STUART-MOORE, JONATHAN W., M.M. Live Manipulation of Documentary Audio in a Narrative Electroacoustic Concert Piece. (2011)
Directed by Dr. Alejandro Rutty. 121 pp.

Documentary musical and theatrical works span a wide variety of genres, styles, and media. Such musical works typically involve fixed electronic media, either alone or —as in Steve Reich's *Different Trains*—with an accompanying acoustic ensemble. Most documentary theatrical works, by contrast, are live performances in which interviewees' original words are re-created by an actor. With this thesis, I have attempted a new blend of documentary styles involving the live performance of both acoustic and electronic elements. I have composed a piece, *There Was No Question*, using narrative audio clips taken from interviews with my father. His recorded speech is triggered and manipulated live during performance by two laptop players using Wii remotes, and is accompanied by an acoustic ensemble.

This thesis investigates the precedents, both musical and theatrical, informing this new work. It also introduces two frameworks for understanding the compositional techniques used, both in treating the documentary audio and in constructing a compelling dramatic narrative.

I provide the text of the narration (Appendix A), a score of the work (Appendix B), a concert recording (Appendix C) and the Max/MSP patches used to perform the two electronics parts (Appendix D).

LIVE MANIPULATION OF DOCUMENTARY AUDIO IN A NARRATIVE ELECTROACOUSTIC CONCERT PIECE

by

Jonathan W. Stuart-Moore

A Thesis Submitted to
the Faculty of The Graduate School at
The University of North Carolina at Greensboro
in Partial Fulfillment
of the Requirements for the Degree
Master of Music

Greensboro
2011

Approved by

_____
Committee Chair

APPROVAL PAGE

This thesis has been approved by the following committee of the Faculty of The Graduate School at The University of North Carolina at Greensboro.

Committee Chair _____
Dr. Alejandro Rutty

Committee Members _____
Dr. Elizabeth Keathley

_____
Dr. Irna Priore

_____
Date of Acceptance by Committee

TABLE OF CONTENTS

Page

LIST OF FIGURES

Page

CHAPTER I

INTRODUCTION

Documentary musical and theatrical works, based on material collected from interviews or historical sources, span a wide variety of genres, styles, and media. Some works are entirely theatrical, some are musical theater, some combine musical performance with a tape or video track, and some are fixed media.

With this thesis, I have attempted to find a new blend of documentary styles that involves the live performance of both acoustic and electronic elements. I have written a piece, *There Was No Question*, that tells of my father's experiences working as part of the Manhattan Project. The piece consists of narrative audio clips, taken from a series of interviews with my father, and a musical accompaniment involving both electronic and acoustic elements. Two performers use laptops controlled by Wii remotes to play the documentary audio and electronic accompaniment; a small mixed ensemble plays the acoustic accompaniment.

I strove to create a piece that was both musical and theatrical by fulfilling two primary goals. At the surface level, I sought engaging ways for the Wii players to perform and manipulate the documentary material—and to represent these manipulations visually using gestures. At a structural level, I attempted to make a compelling dramatic arc by deploying different compositional techniques at different stages of the documentary narrative.

Chapters II and IV will introduce analytical frameworks that provide precedents for the treatment of these goals. Chapter III will discuss additional musical and theatrical precedents for the work. Chapters V–VIII will discuss the four types of musical voices occurring in this piece—narration, electronic text-painting devices, background electronic textures, and instrumental accompaniment—using the frameworks introduced in Chapters II and IV.

I should note that, while the title *There Was No Question* bears similarity to Charles Ives's *The Unanswered Question*, the similarity is coincidental did not inform the construction of this work. My title was drawn from the narrator's words describing the American public's opinion towards the war effort.

CHAPTER II

COMPOSITIONAL TECHNIQUES FOR TREATING RECORDED SPEECH

Chapter I proposed two compositional goals for this piece; the first was to find engaging methods for the performance and manipulation of documentary audio. Composer and scholar Cathy Lane has surveyed and categorized many compositional techniques for treating recorded speech. Specifically, she investigates "works which use words, often as a primary source, and in general play with the tension between their semantic and abstract musical characteristics mainly through the power of technology."[1]

Lane identifies nineteen frequently-used compositional techniques for treating spoken words. Nine of these techniques relate to the meaning of the words, which can be retained, dissolved, or accumulated through various methods of electronic processing. Another technique she identifies is "melodic or rhythmic extraction, translation, and elaboration."[2] Below, I discuss those techniques identified by Lane that are used in *There Was No Question*, along with musical examples that have informed my composition.

---

[1] Cathy Lane, "Voices from the Past: Compositional Approaches to Using Recorded Speech," *Organised Sound* 11, no. 1 (March 2006): 3.

[2] Ibid., 5-6.

Retention of Meaning

The simplest of Lane's techniques is "retention of meaning," where words "are presented as recorded with no apparent processing."[3] One of many works to use this technique is Glenn Gould's *Solitude Trilogy* (1967-77), a radio documentary series that Gould treated as a piece of music. Gould's work incorporates numerous segments of unprocessed interview speech, while subjecting other portions of speech to processing. Annea Lockwood's *Sound Map of the Danube* (2005) uses unprocessed speech throughout.

Michael Vincent points out that the live narration parts in Sergei Prokofiev's *Peter and The Wolf* (1936) and Benjamin Britten's *Young Person's Guide to the Orchestra* (1946), while they do not use recorded sound, employ a related technique.[4]

Simultaneous Dissolution and Accumulation Through Processing

Lane defines another category, "dissolution of semantic meaning through processing," but notes that this same compositional technique may also create "accumulation of meaning by semantic extension or elaboration."[5] There are many instances in which processing serves both of these functions, transforming semantic

---

[3] Ibid., 6.

[4] Michael Lawrence Vincent, "Music/Language Interrelations: Towards an Evolutionary, Semiotic, and Compositional Perspective," (DMA diss., University of Toronto, 2010), 93.

[5] Lane, 5–6.

meaning by dissolving actual words while creating a text-painting effect through the method of their breakdown.

One example, offered by Lane, is Steve Reich's tape piece, *Come Out* (1966), in which the words "come out to show them" are first played normally, then subjected to a phasing technique that slowly dissolves their semantic meaning.[6] Reich sees this effect as a way to treat the speech "without altering its pitch or timbre," preserving "the original emotional power that speech has while intensifying its melody and meaning through repetition and rhythm."[7] He contrasts his approach to *musique concrète*, which "usually presented sounds that could not easily be recognized."[8] Reich's preservation of semantic meaning establishes the political context of the piece: *Come Out* commented on the Harlem riots of 1964 (the speaker is discussing his wounds, having been beaten by police).[9] Yet in all works, including *Come Out,* the possibility for varying interpretations increases as semantic meaning is dissolved.

Another example, Lateitia Sonami's *What Happened* (1982), begins with an unprocessed voice reading a fictitious life story. Processing effects (including an amplitude envelope and vocoder) are sequentially introduced and slowly intensified, rendering the words of the poem harder and harder to understand. The escalation of these effects parallels the escalating complications within the story; the narration finally

---

[6] Ibid., 5.

[7] Steve Reich, *Writings on Music, 1965-2000* (New York: Oxford University Press, 2002), 20.

[8] Ibid.

[9] Ibid., 21-22.

becomes unintelligible just after she says her husband had "lost the ability to speak" (at 1:33 in the piece).

Katherine Norman's *London: In Her Own Time* (1996) uses a concept similar to mine: she has recorded her mother's stories about living in London during World War II, filtered them, and orchestrated them using electronic sounds. Reviewer Ian Stevenson Chatswood calls the style of this piece "evocative documentary montage."[10] Norman processes the interview text using a "resonant filtering device," which in some places makes the text difficult or impossible to understand, dissolving semantic value (ex, 0:00–1:00). Yet this filtering simultaneously "makes audible the metaphor of resonance" between the listener, composer, and narrator—and adds "harmonic and occasionally tonal content."[11]

Melodic or Rhythmic Extraction, Translation, and Elaboration

Probably the most widely known works of documentary music are Steve Reich's electroacoustic pieces. With *Different Trains* (1988), Reich established a new style of documentary composition; he has continued to develop this style with works including *The Cave* (1994), and more recently *WTC 9/11* (2011). Reich's process involves recording interviews, selecting from them a set of short, melodic audio clips, transcribing those clips into musical notation, and using the transcriptions and recorded audio together

---

[10] Ian Stevenson Chatswood, "Katherine Norman: London" [Review], *Computer Music Journal* 26, no. 2, (Summer 2002): 107.

[11] Ibid.

to construct a piece. In the resulting work, not only are the instrumental parts derived from the transcribed melodies (in terms of implied harmony, key, and tempo), but the instruments often play these transcribed "speech-melodies" in unison with the recorded voice.[12] Lane categorizes these methods collectively as "melodic or rhythmic extraction, translation and elaboration."[13]

In *The Cave*, Reich and his collaborator, video artist Beryl Korot, took this process a step further, incorporating documentary video that allowed the audience to see —as well as hear—the interviewees talking. Building on the idea of melodic and rhythmic extraction, Korot superimposed the interviewees onto video textures created by extracting and processing (e.g., zooming in or layering) small regions of the documentary video material. Reich states, "everything (and this is the ethos of the piece) comes out of the documentary material, musically and visually."[14]

Accumulation Through Sonic Association

One of the most commonly used techniques for the treatment of documentary material is what Lane calls "accumulation of meaning by sonic association:" the addition of "sounds relating to the text." This technique is common in radio documentaries, and appears in Gould's *Solitude Trilogy*. Gould describes *Solitude Trilogy* as "contrapuntal radio" because of the musical techniques he employed in editing the documentary

---

[12] Reich, *Writings on Music*, 152.

[13] Lane, 6.

[14] Geoff Smith, "Steve Reich Talking About 'The Cave,'" *Tempo,* New Series, no. 186 (Sep. 1993): 17.

sound.[15] For instance, multiple lines of speech often play in parallel, with different voices rising to the foreground. Gould's most prominent use of sonic association is a sonic "basso-continuo" under each movement—the clacking of railroad tracks; the lapping of waves; or the singing of a hymn—to create an image of the setting.[16]

Steve Reich uses sonic association in *Different Trains* in two ways. He includes historically accurate sounds of sirens, bells, and train whistles:

> You may...note the difference between American (first movement) and European (second movement) train whistles. American train whistles of this period In the '30s and '40s are mostly long held perfect intervals of fourths and fifths. European train whistles of this same period are mostly in short triadic shrieks.[17]

Reich also creates the effect of "a locomotive" using the rhythms of the string parts.[18] Another example of association can be found in Katherine Norman's *London: In Her Own Time*. Norman uses synthesized drone textures that connote the bombers flying over London described in the narration.

---

[15] Geoffrey Payzant, *Glenn Gould: Music & Mind* (Halifax, Nova Scotia: Formac Publishing, 1984), 130–131.

[16] Ibid., 132.

[17] Steve Reich, *Writings on Music*, 182.

[18] Ibid., 219.

Accumulation Through Extension/Elaboration

Another technique proposed by Lane is "accumulation of meaning by semantic extension or elaboration."[19] This technique is related to sonic association, but involves manipulating the recorded words to add further meaning rather than adding new sounds.

One example is Trevor Wishart's *Blue Tulips* (2000), in which a woman describes a recurring dream. When she says "blue tulips," Wishart uses fragments of those words as accompaniment to her narration.[20] Each time she repeats those words, Wishart adds more fragments, showing the narrator's growing obsession with the image. Another example is the first movement of Reich's *WTC/911*, which uses processing to sustain vowel sounds from each successive documentary clip used (communications from NORAD and New York Firefighters).[21] These build upon each other, "connecting one person to another – harmonically," and creating an eerily linked succession of warnings.[22]

Accumulation Through Massing of Voices or Montage

A final category described by Lane is the "accumulation of meaning through massing of voices or montage."[23] An excellent example of this is Glenn Gould's *Solitude Trilogy*. Gould used montages both for musical effect and to create imagined

---

[19] Lane, 6.

[20] *Blue Tulips* can be heard online: <http://www.youtube.com/watch?v=VVRBRDD2loY>

[21] NORAD is the North American Aerospace Defense Command, which coordinates air defense for the United States and Canada.

[22] Steve Reich, "Kronos Quartet Website: Steve Reich - WTC 9/11," <http://kronosquartet.org/projects/detail/steve_reich_new_work> (accessed Nov 21, 2011).

[23] Lane, 6.

conversations. In some instances, Gould plays several voices in parallel in a way that the listener may understand. He stated in a 1968 interview, "there's no particular reason, it seems to me, why one shouldn't be able to comprehend, clearly and concisely, two or three simultaneous conversations."[24] In other cases, numerous voices are played simultaneously, making any one voice impossible to follow.

Gould's montages also have a dramatic dimension: through editing, he created juxtapositions which, for the listener, become implied conversations among groups of interviewees who never actually met.[25] This practice tests the boundaries of documentary, accumulating new meaning that may not reflect the intentions of the interviewees. Gould's work has received some criticism over his creation of these conversations, and the fact that his own words—the words to which the speakers *actually* responded—are absent. Bradley Lehman claims that, in some cases, Gould "altered his participants' responses so thoroughly" that they effectively "became fictional characters."[26]

---

[24] Payzant, 131.

[25] Ibid., 132.

[26] Bradley Lehman, "Gould, Glenn. Solitude Trilogy: Three Sound Documentaries. [Review]," *The Mennonite Quarterly Review* 71, no. 1 (1997): 153.

CHAPTER III

PRECEDENTS IN THEATER AND LIVE ELECTROACOUSTIC MUSIC

Precedents in Live Electroacoustic Music

Reich's works had the most influence on my compositional process for *There Was No Question*. Yet while all of Reich's works discussed above are bound to a fixed tape or video track, I was interested in creating a piece focused on live performance, where the performers had flexibility in timing and control over live electronics. Fox argues that contemporary players can make a performance with tape sound "completely spontaneous," yet I disagree with this opinion.[27]

In at least two pieces, Reich experimented with live triggering or processing. In *City Life* (1994), he used samplers that were "played live as part of the ensemble" to trigger the various sound clips.[28] These included documentary speech samples as well as sound effects (boat horns, sirens, etc.).

Reich also worked on *My Name Is: Ensemble Portrait* from 1967–1980. This project attempted to apply live processing—including tape phasing effects—during performance, both to the voices of performers in his ensemble, and to voice recordings of

---

[27] Christopher Fox, "Steve Reich's 'Different Trains,'" *Tempo*, New Series, no. 172 (Mar. 1990): 6.

[28] Steve Reich, "In Through the Out Door: Sampling and the Creative Act," In *Sound Unbound*, edited by Paul D. Miller (Cambridge, MA: MIT Press, 2008), 3.

historical figures. Reich even sought technological advice from IRCAM to implement this piece. Yet after this experiment, Reich returned to using mainly fixed electronics.[29]

Fox attributes Reich's turn away from live techniques to the technological difficulties they posed in performance, the lack of appropriate expertise in Reich's circle, and Reich's "determination always to achieve the most idiomatically successful form for his ideas."[30] For *Different Trains*, Fox says live processing would have been an "impossible luxury" because Reich wanted to add recorded quartet parts in addition to voices and sound effects.[31]

Fortunately, for *There Was No Question*, I had the luxury of more advanced live processing technologies and no need to record a copy of the live ensemble to tape.

Precedents in Documentary Theatre

I strove to make *There Was No Question* a theatrical piece in its treatment of the narration part. Therefore I will briefly discuss precedents for the use of documentary audio material in the context of theatre.

Documentary or "Verbatim" Theatre is a genre in which words from interviews or historical sources are used to create plays. In the past two decades verbatim techniques have grown to become a prominent, even mainstream, method in theatre.[32] Some

---

[29] Fox, 5.

[30] Ibid., 6.

[31] Ibid., 6.

[32] Will Hammond and Dan Steward, *Verbatim Verbatim: Contemporary Documentary Theatre* (London: Oberon Books, 2008), 11–12.

verbatim plays are created by transcribing interviews and editing them into a script from which actors re-interpret the characters' inflections. Technological improvements have allowed for another form of verbatim play, in which actors use headphones to listen to recordings of documentary subjects' words and try to mimic every detail of their original speech. This technique can be used in rehearsal and even in performance.

Anna Deavere Smith has created several one-woman verbatim plays, in which she takes on the roles of dozens of different characters, performing monologues or even conversations. Smith's plays often revolve around a particular event that has affected many people. *Fires in the Mirror* (1992) discusses the racial tensions in Crown Heights, Brooklyn after the accidental killing of a black child by a Hasidic Jewish driver.[33] *Twilight: Los Angeles, 1992* (1994), addresses the riots following the Rodney King trial.[34] Smith interviews subjects who experienced the event, then listens to and memorizes their recordings until she can recreate the interviews in performance.[35] Gina Kolata of The New York Times writes that Smith repeats her subjects' "exact words, complete with regional accents, ums and uhs and stammers."[36]

---

[33] "Times Topics Profile: Anna Deavere Smith" *The New York Times* <http://topics.nytimes.com/topics/reference/timestopics/people/s/anna_deavere_smith/index.html> (accessed Nov 21, 2011).

[34] David Richards, "Twilight -- Los Angeles, 1992; A One-Woman Riot Conjures Character Amid the Chaos," *The New York Times*, March 24, 1994. <http://www.nytimes.com/1994/03/24/theater/review-theater-twilight-los-angeles-1992-one-woman-riot-conjures-character-amid.html> (accessed Nov 21, 2011).

[35] Royce Carlton Incorporated, "Profile: Anna Deavere Smith" <http://roycecarlton.com/speaker/profile/Anna-Deavere-Smith.html> (accessed Nov 21, 2011).

[36] Gina Kolata, "Through 1 Woman, 20 Views of Life's End," *The New York Times*, November 9, 2009. <http://www.nytimes.com/2009/11/10/health/10easy.html> (accessed Nov 21, 2011).

Other verbatim playwrights, such as Alecky Blythe, call for actors to use headphones on stage during performances, claiming that this makes their delivery closer to the source material. Blythe asserts that authentic speech is always more mundane, and therefore more interesting, than the interpretation added by a practiced actor (even when the actor thinks he or she has memorized the inflection).[37]

Such extreme fidelity to the source material leads one to question why actors are involved, if they are trying to imitate an audio recording that will always be more accurate. Reich's *The Cave* is essentially a work of verbatim theatre without actors (Reich calls the work "music theater"). The original interviewees, via video, are the actors.[38]

Yet there is clearly artistic value added when characters are embodied by real, living actors. Hayes describes verbatim theatre as "applying the language of theatre to the words of real people, or what I call theatricalizing oral history."[39] This process involves "how the dialogue is shaped," in live performance, "to create the play's narrative, tension, rhythm and atmosphere."[40] It is this "language of theatre" that I sought to add to *There Was No Question* by having the documentary material triggered and manipulated by live performers. However, because I was composing a piece of music rather than writing a

---

[37] Hammond, 80–82.

[38] Smith, 16.

[39] Lisa Hayes, "Theatricalizing Oral History: How British and American Theatre Artists Explore Current Events and Contemporary Politics in the Journey from Interview to Performance," (Ph.D. diss., SUNY Buffalo, 2008), vii.

[40] Ibid., 219.

play, I wanted to preserve the exact pitch, timbre, and (in some cases) rhythm of my father's voice, rather than have his words spoken by an actor.

Techniques from Laptop Orchestras

There Was No Question needed a method for the live manipulation and triggering of documentary audio. To solve this problem, I turned to techniques pioneered by laptop orchestras. Several universities have started such orchestras over recent years, including Stanford (SLOrk), Princeton (PLOrk), and Virginia Tech (Linux Laptop Orchestra, L2Ork).[41] L2Ork uses Wii remotes as a means to control sound processing on each laptop. I helped to adapt L2Ork's methods for UNCG's Greensboro Laptop Orchestra (GLOrk) in Spring 2011, and I further adapted them for this piece. L2Ork's work has informed not only my procedures for collecting and processing Wii remote data but also my ideas for how to use various Wii gestures to generate and control sound. The use of laptop orchestra techniques to perform documentary audio strikes an appropriate balance between preserving the narrator's storytelling and extending it.

[41] The websites of these laptop orchestras include descriptions of their techniques and technologies as well as audio samples: <http://plork.cs.princeton.edu/> <http://slork.stanford.edu/> <http://l2ork.music.vt.edu/main/>

CHAPTER IV

THERE WAS NO QUESTION AS A "HERO'S JOURNEY"

To discuss the second goal proposed in Chapter I—the creation of a compelling dramatic arc through the use of different compositional techniques at different stages of the documentary narrative—I turn to the work of Joseph Campbell. In *The Hero with a Thousand Faces*, Campbell proposes the "Hero's Journey," a framework for understanding the similarities between "myths and folk tales from every corner of the world."[42] Campbell's framework has been widely applied to Western literature and film.[43] The Hero's Journey, in its most elemental form, is a "rite of passage"—a "separation," "initiation," and "return"—played out by an adventurer traveling between two worlds:

> A hero ventures forth from the world of common day into a region of supernatural wonder: fabulous forces are there encountered and a decisive victory is won: the hero comes back from this mysterious adventure with the power to bestow boons on his fellow man.[44]

Stuart Voytilla adapts Campbell's framework, breaking the Hero's Journey into four acts: "separation, descent, ordeal, and return."[45] In the first act, the hero is forced to

---

[42] Joseph Campbell, *The Hero with a Thousand Faces* (New York: Pantheon Books, 1949), viii.

[43] Timothy Scheurer, *Music and Mythmaking in Film: Genre and the Role of the Composer* (Jefferson, NC: McFarland Publishers, 2008), 223.

[44] Campbell, 30.

[45] Stuart Voytilla, *Myth and the Movies: Discovering the Mythic Structure of 50 Unforgettable Films* (Studio City, CA: Michael Wiese Books, 1999), vii

separate from the "Ordinary World," entering the "Special World;" in the second and third acts he travels to the "Inmost Cave" of the Special World, where he experiences an "Ordeal;" in the final act, he returns to the Ordinary World with new understanding.[46]

Many frameworks exist for examining narrative in music; McClary and others have even discussed heroic narrative forms.[47] Yet the narration text of *There Was No Question* aligns particularly well with the Hero's Journey: fundamentally, the text describes the narrator's movement between two opposing worlds.[48] The narrator begins in an Ordinary World, farming and taking care of chickens; he journeys to a Special World, where he works as a physicist on the Manhattan Project; finally, he returns to the Ordinary World, reflecting on World War II from the present day.[49] The entire story is a rite of passage that offers him greater perspective, which he shares with the audience at the end.

My compositional process was focused on the differentiation of these two worlds, and was loosely influenced by the framework of the Hero's Journey. Application of this framework will therefore prove useful in understanding the piece's structure and its organization of musical elements.[50]

---

[46] Ibid., 6.

[47] Many frameworks exist for understanding narrative in music, including mythic and heroic forms. Susan McClary discusses these ideas in "Sexual Politics in Classical Music" in *Feminine Endings* (Minneapolis, MN: University of Minnesota Press, 1991), 53–79.

[48] The full text for *There Was No Question* can be found in Appendix A.

[49] The terms "Ordinary World" and "Special World" are used by Stuart Voytilla in his adaptation of Campbell's framework. See Voytilla, 8–9.

[50] Analyzing any story as a Hero's Journey is a subjective process; here I present one of many possible readings of the narration text.

As mentioned above, the narrator moves between two opposing worlds. The narrator inhabits an Ordinary World as a child growing into a college student (mvts. 1–4), and again in the present time, reflecting on the morality of the war (mvt. 10). His Special World consists of the war effort—specifically his time working on the Manhattan Project—from the start of grad school until after the bomb is dropped (mvts. 5–9).

The narrator's enjoyment studying physics and Hitler's aggression in Europe are both "Calls to Adventure" (mvts. 3–4).[51] Yet while the narrator refuses to join the war effort on moral grounds, he enters this Special World unknowingly by starting graduate school (mvt. 5). The word "ultracentrifuge" confirms the crossing into the Special World by introducing a technology totally foreign to the agrarian childhood described in "Chickens" (mvt. 2).

After the bomb is dropped (end of mvt. 8), it is not immediately clear which world we are in. The narrator still speaks in the past tense, but gives no details from the point of view of a physicist; instead, his words are a universal, emotional reaction ("the method was horrid"). This shift from specific to universal language separates the narrator from the Manhattan Project and leads him on a "Road Back" to becoming an average citizen. Thus, the threshold back to the Ordinary World is crossed sometime during mvt. 9.

In the final movement (mvt. 10), the narrator has arrived back in the Ordinary World, but with a new understanding (an "Elixir") gained through his time in the Special

---

[51] Vogler defines a "Call to Adventure" thus: "the hero is challenged to undertake a quest or solve some problem" (Voytilla, viii).

World.[52] This elixir is the idea of "corporate sin," that the "whole body of the country" participated and therefore bears collective guilt. This new realization transforms his prior knowledge of the Ordinary World: a place where he did what he was told—washed his father's show chickens—but had no responsibility in the outcome (his father collected the prizes, but "[the children's] names were not on them, just his"). Figure 1 diagrams this Hero's Journey according to the method presented in Campbell's book.

[52] Both "Road Back" and "Return With Elixir" are mythical concepts defined by Vogler (Voytilla, ix).

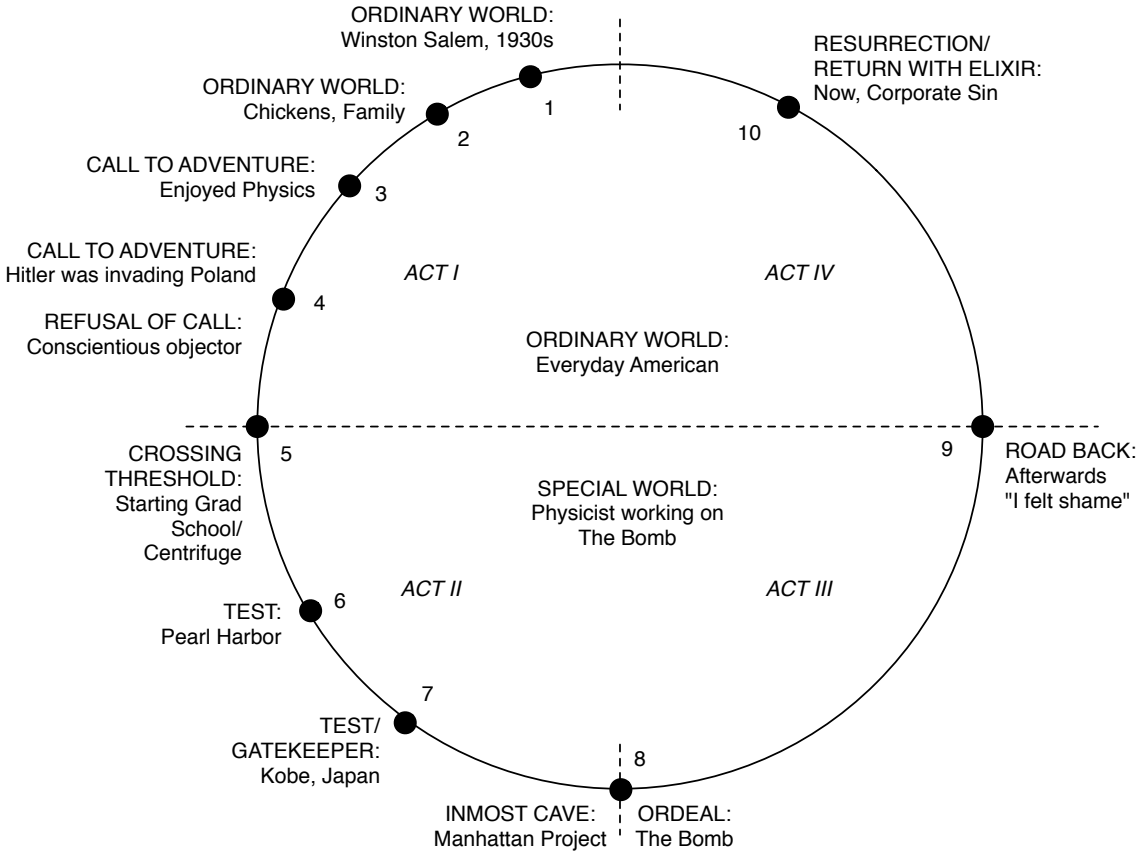


Figure 1. *There Was No Question* narration as a Hero's Journey.[53]

The following chapters will describe the work's four musical voices. I will discuss how the successive stages of this Hero's Journey, designated by the text, inform the musical structure of the piece and the deployment of different compositional techniques.

[53] This diagram conforms to the visual representation of the Hero's Journey presented in Campbell, 245 and adapted by Voytilla, 6.

CHAPTER V

NARRATION

The narration voice in *There Was No Question* consists of the playback of recorded audio samples that tell the story of the piece. Sometimes, this narration is simply triggered (played without processing); at other times it is electronically processed based on the movements of the Wii players.

Using Lane's classifications, the processing and playback of narration in this piece either retains or dissolves semantic value, but seldom adds it. The patches used by the Wii players to perform the narration can be arranged as a continuum, moving from the full retention of semantic value to its full dissolution (see Figure 2).[54]

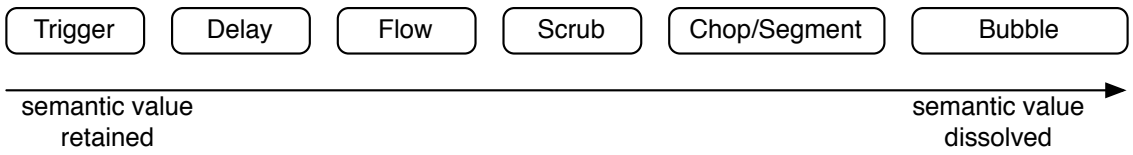


Figure 2. Narration patches and preservation of semantic value.

Retention of semantic value is associated with the Ordinary World; dissolution is associated with the Special World. Generally, the selection of a patch from the continuum corresponds to how deep the narrator is into the current world. For example, mvts. 2 and 10 (most Ordinary) use Trigger, while mvt. 8 (most Special) uses Chop/Segment and

[54] For a complete list of processing/playback patches used by the Wii players, see Appendix D.

Bubble.[55] Figure 3 shows the use of narration patches in the context of the Hero's Journey.

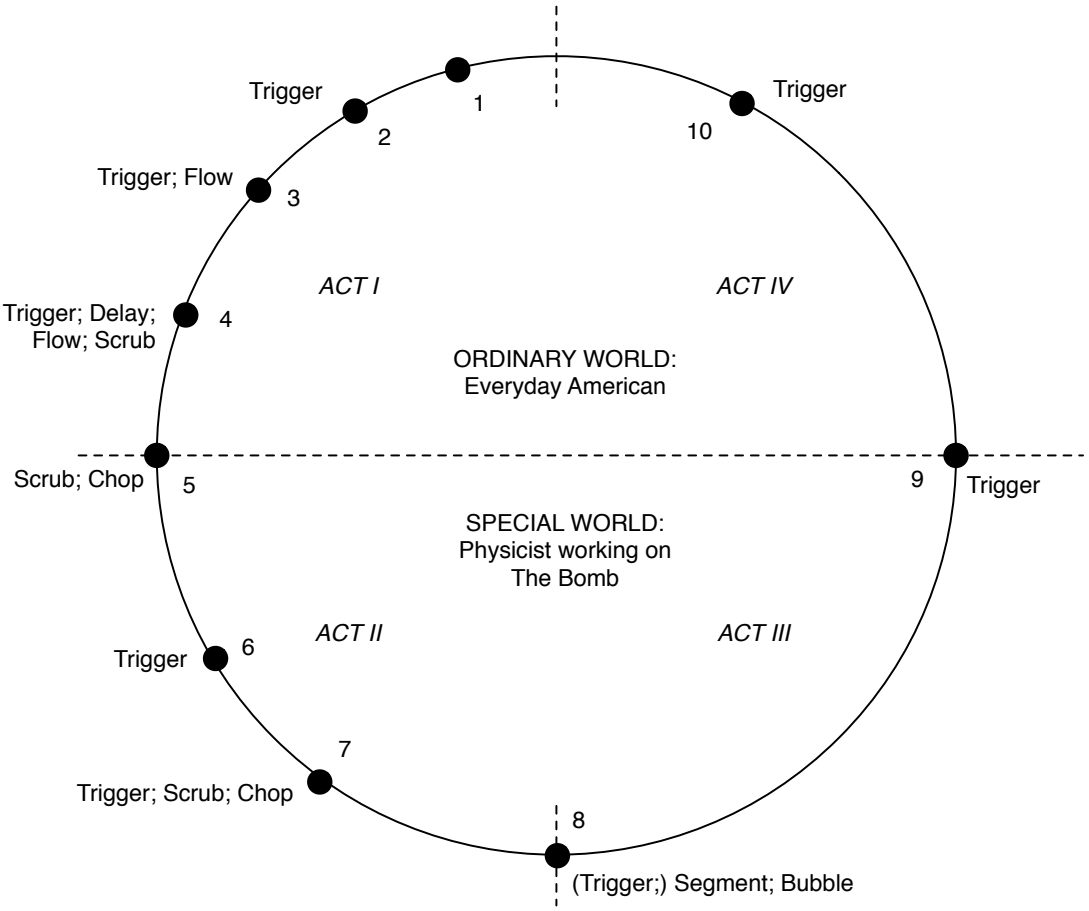


Figure 3. Narration patches in the context of the Hero's Journey.[56]

[55] Bubbling is an effect in which small grains of sound are sampled from a source and multiplied in number. Each grain may be randomly altered, for instance in pitch, duration, or feedback. The effect is a cloud of sound generated from the source audio; the density of the cloud is determined by several factors, primarily the feedback level. All "Bubble" patches in this piece utilize SoundHack's +bubbler VST plugin, which can be downloaded for free from <http://www.soundhack.com/>.

[56] Trigger is included in parentheses in mvt. 8 because the triggered clips are each one word long, sounding nearly as fragmented as the Segment patch.

Semantic value and the Ordinary World are dissolved in parallel. The narrator's love of the natural world ("I loved the farming," mvt. 3, m. 147) dissolves into the mechanical world of centrifuges; his clear morals, individualism, and ties to his family dissolve into a huge, secret, and impersonal government project (his work becomes secret even to his family: "I might have said that we were working on a war project. But that's as far as I would have gone," mvt. 8).

This transition to the Special World is accomplished musically through a simultaneous dissolution and accumulation of meaning, as described in Chapter II. The use of fragmentation and bubbling, in addition to dissolving semantic value, creates a text-painting effect of tiny particles colliding in an ever-expanding chain reaction. As we approach the depths of the Special World (mvt. 8), fragmentation is used more frequently. More and more particles participate in the reaction, until the entire auditory experience becomes the noise generated by the dissolution of the narration, a musical image of the bomb.

On two other occasions, the processing of narration adds semantic value by differentiating the words of two characters in the story. The "FlowNarration" patch distinguishes the physics professor (m. 161) and ROTC students (m. 200) from the narrator in mvt. 3–4; pitch shifting emphasizes the secretary's words in mvt. 7 (m. 304–333). For part of mvt. 7 (m. 302–323), the voices of the narrator and secretary are played by different performers, additionally distinguishing the characters through spatialization.

CHAPTER VI

ELECTRONIC TEXT-PAINTING DEVICES

There Was No Question uses several electronic text-painting devices, seeking to accumulate meaning through sonic association, as discussed in Chapter II. Unlike electronic background textures, discussed in the next chapter, these patches require constant input from the performers, and act as either the primary voice or as counterpoint to the narration.

Text-painting devices include the chicken sound effects in mvt. 2 (including the convolution of wing sounds and voice, i.e., m. 48); the centrifuge in mvt. 5 (m. 238); the radio static and chopped radio announcement in mvt. 6 (m. 248–262); and the typewriter sound effects in mvt. 7 (m. 297–302; 324–329). When possible, the text-painting effects are derived from the narration. Many of the chicken effects are generated by the convolution of wings flapping with the narrator's voice; the centrifuge is built by looping and increasing the playback speed of the narrator's word "ultracentrifuge;" and the typewriter patch uses a sample of the narrator saying "typewriters." Effects derived from the narration can be viewed as "semantic extension and elaboration," as discussed in Chapter II. As discussed in Chapter V, the narration also accomplishes some text-painting, such as the differentiation of voices and the dissolution of the narrator's speech into particles.

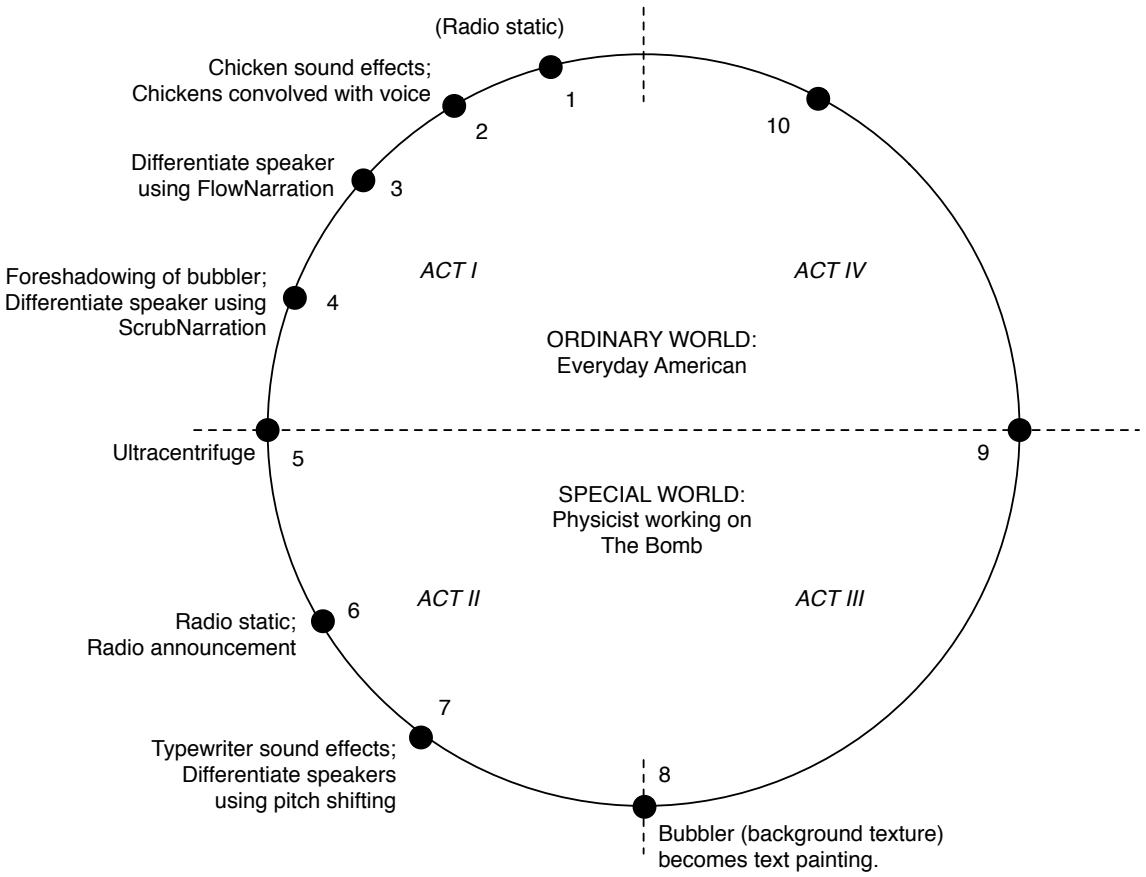


Figure 4. Examples of text-painting in the electronics parts.

Figure 4 places the uses of electronic text-painting in the context of the Hero's Journey. From the diagram, one can see that text-painting is used throughout the work, except in Act IV. In the Ordinary World, the text-painting devices are primarily static, while in the Special World they are primarily dynamic.

In mvt. 1, the QuietRadioCrackle and OpeningDrone patches (m. 1–6) allow very little control from the performer. In mvt. 2 (Ordinary World), the ChickenVoice patch produces the same sound effects throughout the movement. The only parameter that changes is which phrase of text is convolved with the flapping wings.

By contrast, the accelerating Centrifuge patch in mvt. 5 (m. 238) is a dynamic text-painting effect that confirms our transition to the Special World. The centrifuge slowly rises in pitch while the narration "ultracentrifuge" repeats faster and faster. Here, the parameters of the patch are clearly—and visibly—modified by the performer, who controls the centrifuge's speed with the vertical pitch of the Wii remote.

The RadioCrackle (m. 248) and WispSynth (m. 268) patches in mvt. 6 are equivalent to the radio and drone patches in mvt. 1, but allow substantially more control (for the radio, control over the crackling sounds; for the synthesizer, control over pitch). The CentrifugeChopNarration (a combination of two previously seen patches) is used to create the Wii cadenza at the end of mvt. 7 ("uhh, she said!," m. 331–334). This effect brings out the humor in the mechanical nature of the secretary by combining her expressions of growing alarm with the accelerating centrifuge. A final example of dynamic text-painting is the Bubbler in mvt. 8, with its slowly increasing feedback.

The use of dynamic text-painting patches correlates with the increasing role of electronics, and diminishing role of the acoustic ensemble, as we delve deeper into the Special World. This transition to electronics differentiates the Special World, and demonstrates the urgency, danger, and excitement of working on the project. The arrival back in the Ordinary World, totally lacking text-painting, adds to the slow, contemplative nature of act IV.

CHAPTER VII

BACKGROUND ELECTRONICS TEXTURES

The background electronics textures, like text-painting devices, seek to add meaning to the narration, but with larger-scale, more abstract imagery. Like the narration patches, they vary along a continuum. Shown in Figure 5, this continuum moves from concrete, with no sound being derived from the narration, and with minimal control from the performer, to abstract, with all sound being derived from the narration, and with complete control by the performer.

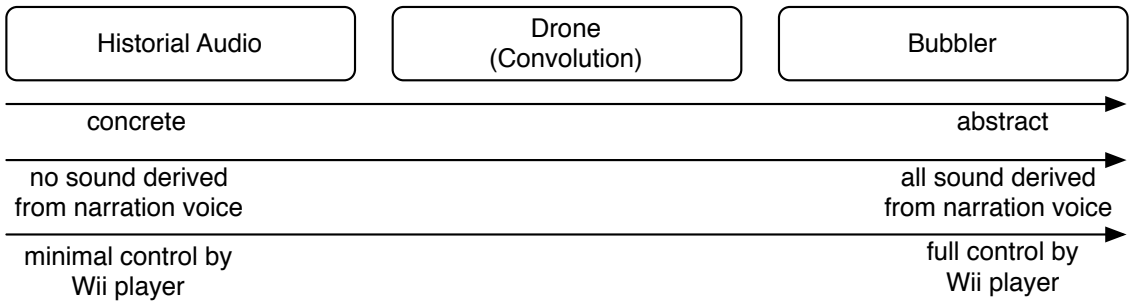


Figure 5. Background electronics textures and abstraction.

The most concrete textures are those derived from historical audio. These include the FDR speech (m. 251; 339) and Pearl Harbor radio announcement (m. 252) in mvts. 6–7. Although some processing is applied to these historical sound clips, either the semantic content (in the case of the radio announcement) or the pitch and cadence of the speech (in

the case of the FDR speech) is preserved, and the clips are recognizable as historical references.

The drone texture (m. 232; 257; mvt. 8) is a halfway point on the continuum: it is a convolution of the narration voice with a recording of a drone played on cello. It contains a varying mixture of semantic content and pitch content, depending on the motions of the Wii player. The performer "scrubs" through the voice recording to generate the drone, choosing where to start and stop playing the voice, how fast to play it, and whether to play it forwards or in reverse. However, the performer has no control over the cello note.

These first two techniques could be categorized according to Lane's framework as "dissolution of semantic meaning through sonic translation or equivalence" (not discussed in Chapter II). Lane describes this technique as transforming words into "a sound equivalent where the semantic meaning is not quite so apparent," which may include creating a "sonic metaphor."[57] While the semantic content may sometimes be audible, the texture serves to paint a visual picture rather than to convey specific words.

In the case of FDR's speech, the listener will at least perceive a speech and applause; those familiar with FDR's voice (or this particular speech) should be able to recognize it from the pitch content. The blurring of individual words seeks to represent the feeling of disconnect and confusion the narrator may have experienced at the time of the Pearl Harbor attack, while it also prevents the texture from distracting from the

---

[57] Lane, 5.

narration. The drone texture, likewise, should create the sense of mechanization of the narrator; the actual words used by the patch are not as important.

The bubbler (mvt. 8) is the most abstract texture, having no pitch or semantic content. It is entirely derived from the narration audio. The performer selects tiny chunks of narration audio, which are fed to SoundHack's "+bubbler" to create a distorted feedback texture. The performer has complete control over the location and size of the chunks, and therefore complete control over what pitch and rhythm content is fed to the bubbler. In addition, the performer can control the bubbler's feedback level.

Background electronic textures are only used in the Special World. They begin more concrete, with the use of the historical audio (mvt. 6) and drone (mvt. 5, mvt. 6, mvt. 8), and move towards more abstract, with the increasing use of the bubbler in mvt. 8. The performers gain more control over the manipulation of sound as they journey deeper into the Special World; their highest level of control—and the most prominent role of electronics—is reached in mvt. 8, a Wii solo. Figure 6 shows the use of electronic textures in the context of the Hero's Journey.

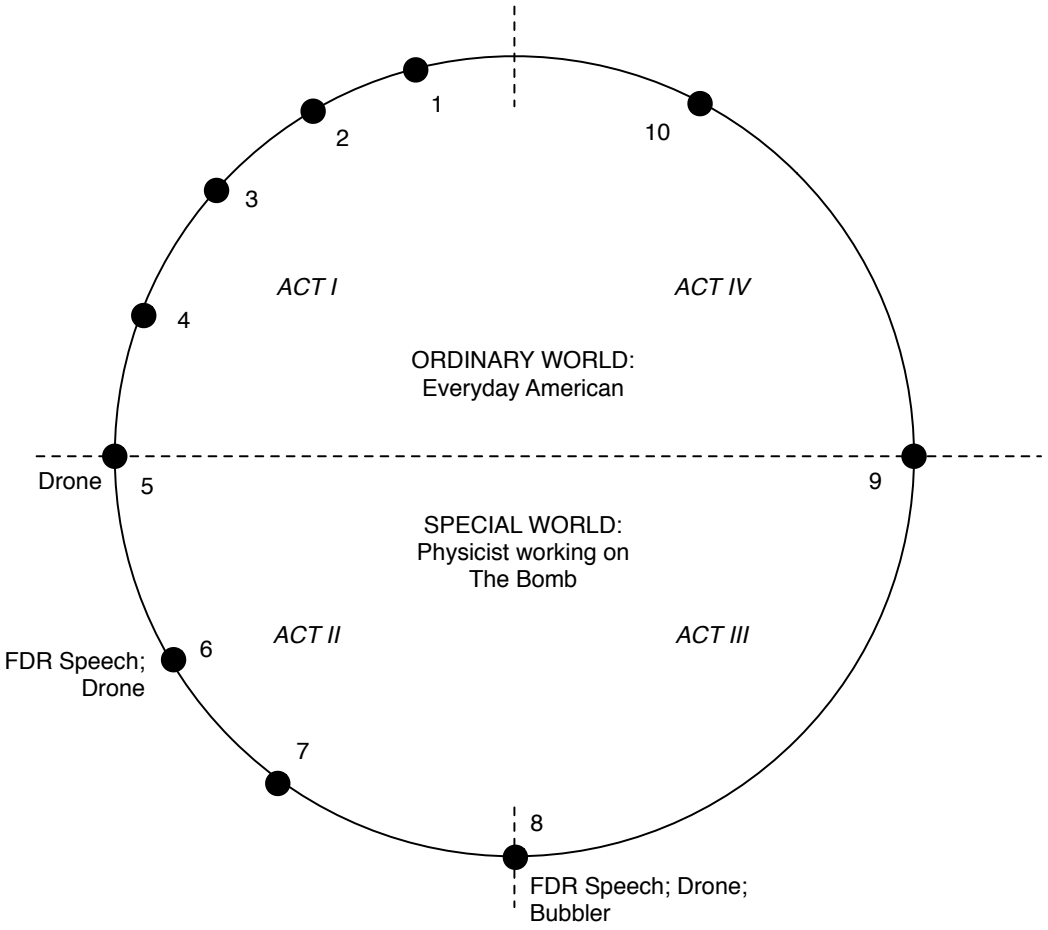


Figure 6. Electronic background textures in the context of the Hero's Journey.

CHAPTER VIII

INSTRUMENTAL ACCOMPANIMENT

The final voice to discuss is that of the instrumental ensemble. The compositional techniques used to create the instrumental part may be placed along a continuum, showing their level of derivation from the documentary material (see Figure 7). Note that the final technique, pitch detection, does not relate to the instrumental parts, but will be discussed below.

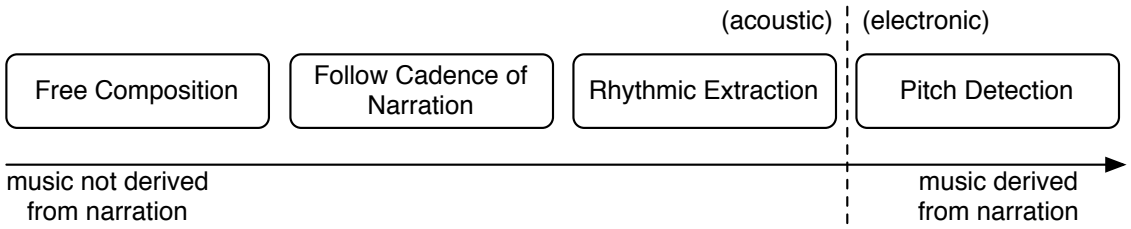


Figure 7. Derivation of cadence, rhythm, and pitch content from narration audio.

Much of the instrumental music is free composition, which is in no way derived from the narration. Movements using free composition either have no narration (mvt. 1, part of mvt. 9), or narration whose timing is only loosely bound to the accompanying music (mvt. 3, 5, 9–10).

A tighter connection between music and text is made when the music follows the cadence of the narration. This is the case in mvts. 2 and 7, where the instrumental parts generally alternate with or play in unison with the narration parts (i.e., alternations in m.

113–118; unisons in m. 294, 296: “typewriters”). Fermatas are used in the instrumental parts to emphasize—and safeguard the timing of—pauses in the narration part (i.e., m. 282: “ahh...;” m. 304: “where were you born”). These unisons, alternations, and pauses can also be used for text-painting. For instance “with soap in the first one” (m. 83), “a rinse in the second” (m. 89), and “a bluing water in the third” (m. 93) are each timed with entrances of new instrument groups.

The instrumental ensemble is most closely bound to the narration through the use of rhythmic extraction. Rhythmic extraction is discussed in Chapter II in regards to Steve Reich’s works. In mvt. 4, the rhythms of two narration phrases—“It was clear Great Britain was going to war” (starting m. 195) and “Everybody was making sacrifices” (starting m. 214)—are transcribed and used as the basis for the ensemble’s rhythm. The pitches are freely composed. The Figures 8 and 9 below show the rhythmic extraction, and its use in the context of mvt. 4.

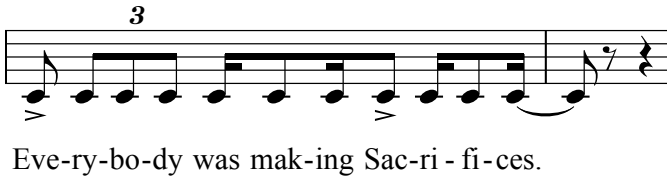


Figure 8. Rhythmic extraction of “Everybody was making sacrifices.”

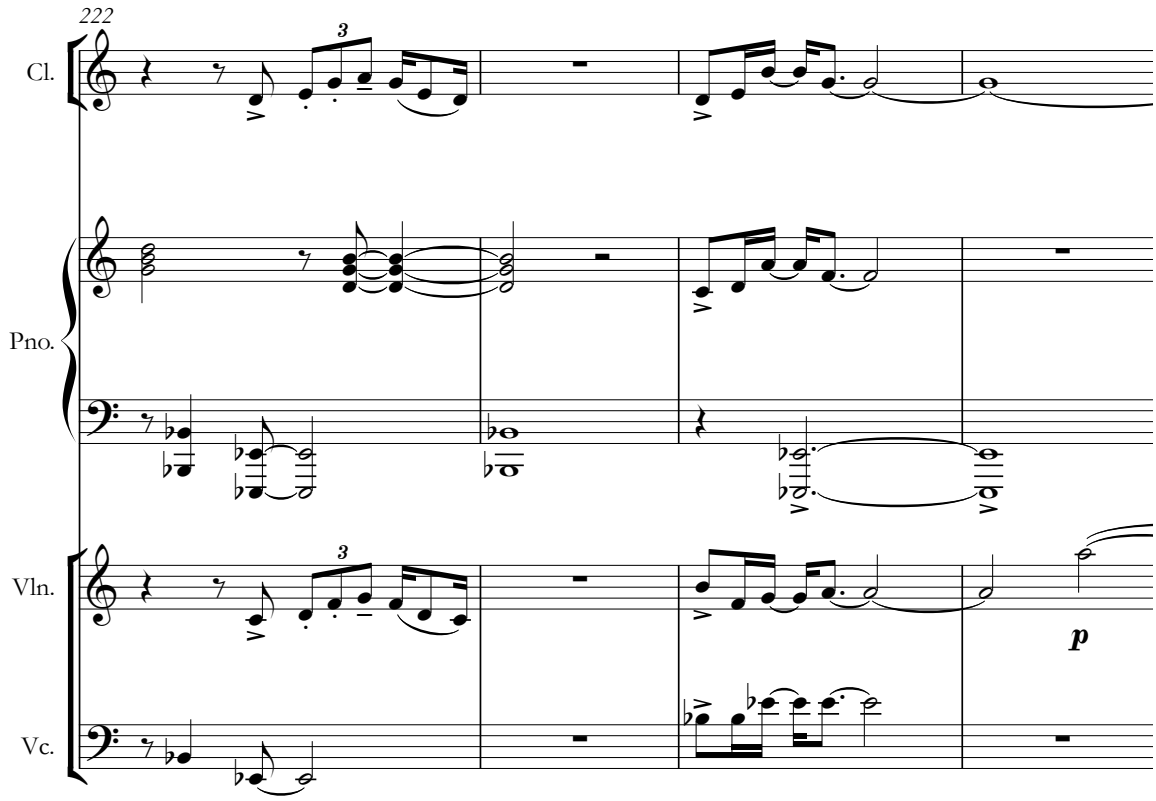


Figure 9. Rhythmic Extraction of "Everybody was making sacrifices" applied to instrumental parts.

An even tighter correlation between accompaniment and narration is reached in mvt. 8, but not by the instrumental parts (they are tacet). The SegmentNarration patch allows the Wii performer to selectively add an accompaniment derived from both the pitch and rhythm of the narration. The patch detects the pitch of the voice, and then synthesizes that pitch, several octaves higher. Since it plays in unison with the voice, it also matches the voice's rhythm. This is the furthest extent of the derivation of musical material from the narration.

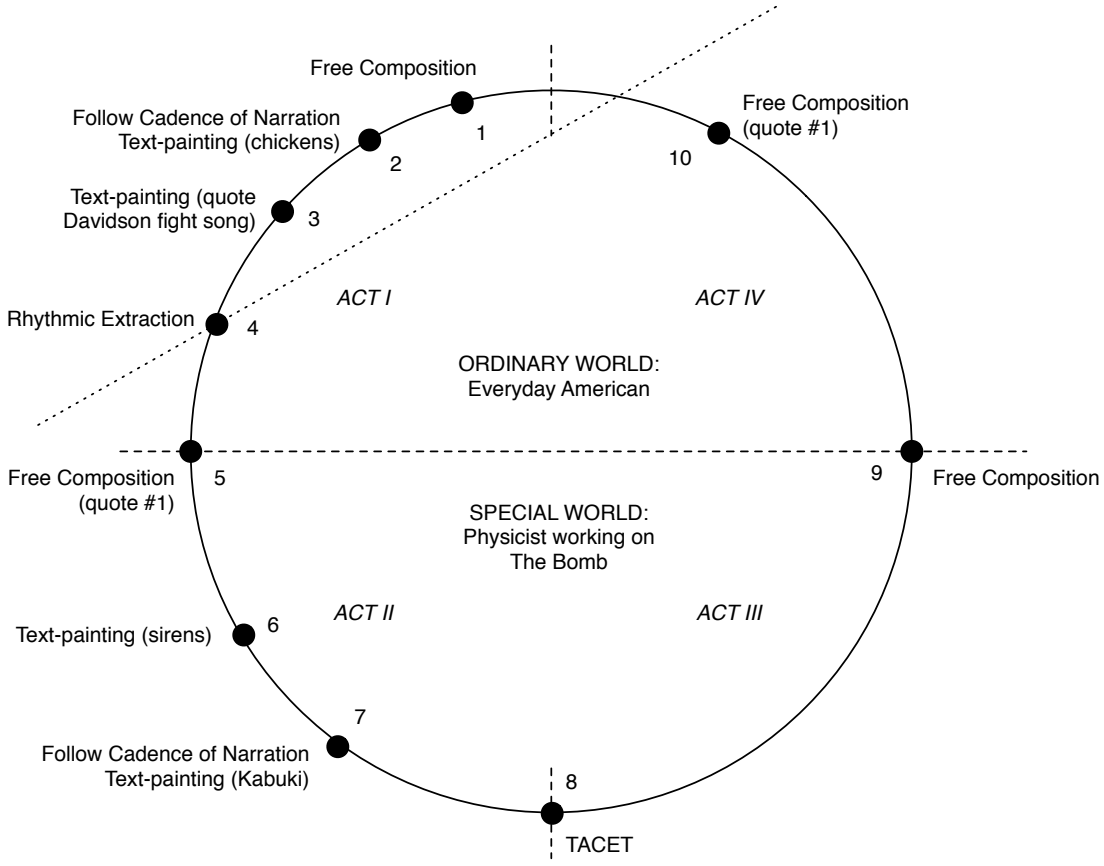


Figure 10. Instrumental accompaniment in the context of the Hero's Journey.[58]

If one views the derivation of instrumental accompaniment in the context of the Hero's Journey (see Figure 10), the music ascends the continuum—from free composition to rhythmic extraction—by mvt. 4, then descends again in the following movements. If one adds the use of electronic pitch detection to the continuum, the top of the continuum coincides with the ordeal in the story (mvt. 8).

One may notice that movements 2 and 7 are the only ones in which the accompaniment follows the cadence of the narration. Each movement also utilizes a

[58] The dashed line shows mvt. 4 as the height of the continuum, with symmetry between the preceding and following movements.

manipulation of the narrator's onomatopoetic words ("chick" or "type") as text-painting. These movements, "Chickens" and "Kobe, Japan" are in many ways parallel movements, in the context of two different worlds. Each is a humorous story of the narrator being forced to accomplish a rote task that leads to unexpected (often comedic) pitfalls—and consequences. These movements provide a basis for understanding the entire piece. There is never a question of what the narrator must do, but the consequences of the path set out for him are sometimes humorous and sometimes extremely serious.

CHAPTER IX

CONCLUSIONS

This document has sought to explain the goals of *There Was No Question*, and the techniques used to achieve those goals. As this composition moves from its Ordinary World to the depths of its Special World, it transforms from a freely-composed acoustic piece with unaltered narration samples, to an entirely electronic piece where processing effects break down semantic meaning of words but create new imagery—through fragmentation of the narration, text-painting effects, and background textures. The use of Wii remotes enables the audience to see all of the gestures used to control the electronics parts, and allows each performance of the piece to be different. I hope that the techniques and structure used to create this piece will inform future documentary works, especially those combining musical and theatrical ideas.

BIBLIOGRAPHY

"Times Topics Profile: Anna Deavere Smith" The New York Times <http://topics.nytimes.com/topics/reference/timestopics/people/s/anna_deavere_smith/index.html> (accessed 21 Nov 2011).

Campbell, Joseph. *The Hero with a Thousand Faces*. New York: Pantheon Books, 1949.

Chatswood, Ian Stevenson. "Katherine Norman: London" [Review]. *Computer Music Journal* 26, no. 2 (Summer 2002), 107–108. <http://www.mitpressjournals.org.libproxy.uncg.edu/doi/pdf/10.1162/comj.2002.26.2.107> (accessed 21 Nov 2011).

Fox, Christopher. "Steve Reich's 'Different Trains.'" *Tempo*, New Series, no. 172 (Mar. 1990), 2–8. <http://www.jstor.org/stable/945403> (accessed 18 Oct 2011).

Hammond, Will and Dan Steward, editors. *Verbatim Verbatim: Contemporary Documentary Theatre*. London: Oberon Books, 2008.

Hayes, Lisa. "Theatricalizing Oral History: How British and American Theatre Artists Explore Current Events and Contemporary Politics in the Journey from Interview to Performance." Ph.D. diss., State University of New York at Buffalo, 2008.

Kolata, Gina. "Through 1 Woman, 20 Views of Life's End." *The New York Times*, November 9, 2009. <http://www.nytimes.com/2009/11/10/health/10easy.html> (accessed 21 Nov 2011).

Lane, Cathy. "Voices from the Past: Compositional Approaches to Using Recorded Speech." *Organised Sound* 11, no. 1 (March 2006), 3–11 <http://search.proquest.com.libproxy.uncg.edu/docview/1551405> (accessed 21 Nov 2011).

Lehman, Bradley. "Gould, Glenn. Solitude Trilogy: Three Sound Documentaries. [Review]." *The Mennonite Quarterly Review* 71, no. 1 (1997): 153. *ATLA Religion Database with ATLASerials,* EBSCO*host* (accessed 19 Nov 2011).

McClary, Susan. "Sexual Politics in Classical Music." In *Feminine Endings*. Minneapolis, MN: University of Minnesota Press, 1991: 53–79.

Payzant, Geoffrey. *Glenn Gould: Music & Mind*. Halifax, Nova Scotia: Formac Publishing, 1984.

Reich, Steve. "In Through the Out Door: Sampling and the Creative Act." In *Sound Unbound*, edited by Paul D. Miller. Cambridge, MA: MIT Press, 2008.

Reich, Steve. "Steve Reich - WTC 9/11 [on Kronos Quartet Website]." <http://kronosquartet.org/projects/detail/steve_reich_new_work> (accessed 21 Nov 2011).

Reich, Steve. *Writings on Music, 1965–2000.* Edited by Paul Hillier. New York: Oxford University Press, 2002.

Richards, David. "Twilight -- Los Angeles, 1992; A One-Woman Riot Conjures Character Amid the Chaos." *The New York Times*, March 24, 1994. <http://www.nytimes.com/1994/03/24/theater/review-theater-twilight-los-angeles-1992-one-woman-riot-conjures-character-amid.html> (accessed 21 Nov 2011).

Royce Carlton Incorporated. "Profile: Anna Deavere Smith." <http://roycecarlton.com/speaker/profile/Anna-Deavere-Smith.html> (accessed 21 Nov 2011).

Scheurer, Timothy. *Music and Mythmaking in Film: Genre and the Role of the Composer*. Jefferson, NC: McFarland Publishers, 2008.

Smith, Geoff. "Steve Reich Talking About 'The Cave.'" *Tempo*, New Series, no. 186 (Sep. 1993): 16–19. <http://www.jstor.org/stable/944875> (accessed 18 Oct 2011).

Vincent, Michael Lawrence. "Music/Language Interrelations: Towards an Evolutionary, Semiotic, and Compositional Perspective." DMA diss., University of Toronto, 2010. <http://michaelvincent.ca/Design/Assets/Writing/Music%20and%20Language%20Interrelations-APA.pdf> (accessed 21 Nov 2011).

Voytilla, Stuart. *Myth and the Movies: Discovering the Mythic Structure of 50 Unforgettable Films*. Studio City, CA: Michael Wiese Books, 1999.

APPENDIX A

NARRATION TEXT OF *THERE WAS NO QUESTION*

1. Winston Salem, 1930s

(no text)

2. Chickens

At the fair time
for the Forsyth County Fair,
my father
wanted to show his
beautiful white wyandotte
chickens
and wanted them
sparkling white and clean.
My mother was in charge of the washing–
Dad somehow arranged to be at school during the whole process.

We assembled
three or four very large galvanized
pails something like three feet across each about a foot deep.

With soap in the first one,
a rinse in the second,
a bluing water in the third, um...
and I guess a final wash/final rinse off in the last one.

Problem:
birds do not like
to
be washed.

On occasion,
the person holding the chicken
was unable to

hold it.
And chicken escaped!
And there was much flapping on the part of both the chicken and the people trying to do the wash.

The thing was: Dad.
It was his show.
He was the one that got the
ribbons,
which he accumulated and kept in his den.
But our names were not on them,
just his.

3. Davidson

I loved the farming part, the growing of vegetables and
Biology sort of thing.
But,
since I had not had any physics in high school I signed up to do that at Davidson.

The first class of physics,
professor walked in and said:
“Only two weeks ago did I find out that I was teaching this class.
I have two weeks lead on you, but we’ll be learning this together.”

And this was actually a lovely challenge and worked out extremely well.
He was learning and seeing the same problems that we were.
To me, an eye-opening, thrilling way–
I really wanted to learn.

In the dormitories, there was much discussion about...

4. The Coming War

Hitler was
invading Poland and
it was clear that
Great Britain was going to war.
“Boy, we’re going to be over there soon.”

Most of them were

ROTCs,
and they knew they would absolutely be going to Europe.

I had
great concerns about
being a conscientious objector.
And I raised this issue with my mother and father,
very strong deep Christians.
And they were horrified that I would do that.

It was so
universal
in the United States of America
that this was something
that we had to do.
Everybody
was in it everybody was making sacrifices.
There was no question.

However,
because I had
a club foot,
I could not
qualify to be drafted.

5. Starting Grad School

September
1941
fresh out of college
a graduate student
with no understanding
of big physics at all.

I was
assigned
helping one
senior graduate student
had developed a
tiny
spinning ball

ultracentrifuge.

6. Pearl Harbor

On December the 7th,
a few days after my 21st birthday,
I was out
walking in
nice part of town where there were trees, and
very quickly
people let me know.
They would say come, come listen.
And I'm telling you, that was really scary.

7. Kobe, Japan

The next morning I went in
to the lab and found barbed wire
surrounding the building.

Ahhh...

So we knew that this was
maybe secret work.
There were armed guards
and secretaries, with typewriters
to take down information for security clearance.

She asked,
"where were you born, when, so forth?"
And I was born in the USA, North Carolina, that's all right.
"OK now, your father's name, uh, date of birth–"
I gave that.
"place of birth?"
Kobe, Japan.

"Ahh!" she said, "you can't go through!"

I said, well he was the son of a missionary.
"Oh, maybe that's all right."

So we filled out some more about Dad, and then Mother.

“Name?”
Marjorie McAlpine.
“Date of birth?”
I gave that.
“Place of birth?”
Kobe, Japan.

“Uhh!!” she said!

The secretary grabbed the sheet of paper, ripped it out, and said, “You’ll never make it!”
Ripped it out of the typewriter and said “you’ll never make it.”
But
I finally got through.

8. Manhattan Project

It wasn’t until after
December 7
that it was revealed
to us
over a period of time
that the lab
was part
{ of } the Manhattan Project

Szilard had been looking at Uranium.
As he started across the street in London, it hit him
that because the Uranium was sending out
that if it hit other Uraniums, that you could have a chain reaction.
Very quickly, that word circulated around the top physicists.
Einstein wrote a letter to FDR, this is a real, very very important thing.
And concern about the Germans being ahead of us.

It was amazing
the amount of secrecy
could be maintained
with such a vast number of people involved.

We did know that at Oak Ridge Tennessee, a little, a little city was built up

and they were trying diffusion.

There was the Uranium 235 and 238,
and the 235 is the one that is much more radioactive,
and was desired, was desired to make the Bomb.

I might have said that we were working on a war project.
But that's as far as I would have gone,
and I'm quite sure they wouldn't have understood anything about it.

There were rumors
that they were having success
in making test bombs...

9. Afterwards

I felt shame
I don't know how many others did
it was, had to be mixed

we were happy
to have the war ending
but
the method was
horrid

Pearl Harbor generated
anger and hate
Hiroshima
and Nagasaki
generated a real sense of
oh my God what have we done

10. Now

I keep talking to
mostly ministers about
what I would call corporate sin.
The whole body of the country
was
very very tightly bound in an effort

to win the war.

War is clearly
against the Christian teaching
and therefore I felt very sinful.
And yet,
everybody participated.

APPENDIX B

SCORE OF *THERE WAS NO QUESTION*

This is a Transposing Score.

Duration: 20 min

Instrumentation

2 Laptop Performers with Wii-Remotes and MaxMSP

Flute
Clarinet in B-flat
Piano
Violin
Cello
Bass

2 Percussion Parts:
Perc. 1:
- Drum Set (bass, snare, and tom/tenor; no hi-hat or cymbals)
- Claves
- Temple Blocks

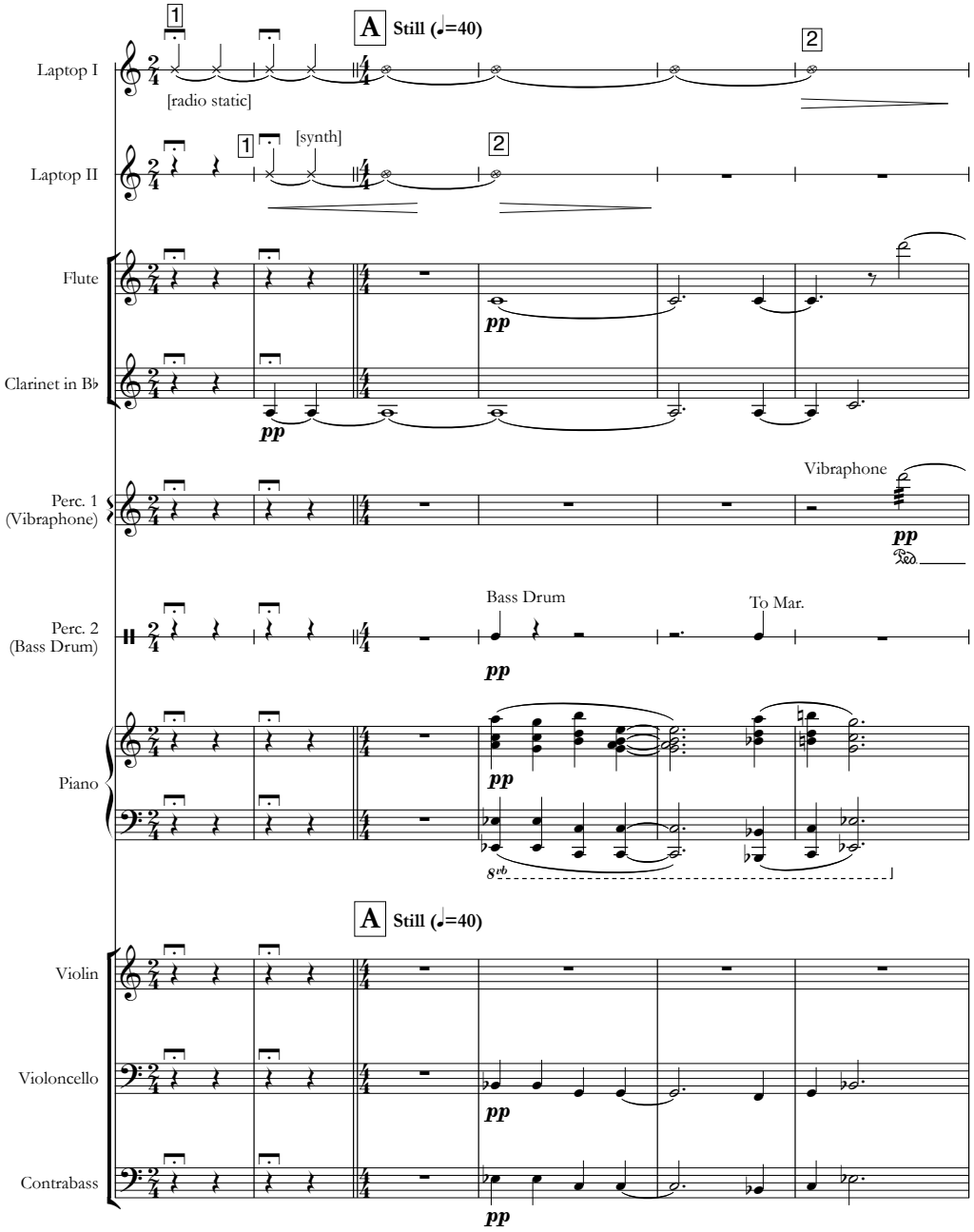
Shared:
- Brake Drum
- Vibraphone (bowed)
- Bass Drum

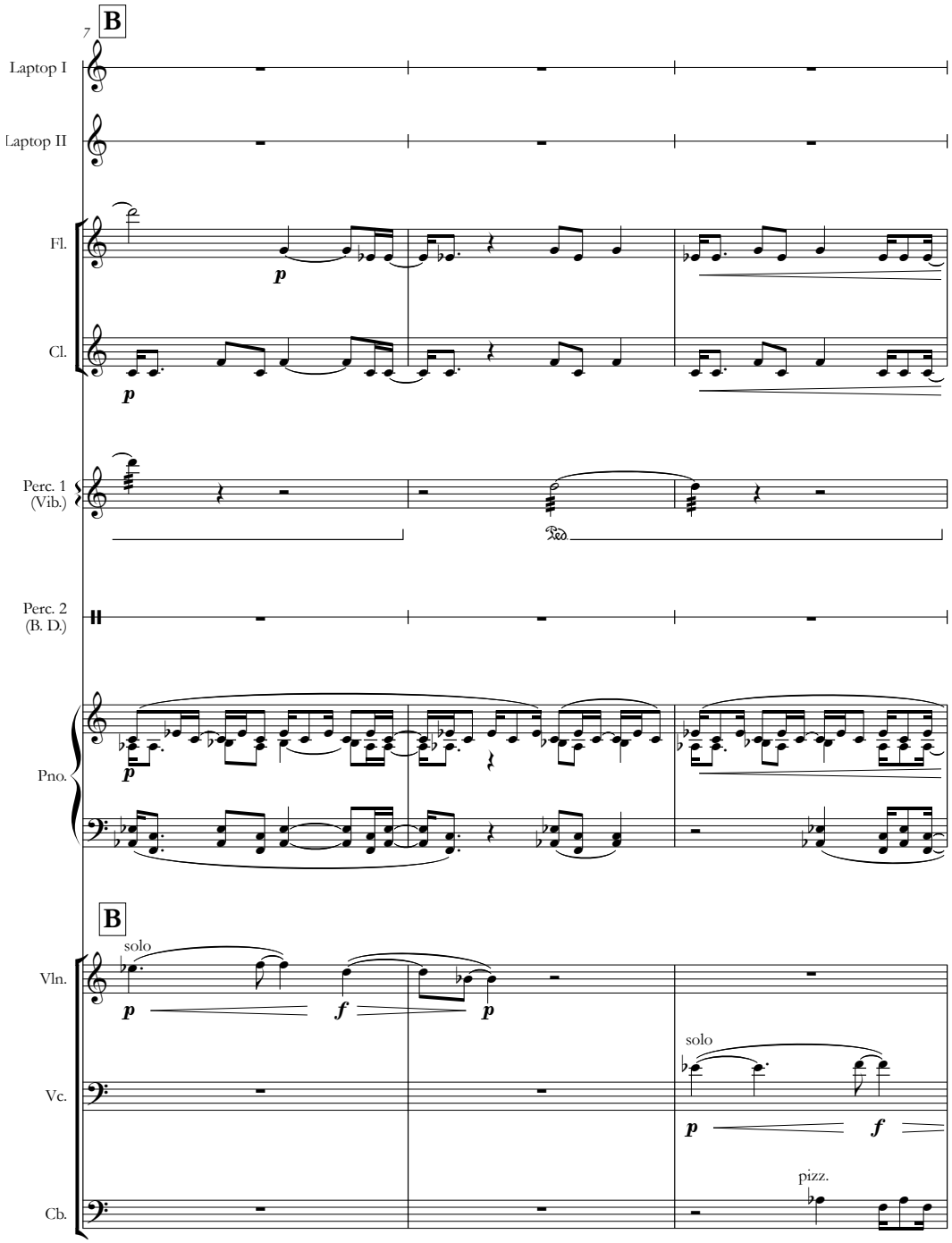
Perc. 2:
- Wood Block
- Marimba
- Ratchet

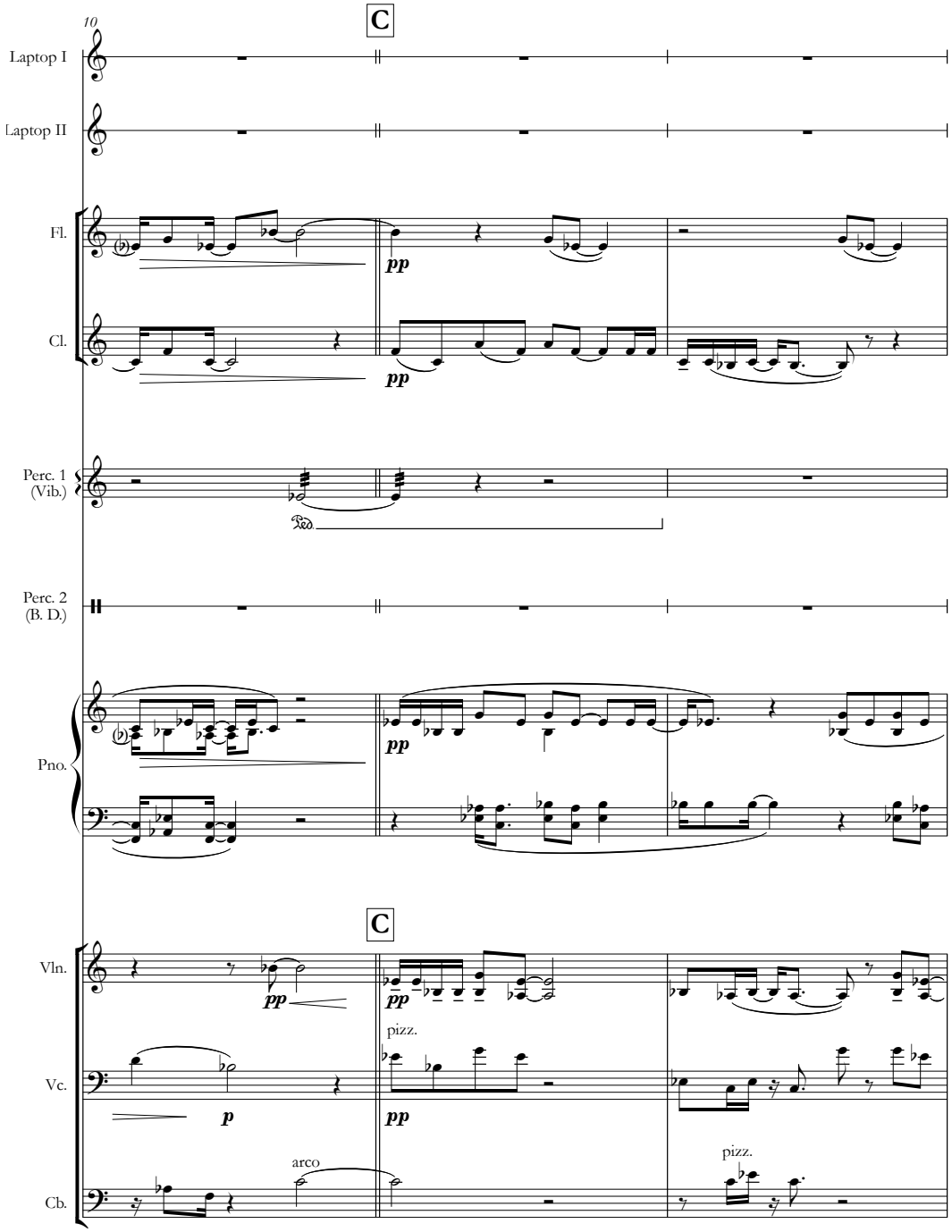
There Was No Question

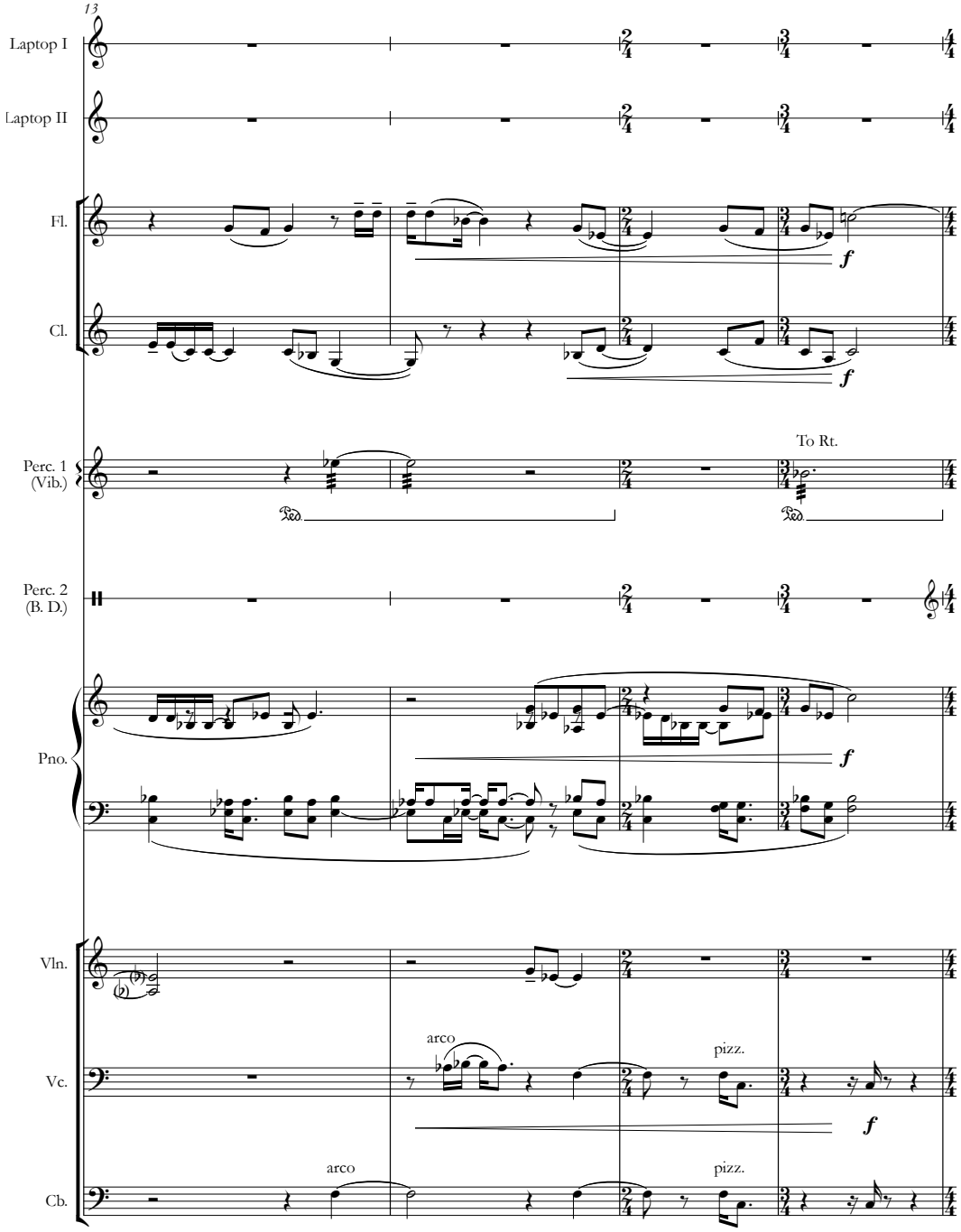
a series of interviews with John W. Moore

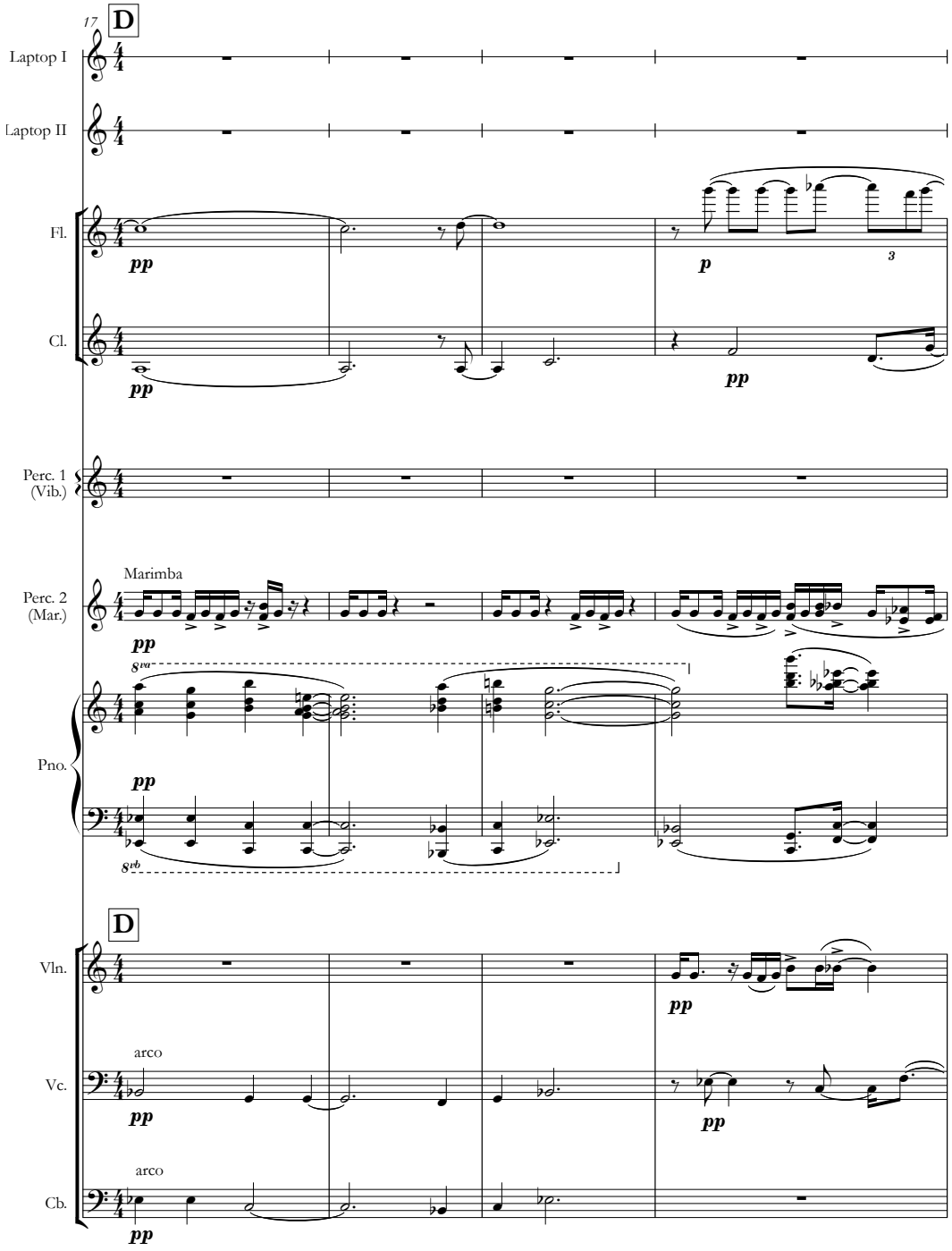
1. Winston Salem, 1930s

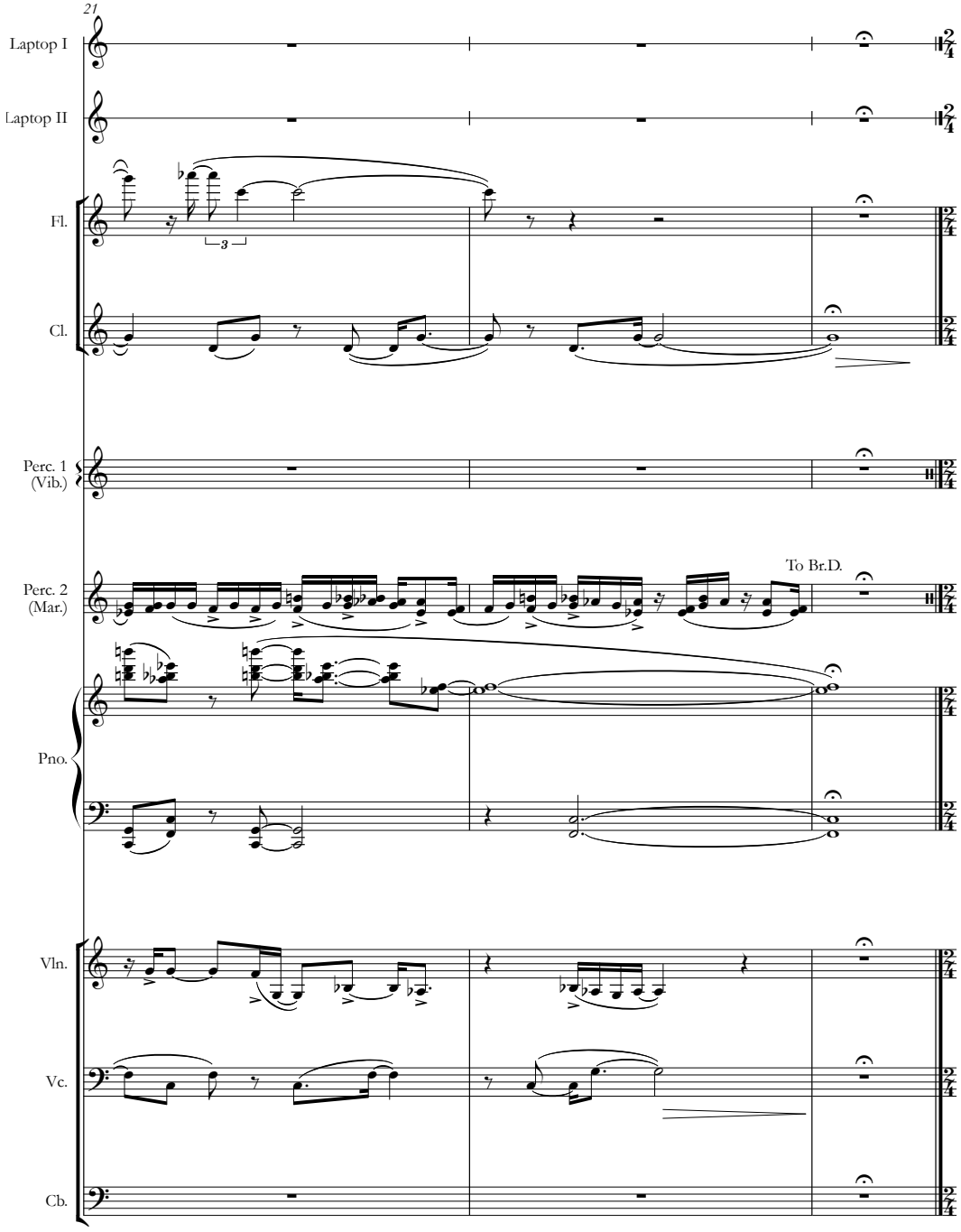



7
B
Laptop I
Laptop II
Fl.
Cl.
Perc. 1
(Vib.)
Perc. 2
(B. D.)
Pno.
B
solo
Vln.
Vc.
Cb.
pizz.

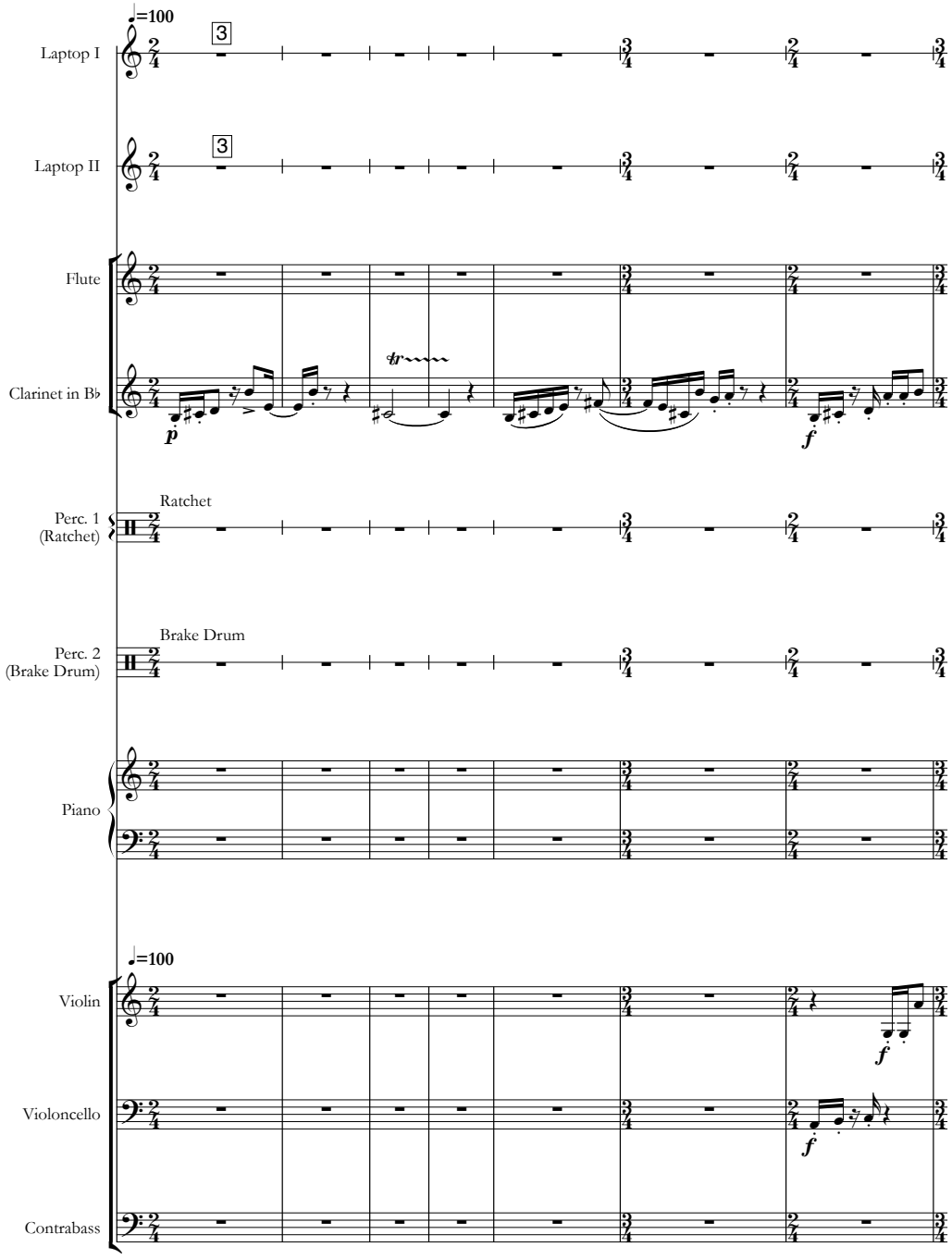

10
C
Laptop I
Laptop II
Fl.
Cl.
Perc. 1 (Vib.)
Perc. 2 (B. D.)
Pno.
C
Vln.
Vc.
Cb.
pp
p
pizz.
arco

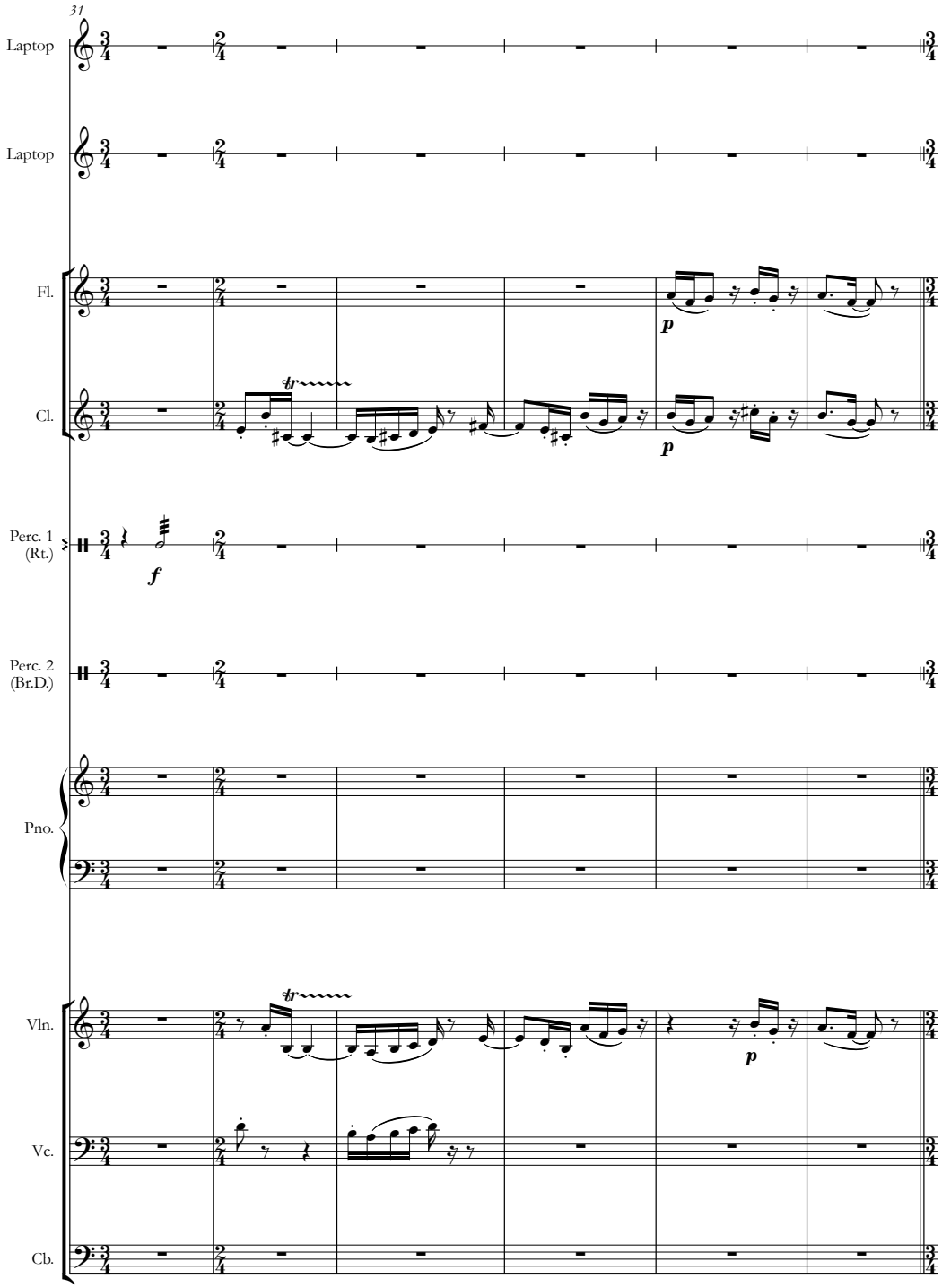

13
Laptop I
Laptop II
Fl.
Cl.
Perc. 1
(Vib.)
To Rt.
Perc. 2
(B. D.)
Pno.
Vln.
Vc.
Cb.
arco
pizz.
arco
pizz.

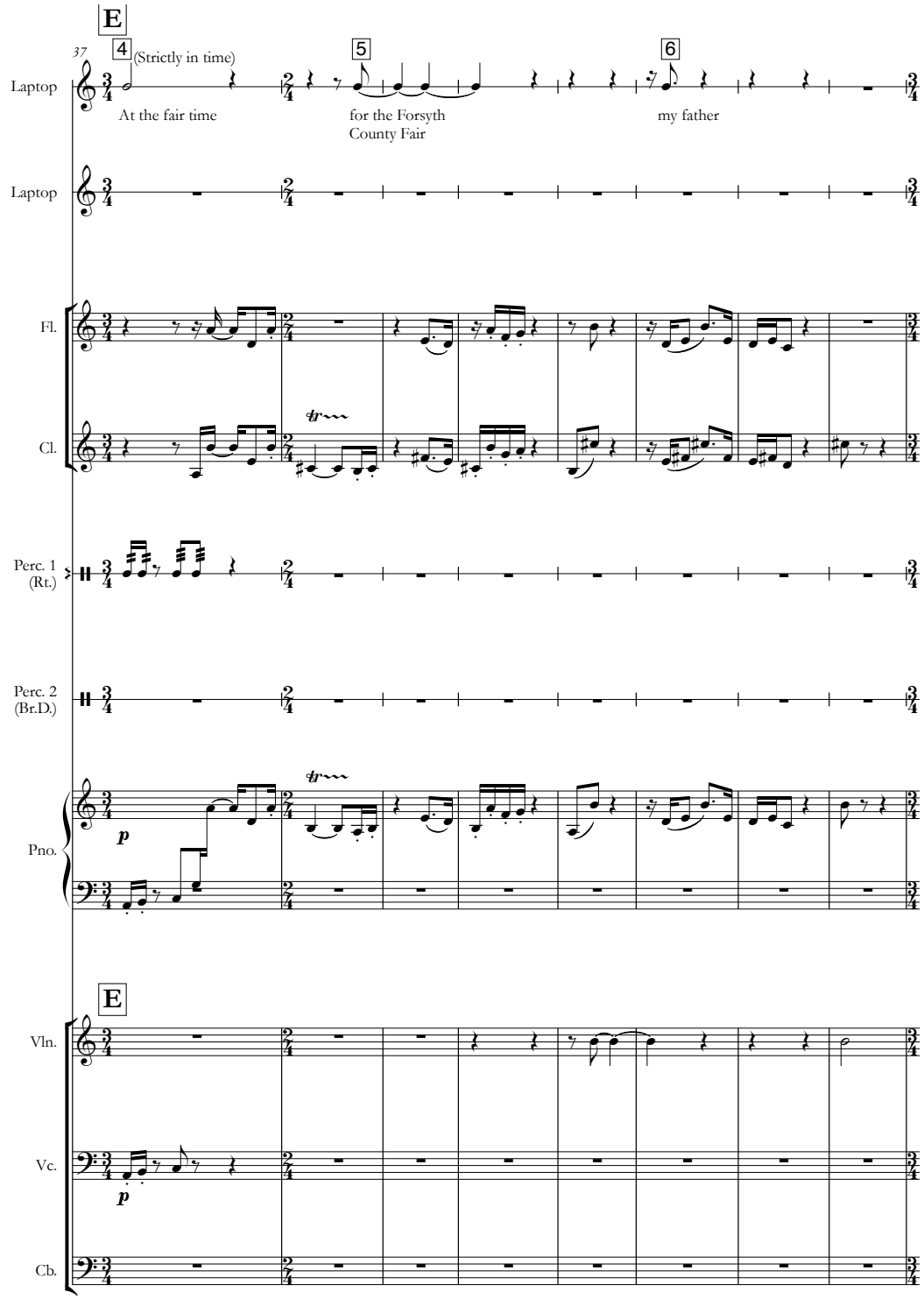

17
D
Laptop I
Laptop II
Fl.
pp
p
3
Cl.
pp
pp
Perc. 1
(Vib.)
Marimba
Perc. 2
(Mar.)
pp
8va
Pno.
pp
8vb
D
Vln.
pp
arco
Vc.
pp
pp
arco
Cb.
pp

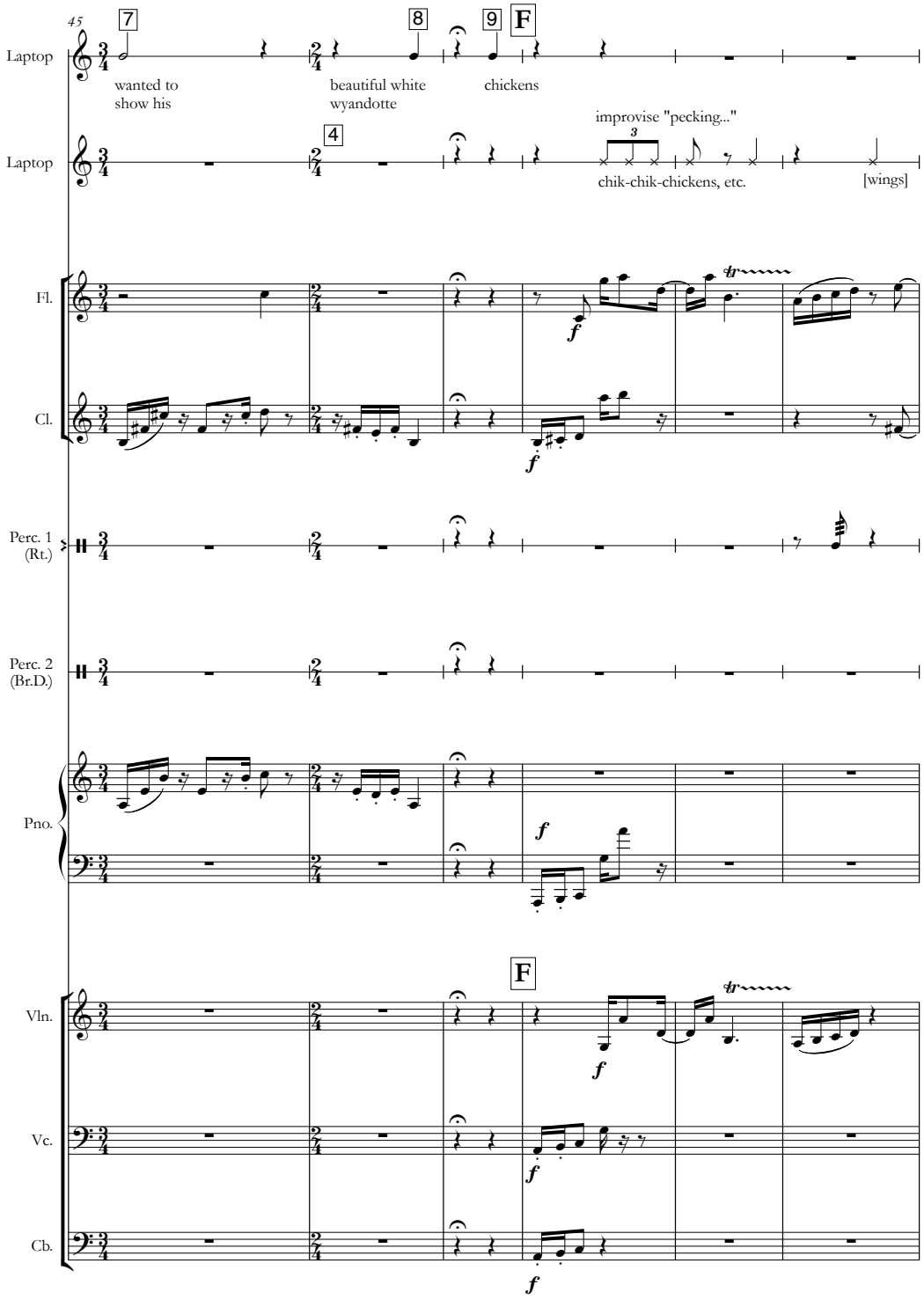

21
Laptop I
Laptop II
Fl.
Cl.
Perc. 1
(Vib.)
Perc. 2
(Mar.)
To Br.D.
Pno.
Vln.
Vc.
Cb.

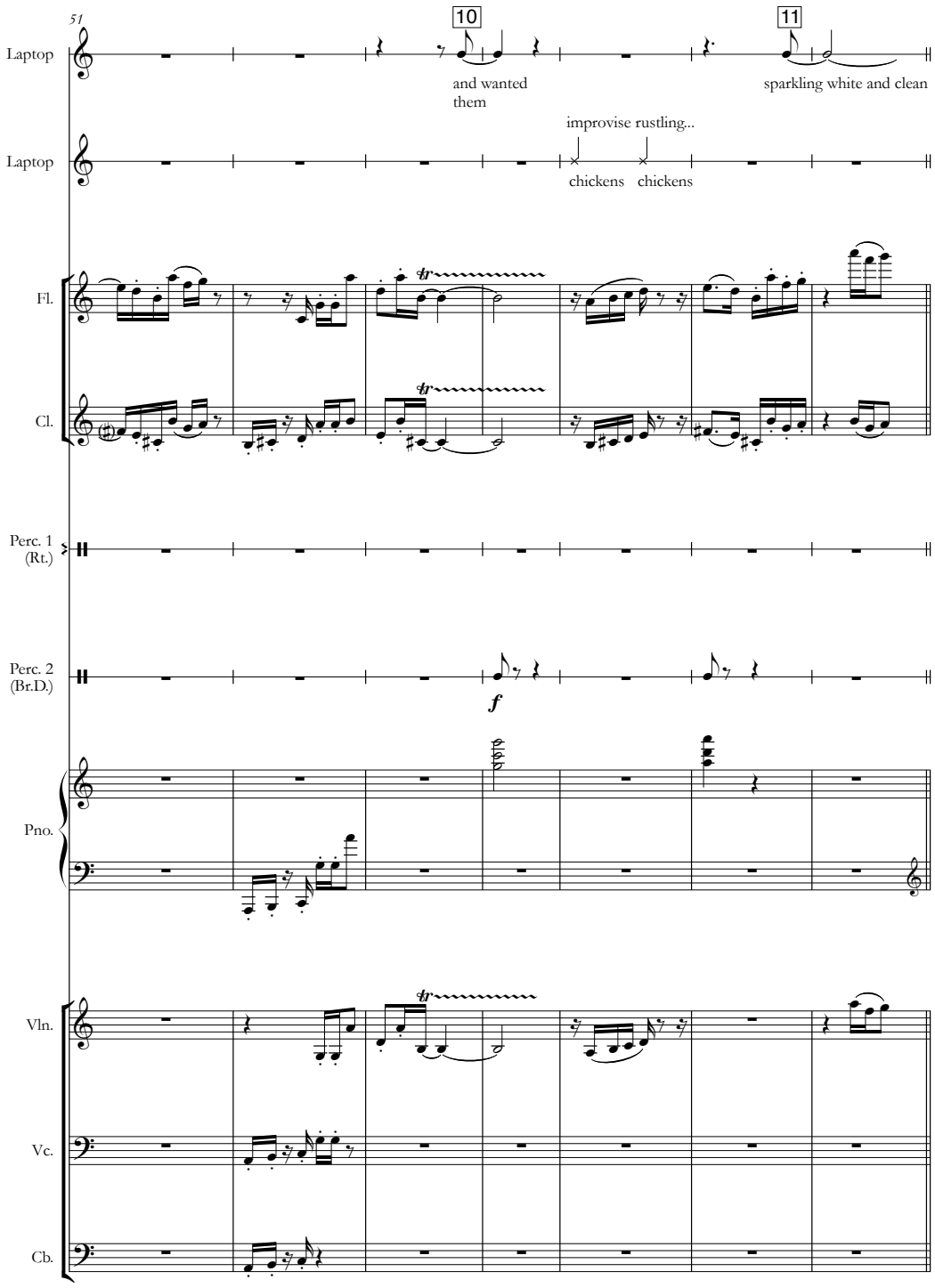
2. Chickens

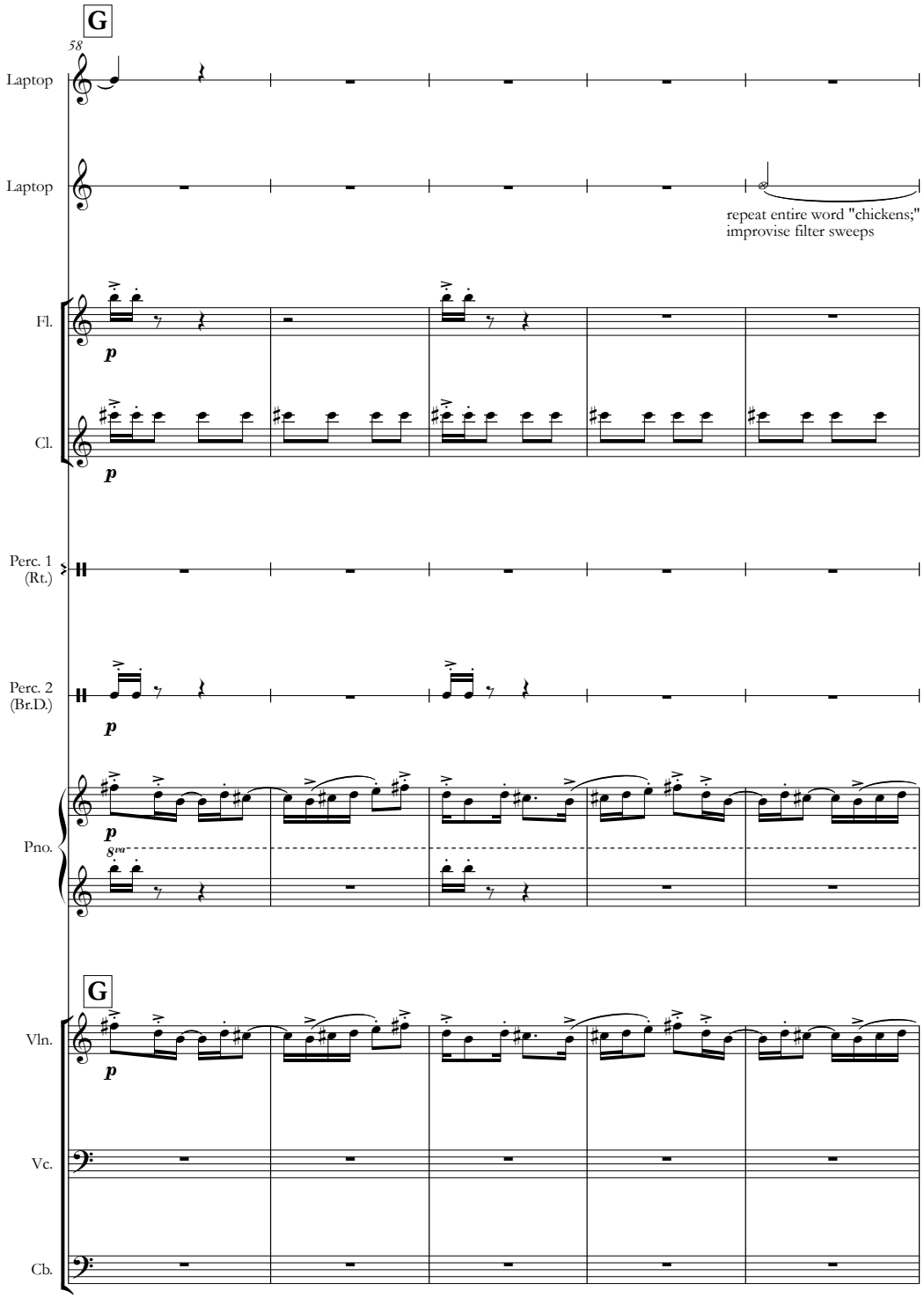

♩=100
Laptop I
3
Laptop II
3
Flute
Clarinet in B♭
tr
p
f
Ratchet
Perc. 1
(Ratchet)
Brake Drum
Perc. 2
(Brake Drum)
Piano
♩=100
Violin
f
Violoncello
f
Contrabass

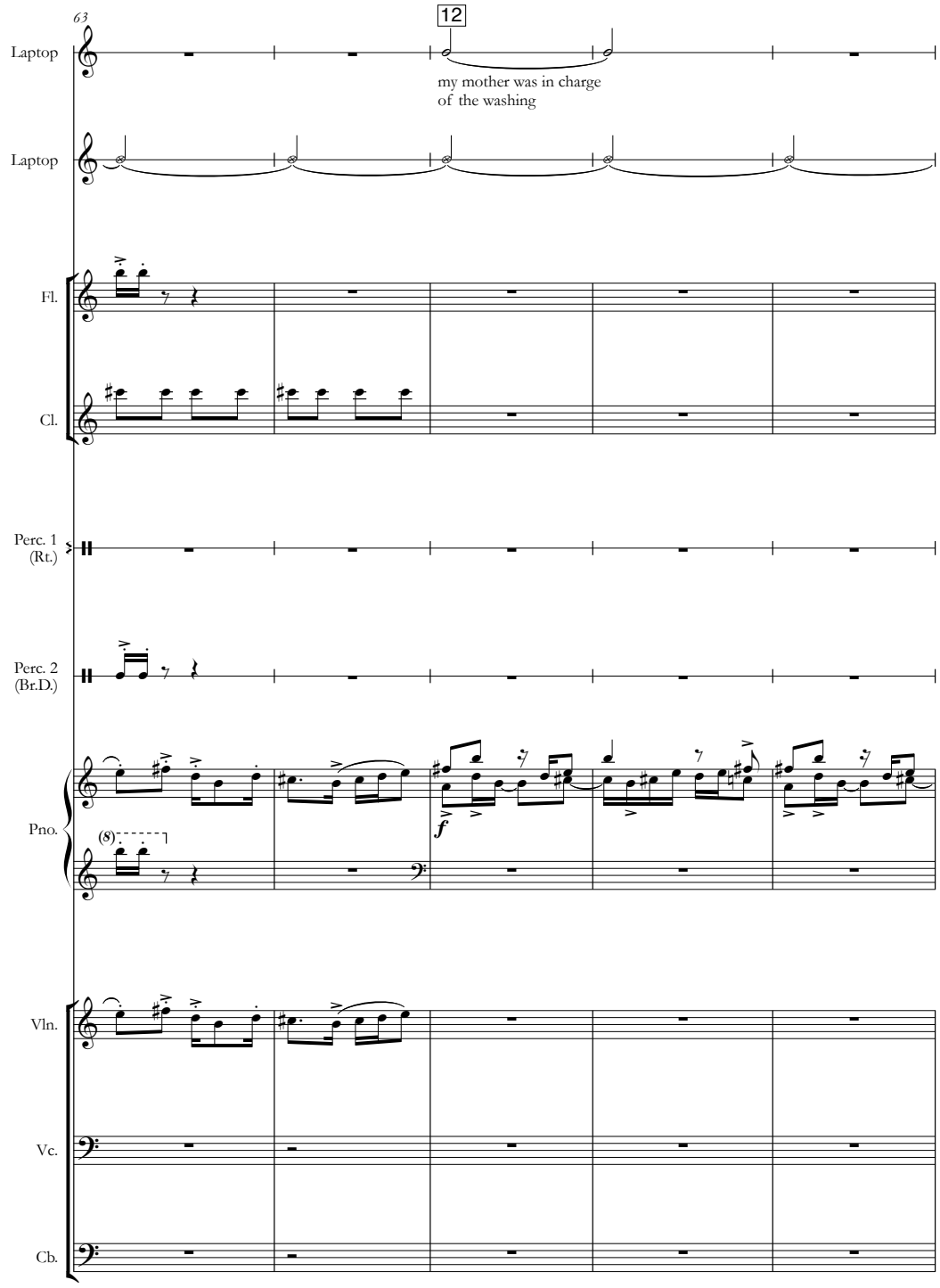

31
Laptop
Laptop
Fl.
Cl.
Perc. 1 (Rt.)
Perc. 2 (Br.D.)
Pno.
Vln.
Vc.
Cb.
p
p
f
p

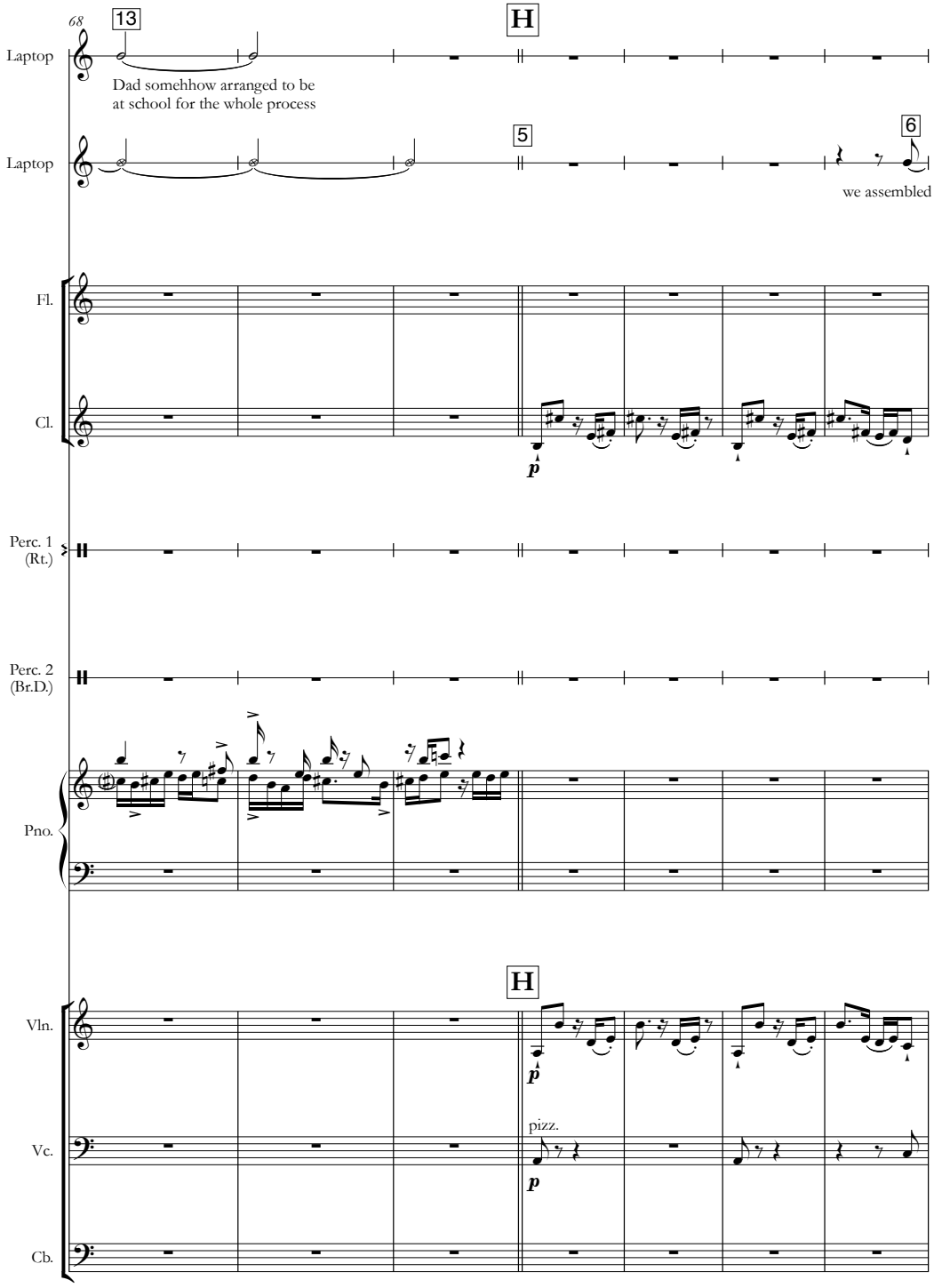

E
37
4
(Strictly in time)
5
6
Laptop
At the fair time
for the Forsyth
County Fair
my father
Laptop
Fl.
Cl.
Perc. 1
(Rt.)
Perc. 2
(Br.D.)
Pno.
p
E
Vln.
Vc.
p
Cb.

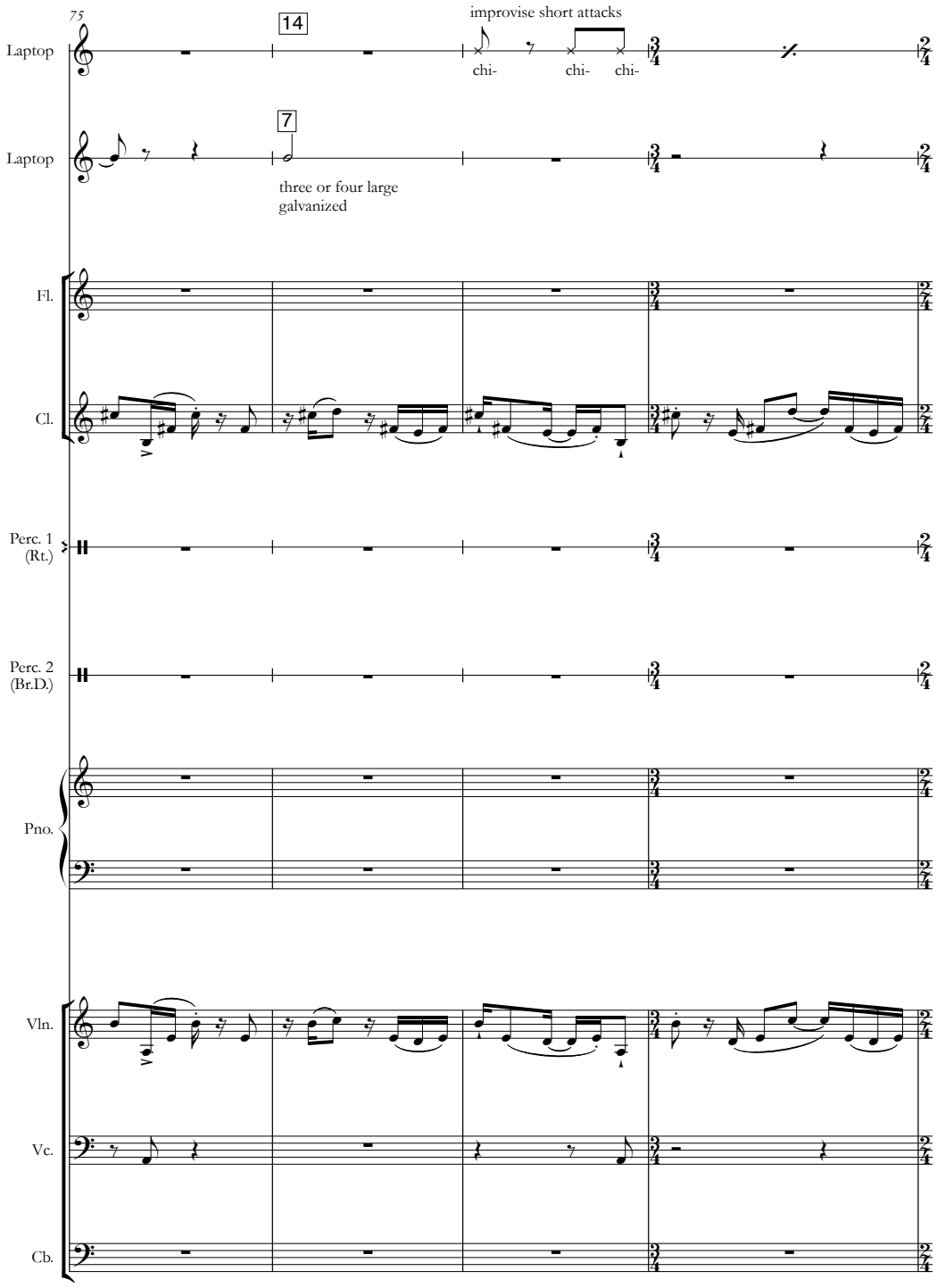

45
7
8
9
F
Laptop
wanted to
show his
beautiful white
wyandotte
chickens
improvise "pecking..."
Laptop
4
3
chik-chik-chickens, etc.
[wings]
Fl.
Cl.
Perc. 1
(Rt.)
Perc. 2
(Br.D.)
Pno.
F
Vln.
Vc.
Cb.

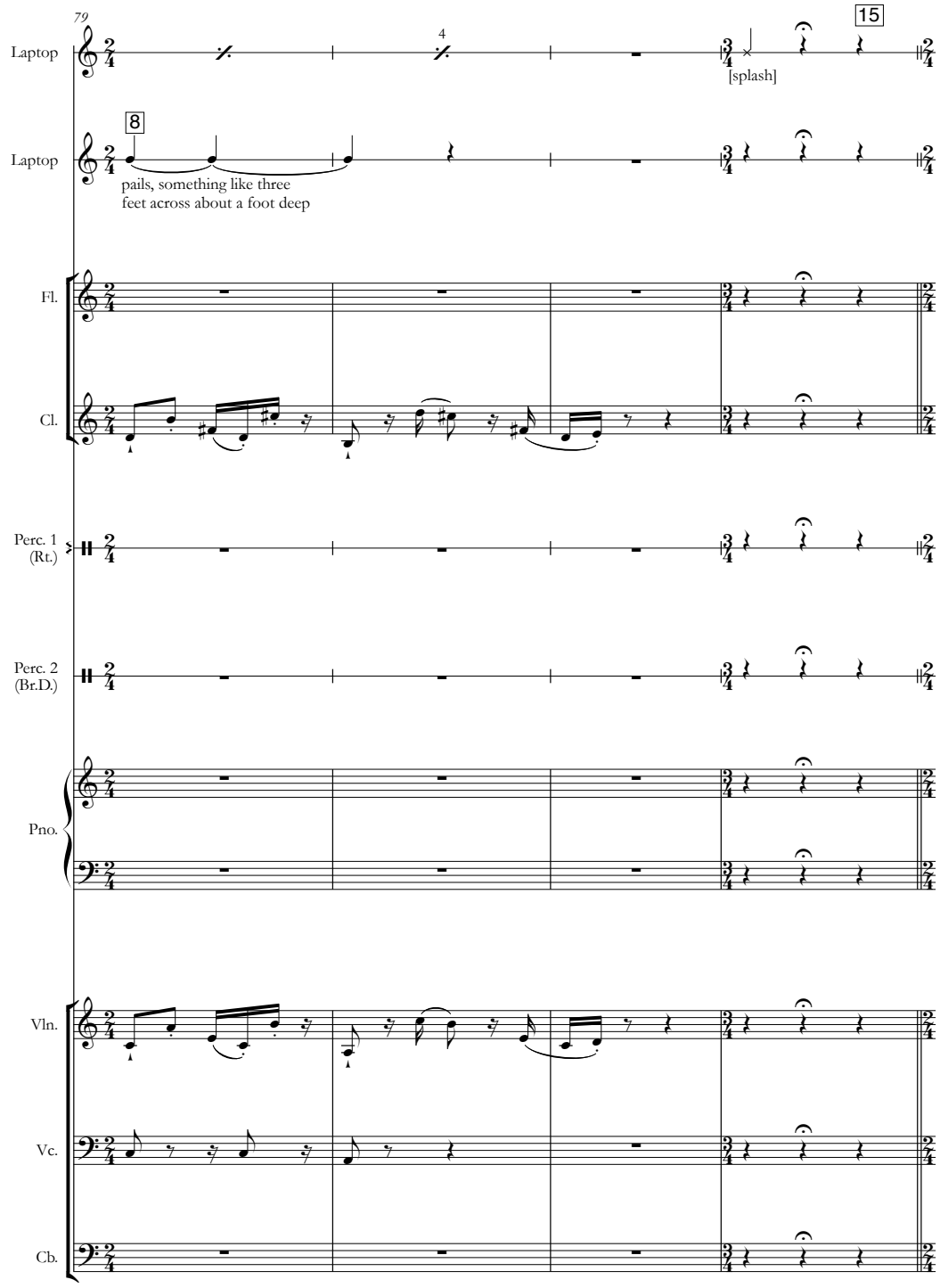

51
10
11
Laptop
and wanted them
sparkling white and clean
improvise rustling...
Laptop
chickens chickens
Fl.
Cl.
Perc. 1 (Rt.)
Perc. 2 (Br.D.)
f
Pno.
Vln.
Vc.
Cb.

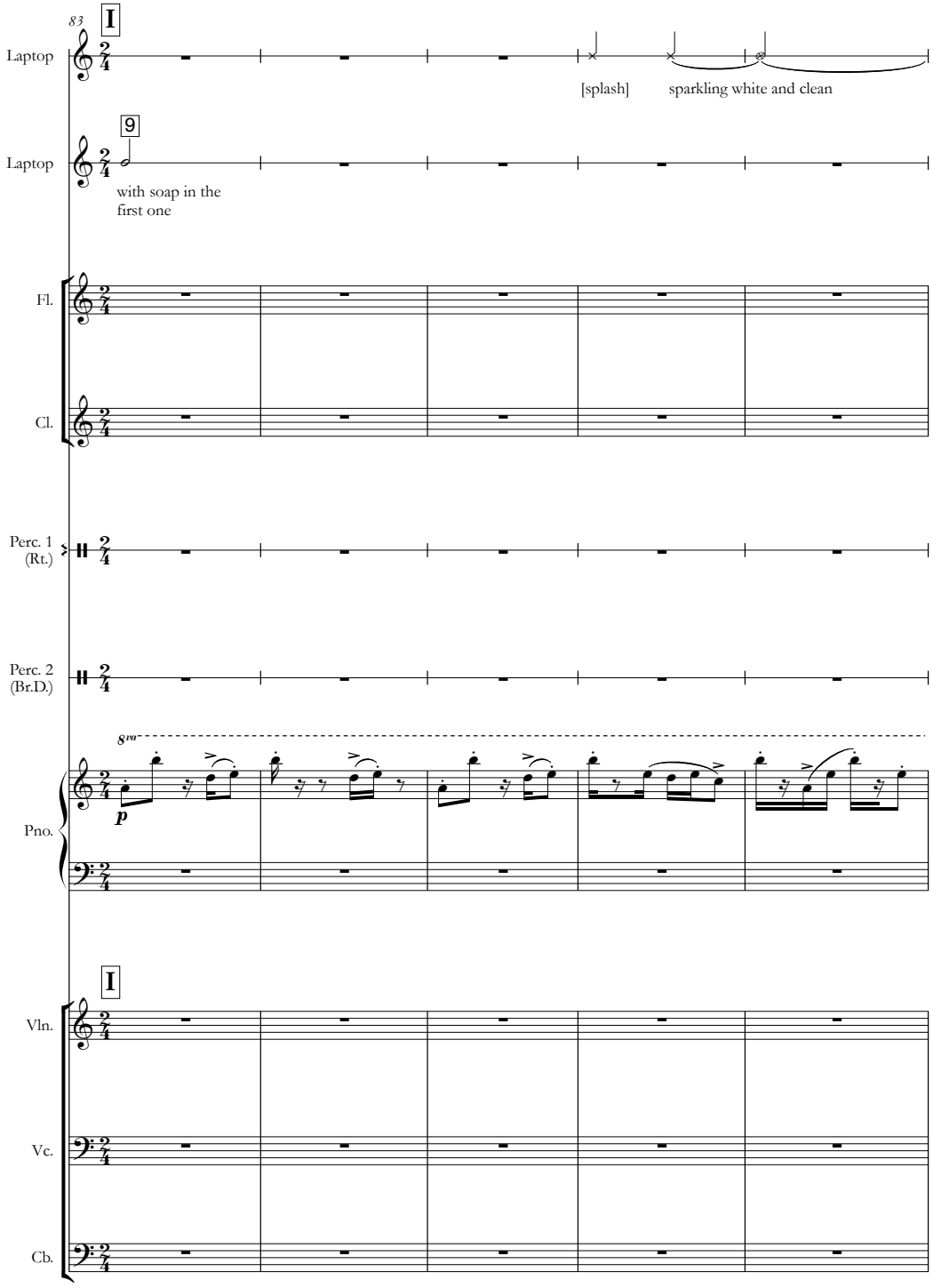

G
58
Laptop
Laptop
repeat entire word "chickens;"
improvise filter sweeps
Fl.
Cl.
p
p
Perc. 1
(Rt.)
Perc. 2
(Br.D.)
p
Pno.
p
8va
G
Vln.
p
Vc.
Cb.

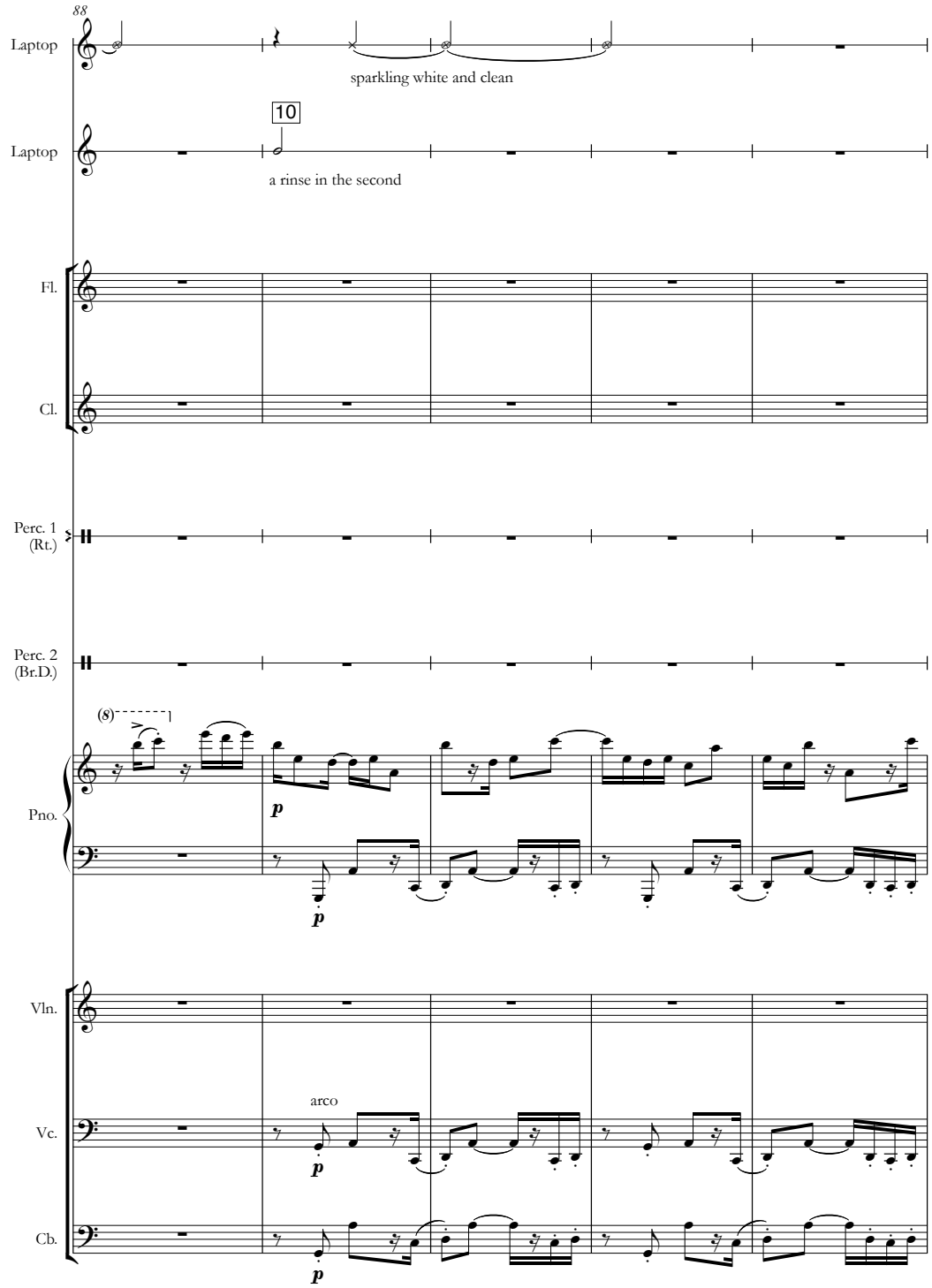

63
12
Laptop
my mother was in charge
of the washing
Laptop
Fl.
Cl.
Perc. 1
(Rt.)
Perc. 2
(Br.D.)
Pno.
(8)
f
Vln.
Vc.
Cb.

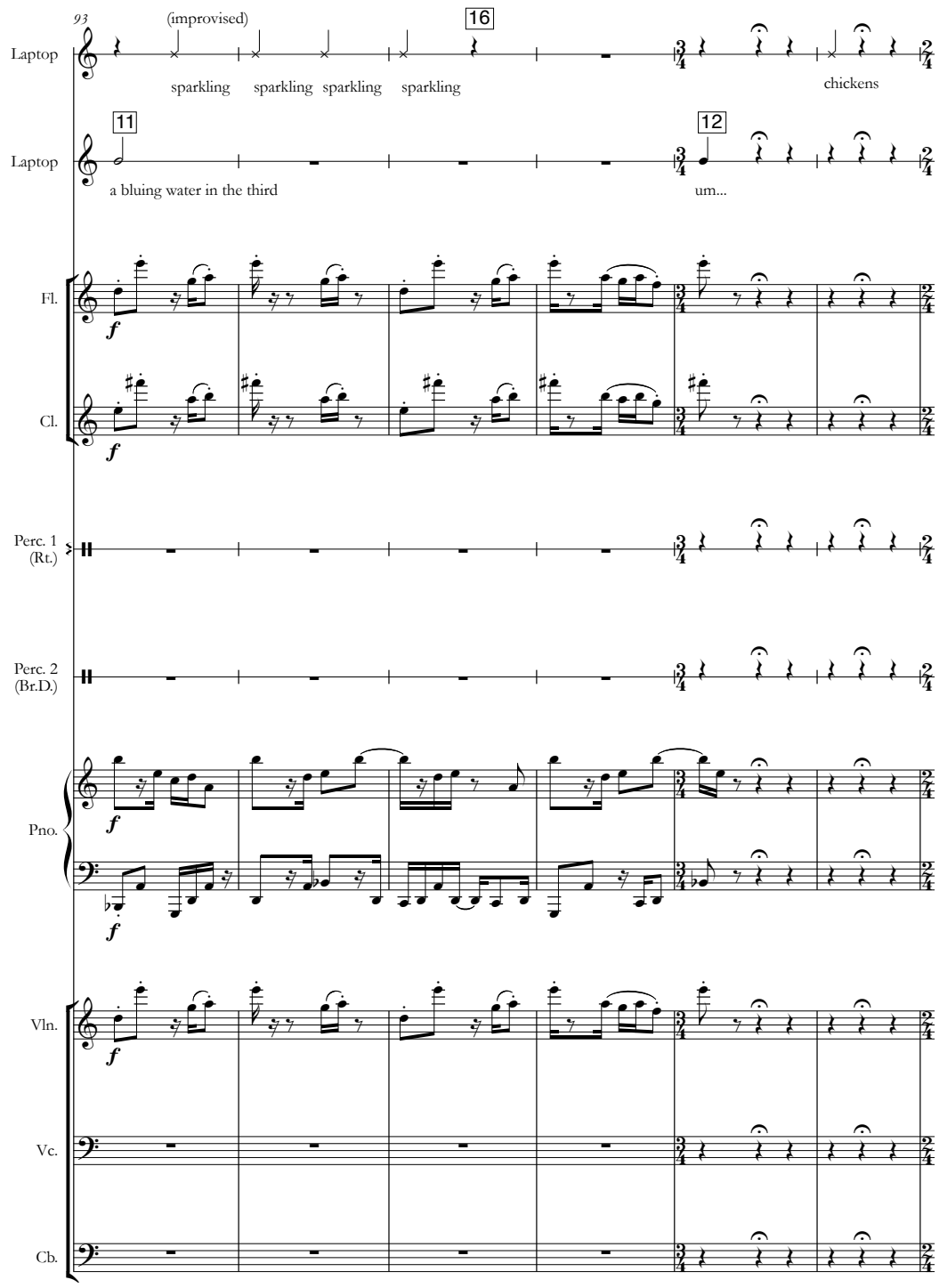

68
13
H
Laptop
Dad somehhow arranged to be
at school for the whole process
Laptop
5
6
we assembled
Fl.
Cl.
p
Perc. 1
(Rt.)
Perc. 2
(Br.D.)
Pno.
H
Vln.
p
Vc.
pizz.
p
Cb.

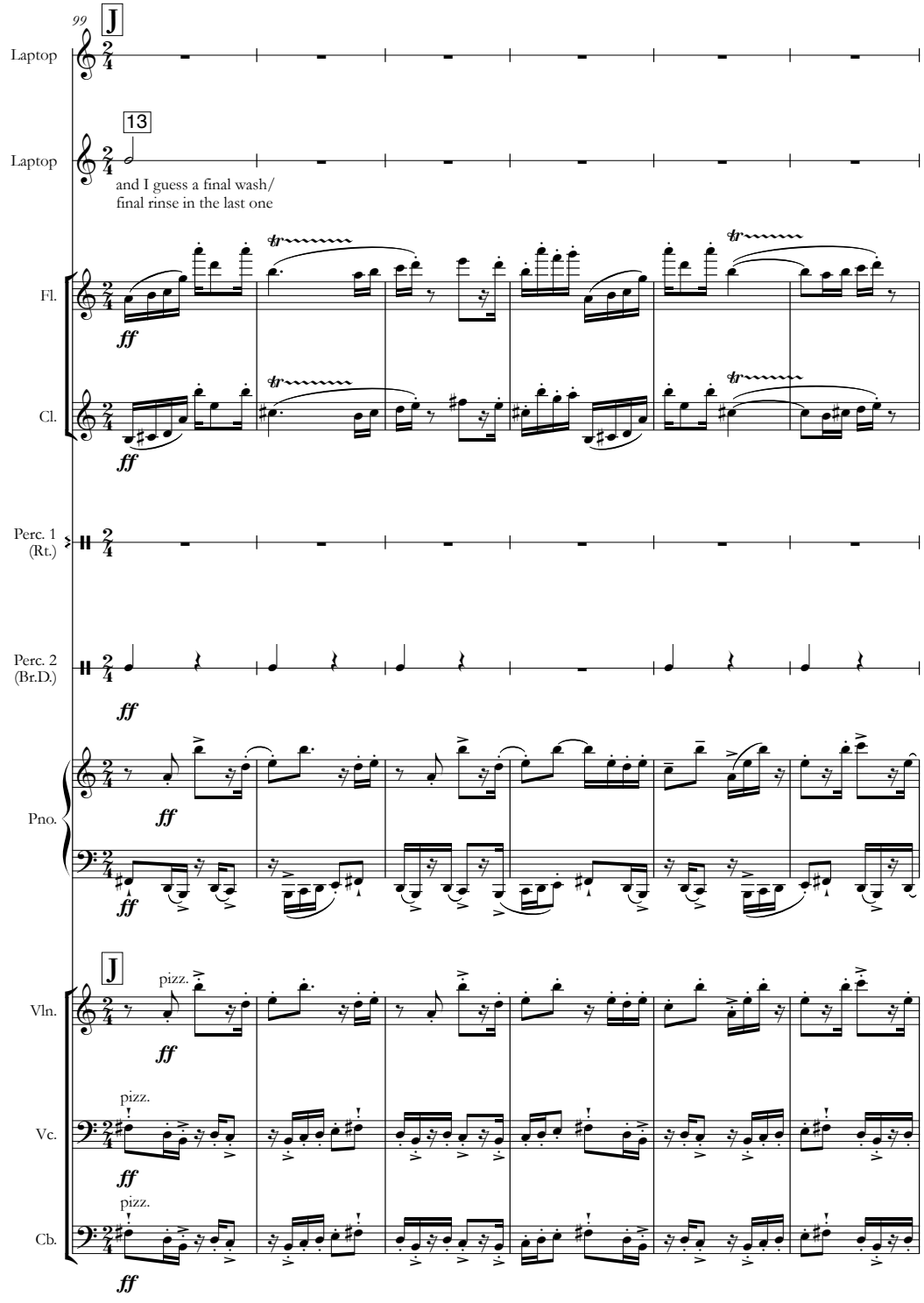

75
14
improvise short attacks
chi-
chi-
chi-
Laptop
7
Laptop
three or four large
galvanized
Fl.
Cl.
Perc. 1
(Rt.)
Perc. 2
(Br.D.)
Pno.
Vln.
Vc.
Cb.

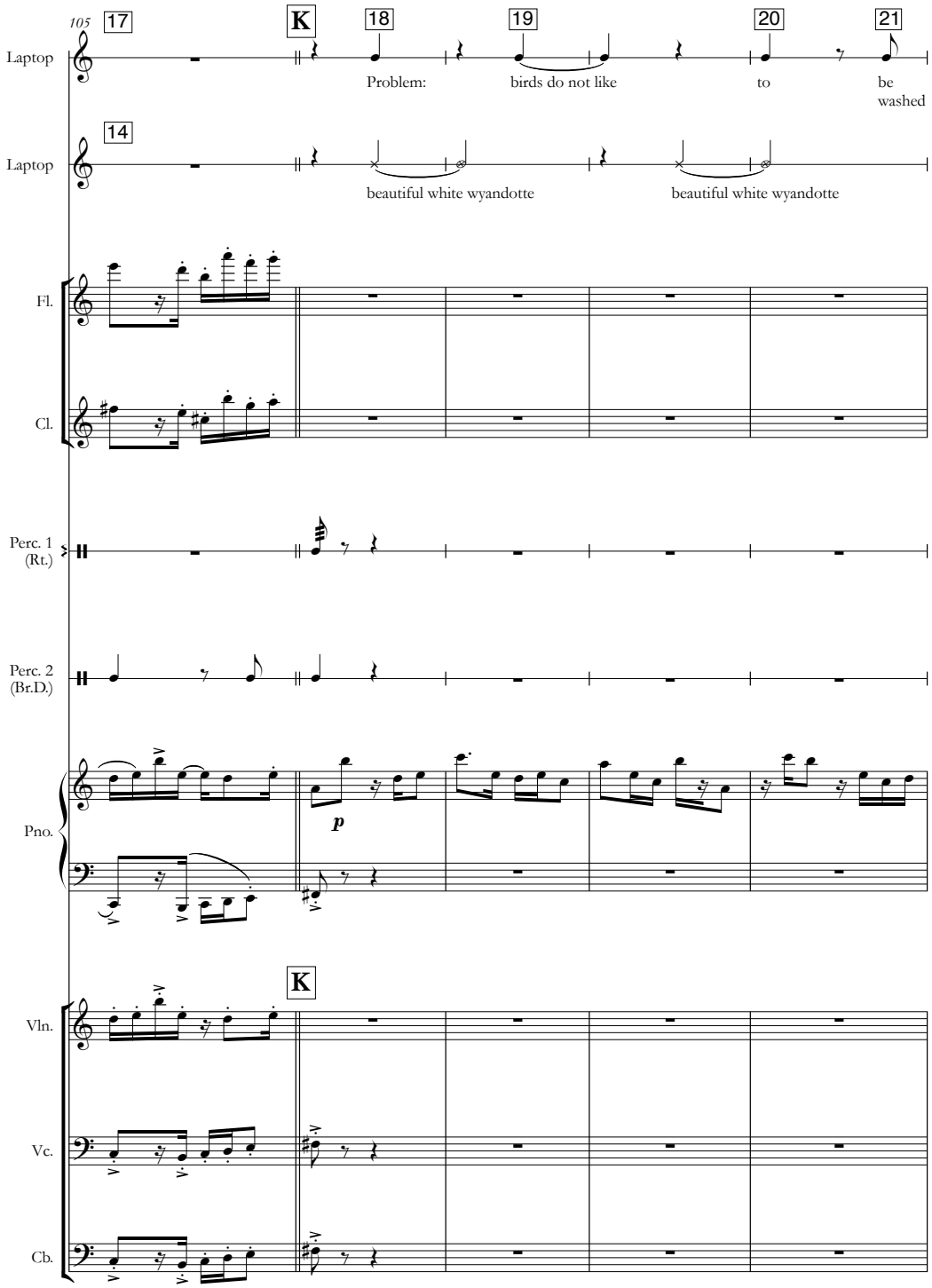

79
4
15
Laptop
[splash]
8
Laptop
pails, something like three
feet across about a foot deep
Fl.
Cl.
Perc. 1
(Rt.)
Perc. 2
(Br.D.)
Pno.
Vln.
Vc.
Cb.

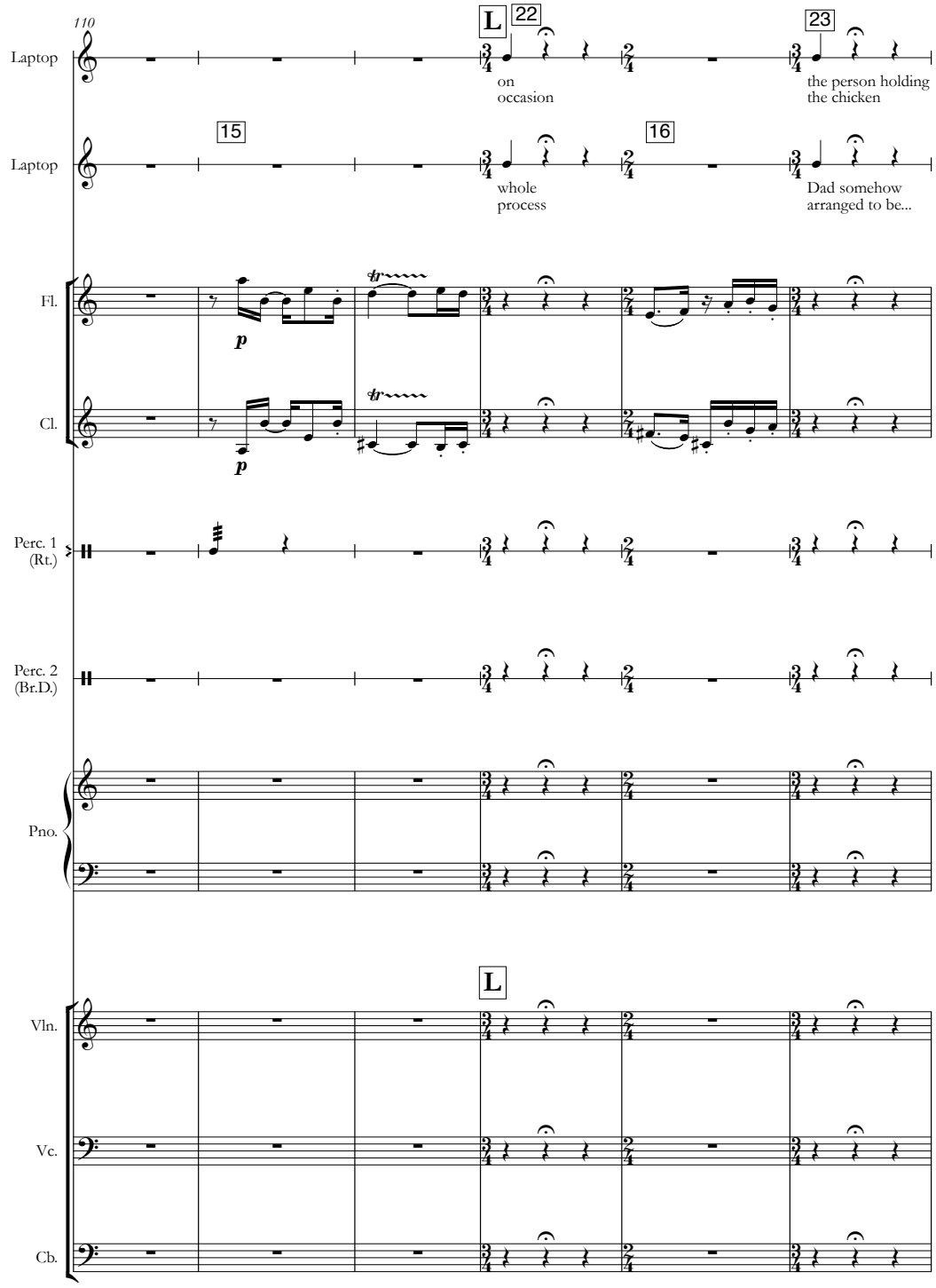

83
I
Laptop
[splash]
sparkling white and clean
9
Laptop
with soap in the
first one
Fl.
Cl.
Perc. 1
(Rt.)
Perc. 2
(Br.D.)
8va
p
Pno.
I
Vln.
Vc.
Cb.

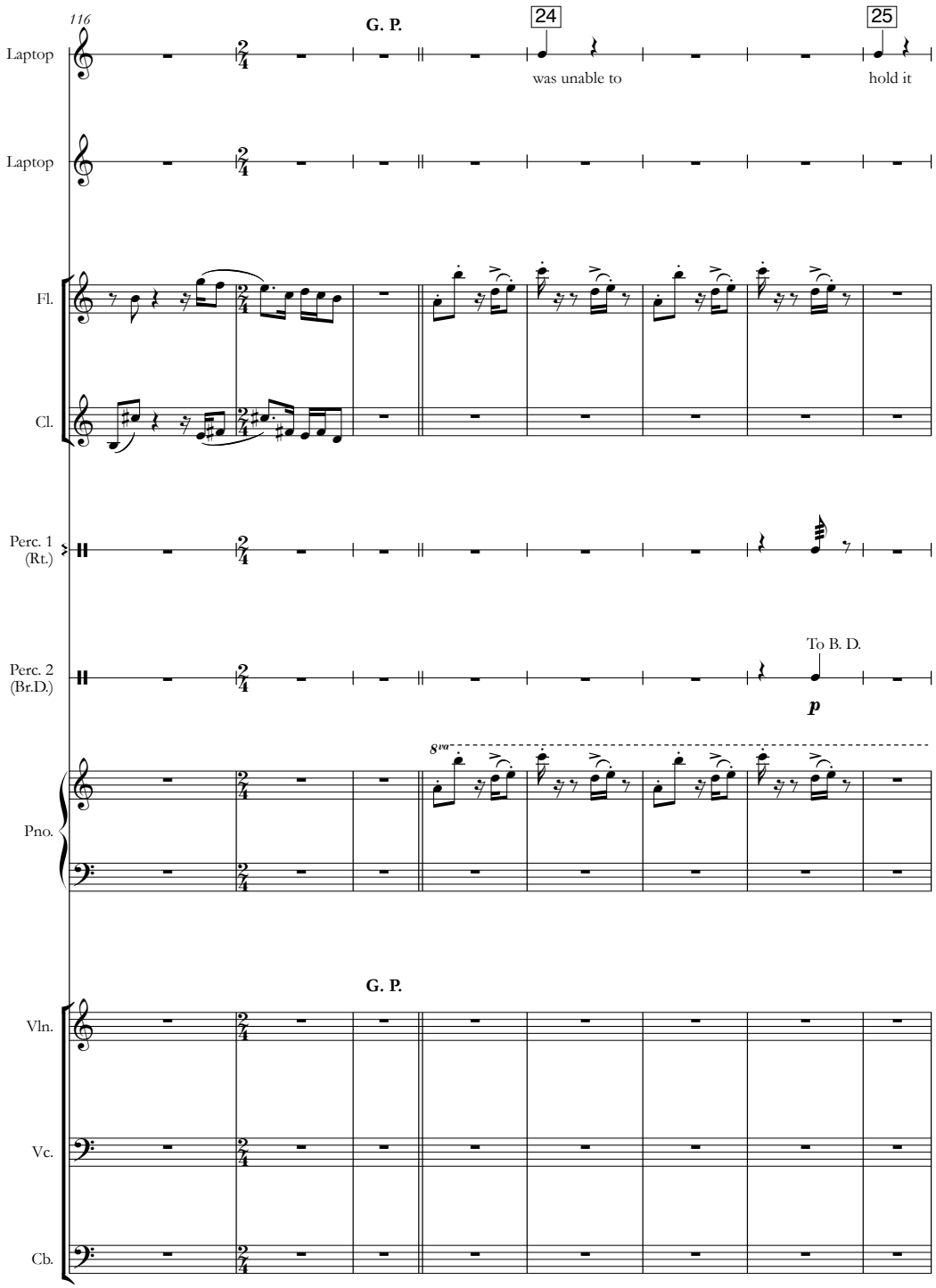

88
Laptop
sparkling white and clean
10
Laptop
a rinse in the second
Fl.
Cl.
Perc. 1 (Rt.)
Perc. 2 (Br.D.)
(8)
p
Pno.
p
Vln.
arco
Vc.
p
Cb.
p

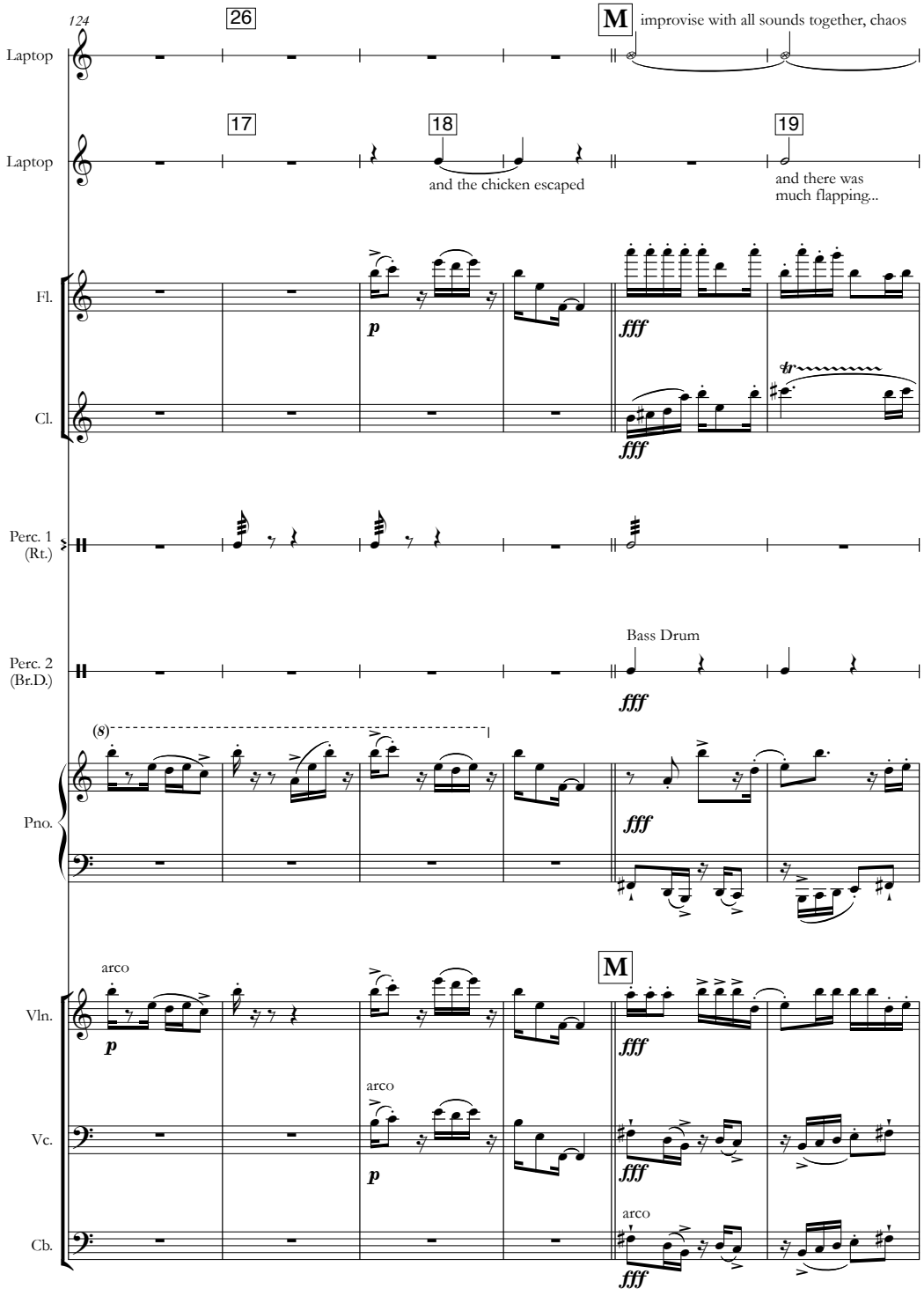

93
(improvised)
16
Laptop
sparkling
sparkling
sparkling
sparkling
chickens
11
12
Laptop
a bluing water in the third
um...
Fl.
Cl.
Perc. 1 (Rt.)
Perc. 2 (Br.D.)
Pno.
Vln.
Vc.
Cb.

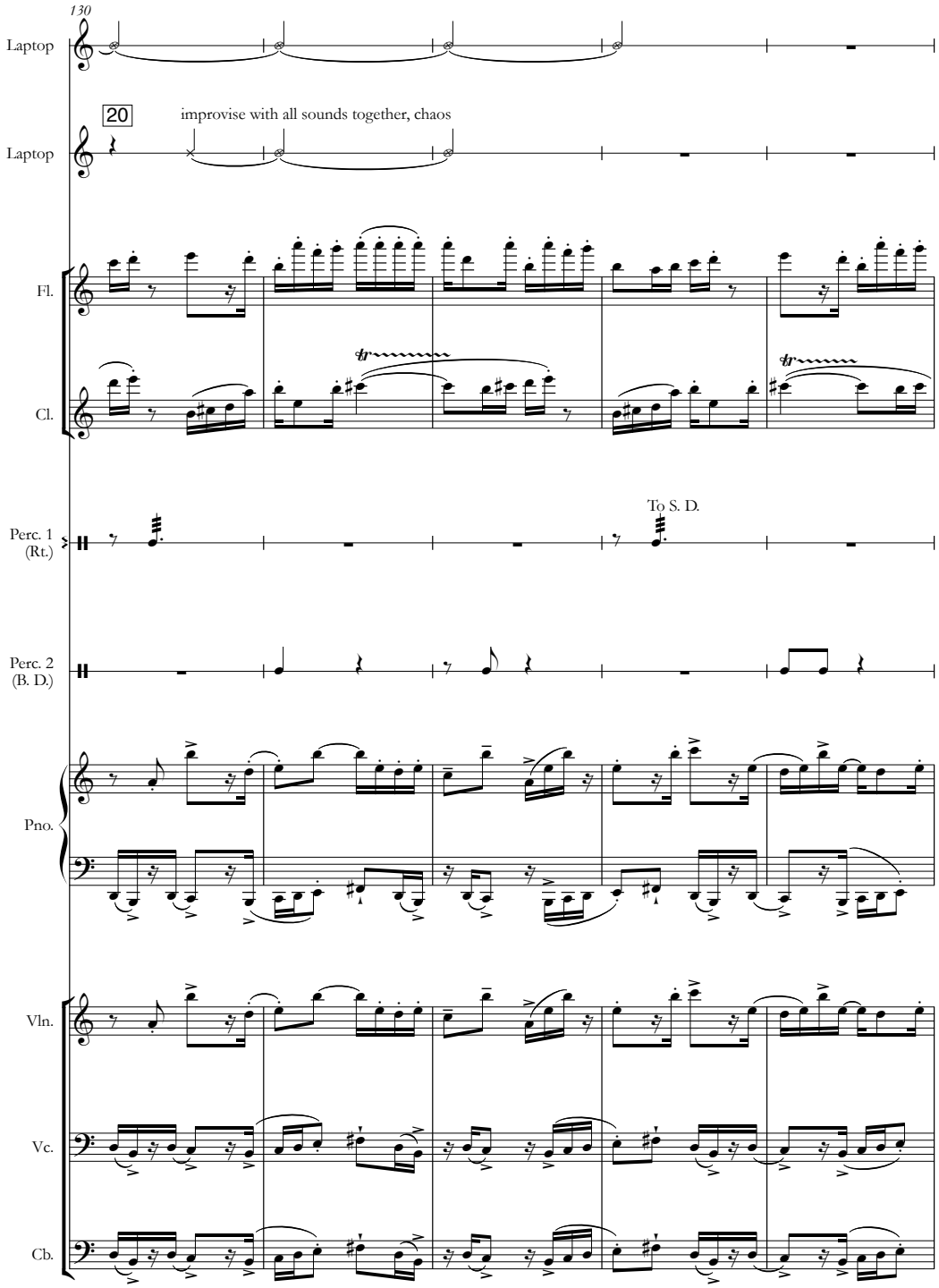

99
J
Laptop
13
Laptop
and I guess a final wash/
final rinse in the last one
Fl.
Cl.
Perc. 1
(Rt.)
Perc. 2
(Br.D.)
Pno.
J
pizz.
Vln.
pizz.
Vc.
pizz.
Cb.

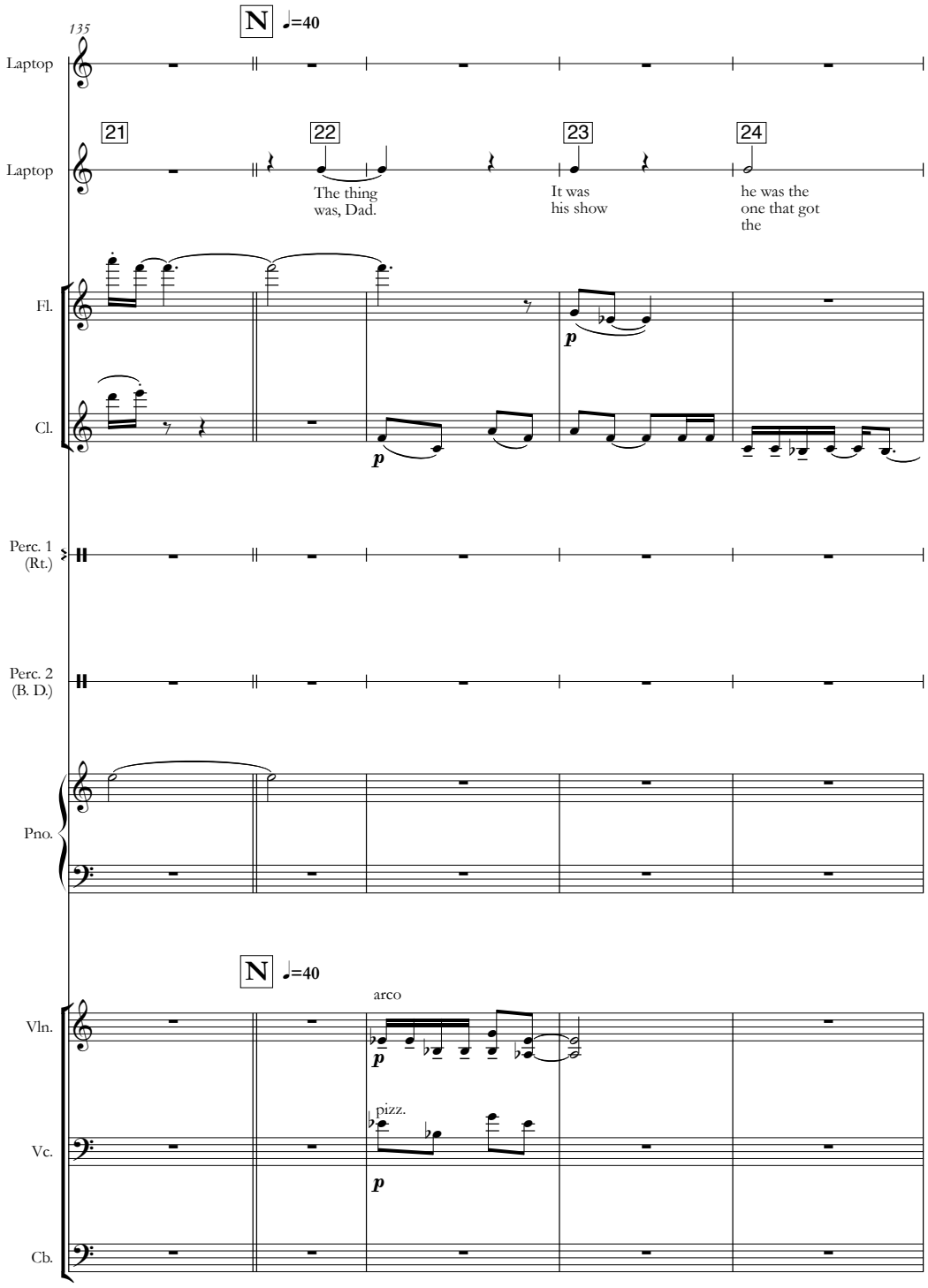

105
17
K
18
19
20
21
Laptop
Problem:
birds do not like
to
be
washed
14
Laptop
beautiful white wyandotte
beautiful white wyandotte
Fl.
Cl.
Perc. 1
(Rt.)
Perc. 2
(Br.D.)
Pno.
p
K
Vln.
Vc.
Cb.

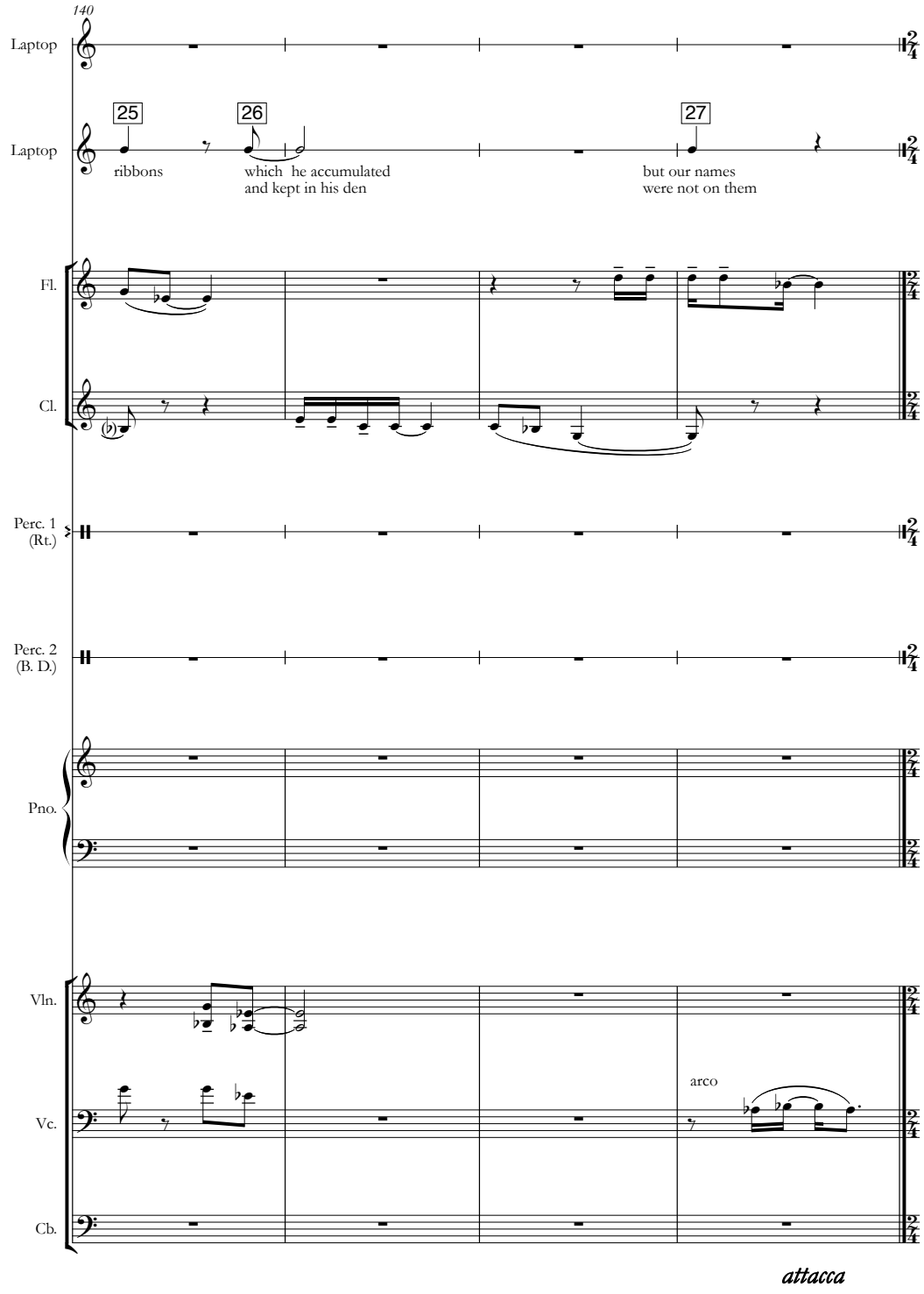

110
Laptop
L
22
23
on
occasion
the person holding
the chicken
15
16
Laptop
whole
process
Dad somehow
arranged to be...
Fl.
Cl.
p
p
Perc. 1
(Rt.)
Perc. 2
(Br.D.)
Pno.
L
Vln.
Vc.
Cb.


116
G. P.
24
25
Laptop
was unable to
hold it
Laptop
Fl.
Cl.
Perc. 1
(Rt.)
Perc. 2
(Br.D.)
To B. D.
p
8va
Pno.
G. P.
Vln.
Vc.
Cb.

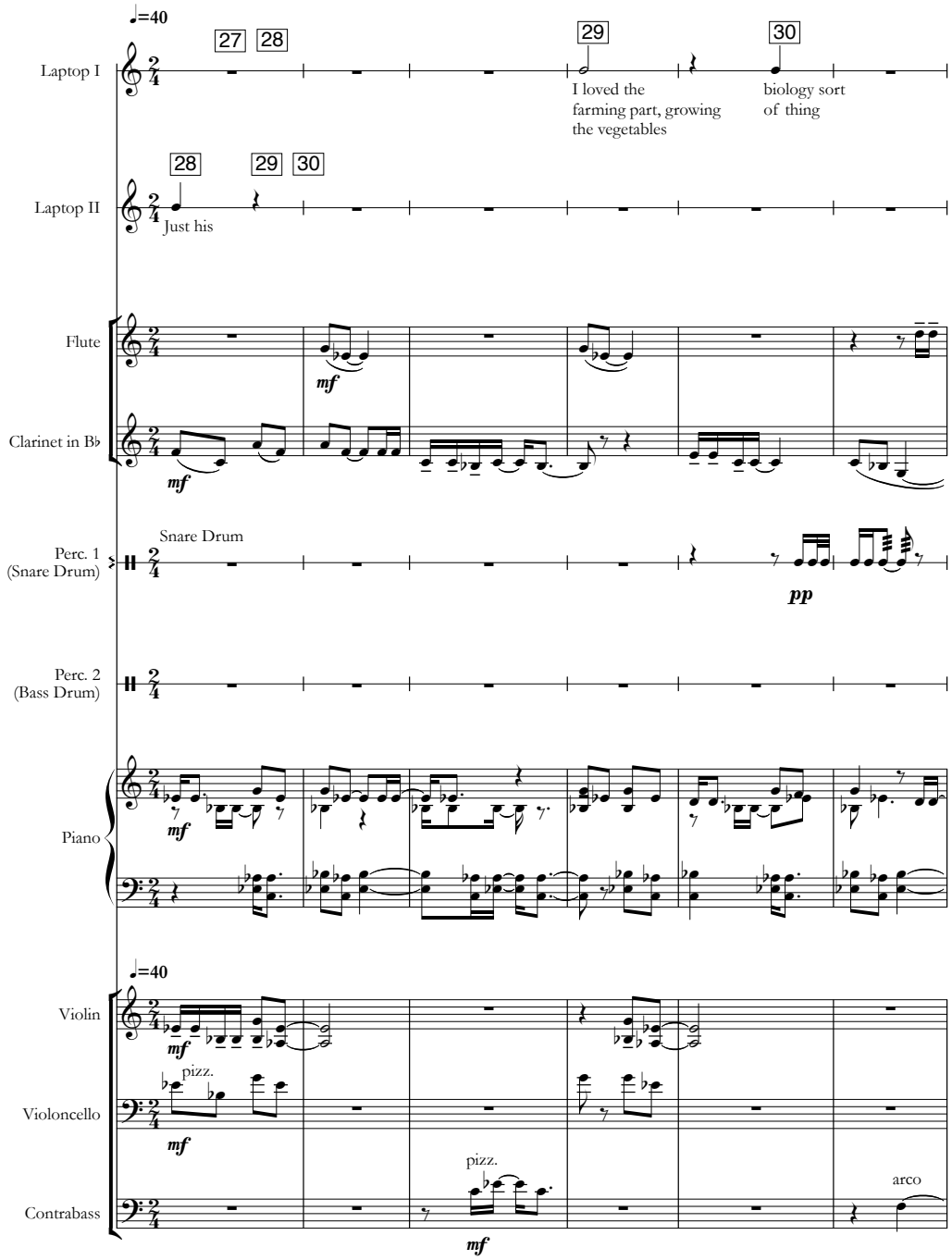

124
26
M
improvise with all sounds together, chaos
Laptop
17
18
19
Laptop
and the chicken escaped
and there was
much flapping...
Fl.
Cl.
Perc. 1
(Rt.)
Perc. 2
(Br.D.)
Bass Drum
Pno.
arco
Vln.
Vc.
Cb.
p
fff
tr

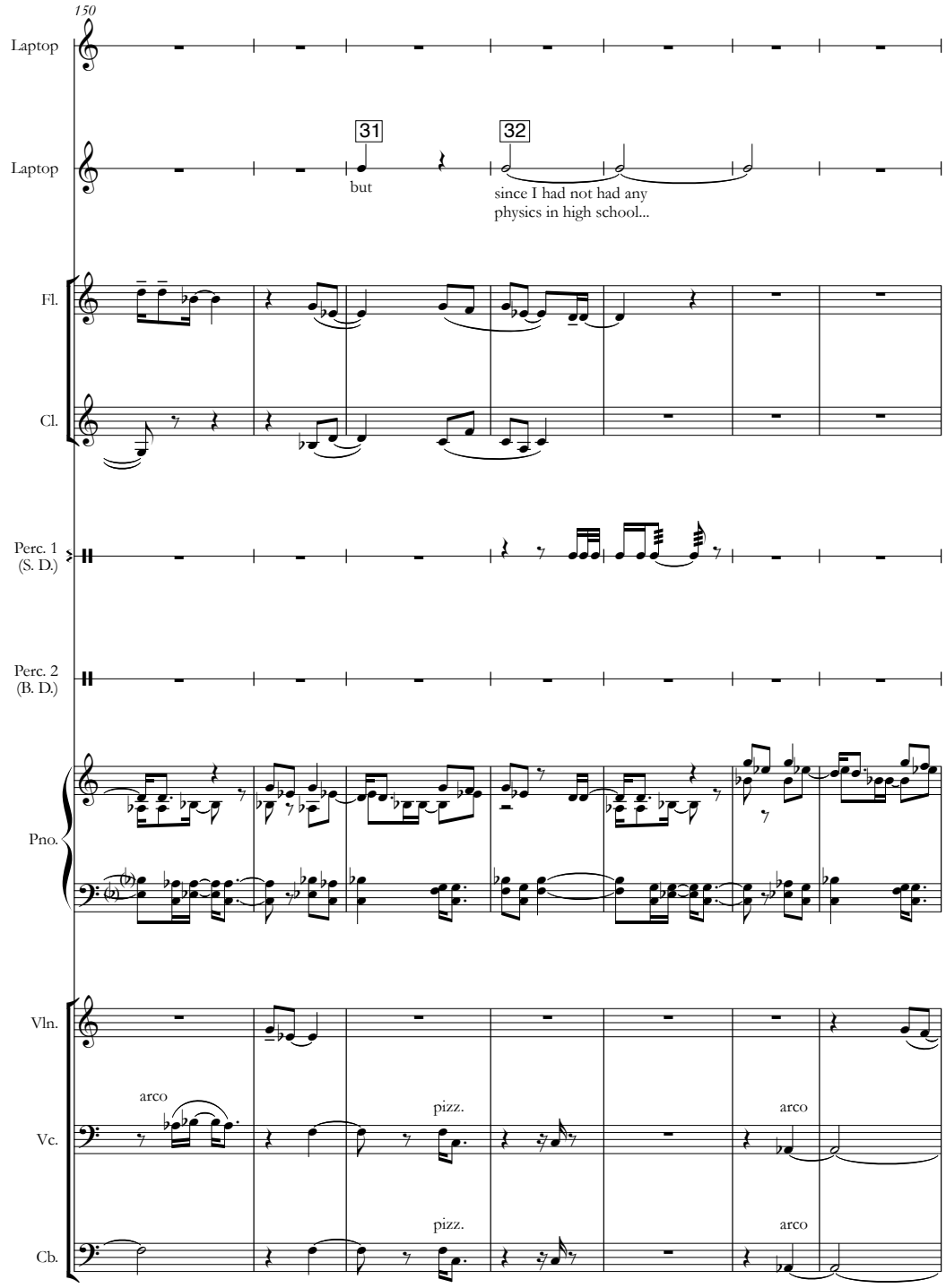

130
Laptop
20
improvise with all sounds together, chaos
Laptop
Fl.
Cl.
To S. D.
Perc. 1
(Rt.)
Perc. 2
(B. D.)
Pno.
Vln.
Vc.
Cb.

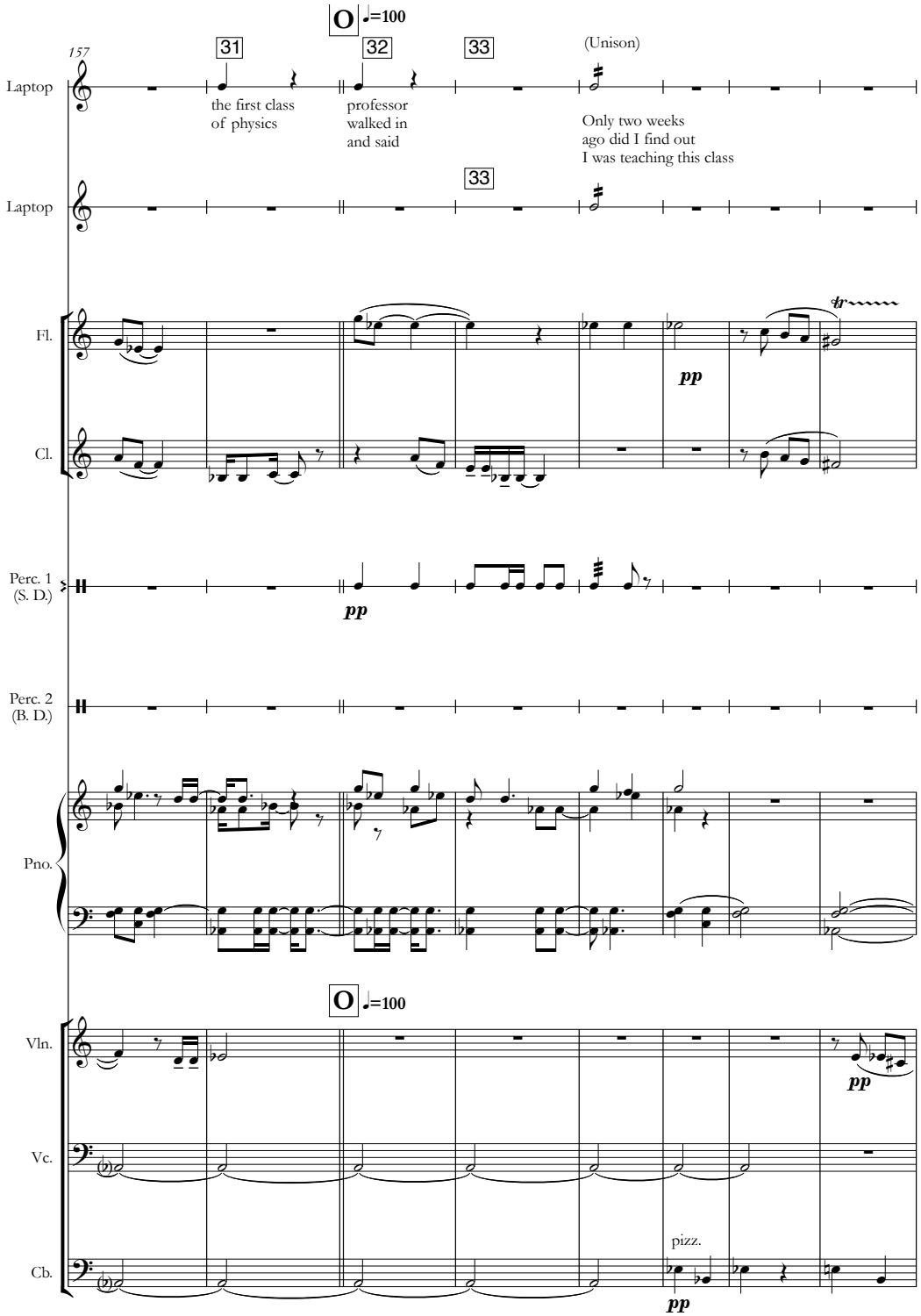

135
N ♩=40
Laptop
21
22
23
24
Laptop
The thing
was, Dad.
It was
his show
he was the
one that got
the
Fl.
Cl.
p
p
Perc. 1
(Rt.)
Perc. 2
(B. D.)
Pno.
N ♩=40
arco
Vln.
p
pizz.
Vc.
p
Cb.

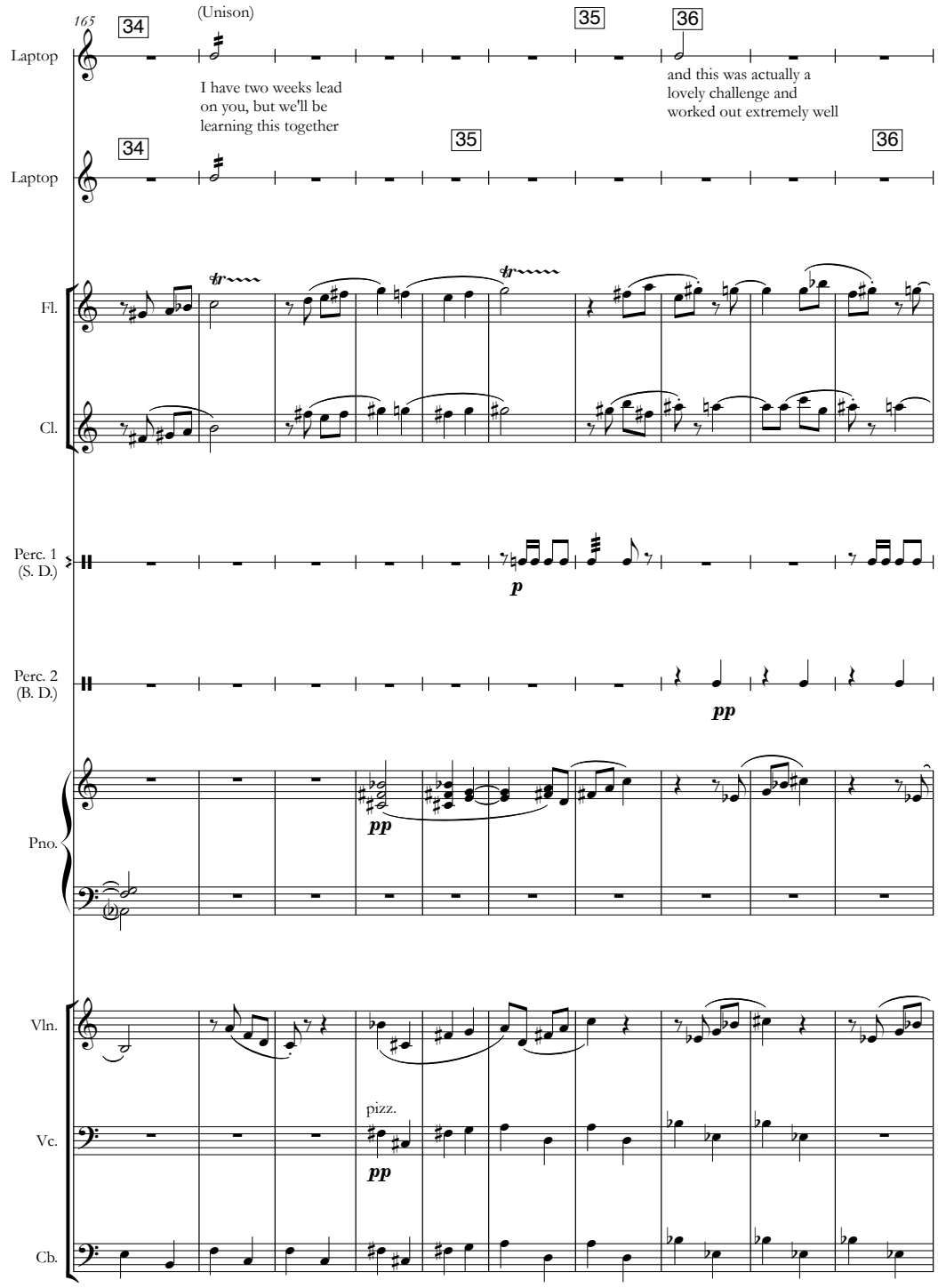

140
Laptop
25
26
27
Laptop
ribbons
which he accumulated
and kept in his den
but our names
were not on them
Fl.
Cl.
Perc. 1
(Rt.)
Perc. 2
(B. D.)
Pno.
Vln.
arco
Vc.
Cb.
attacca

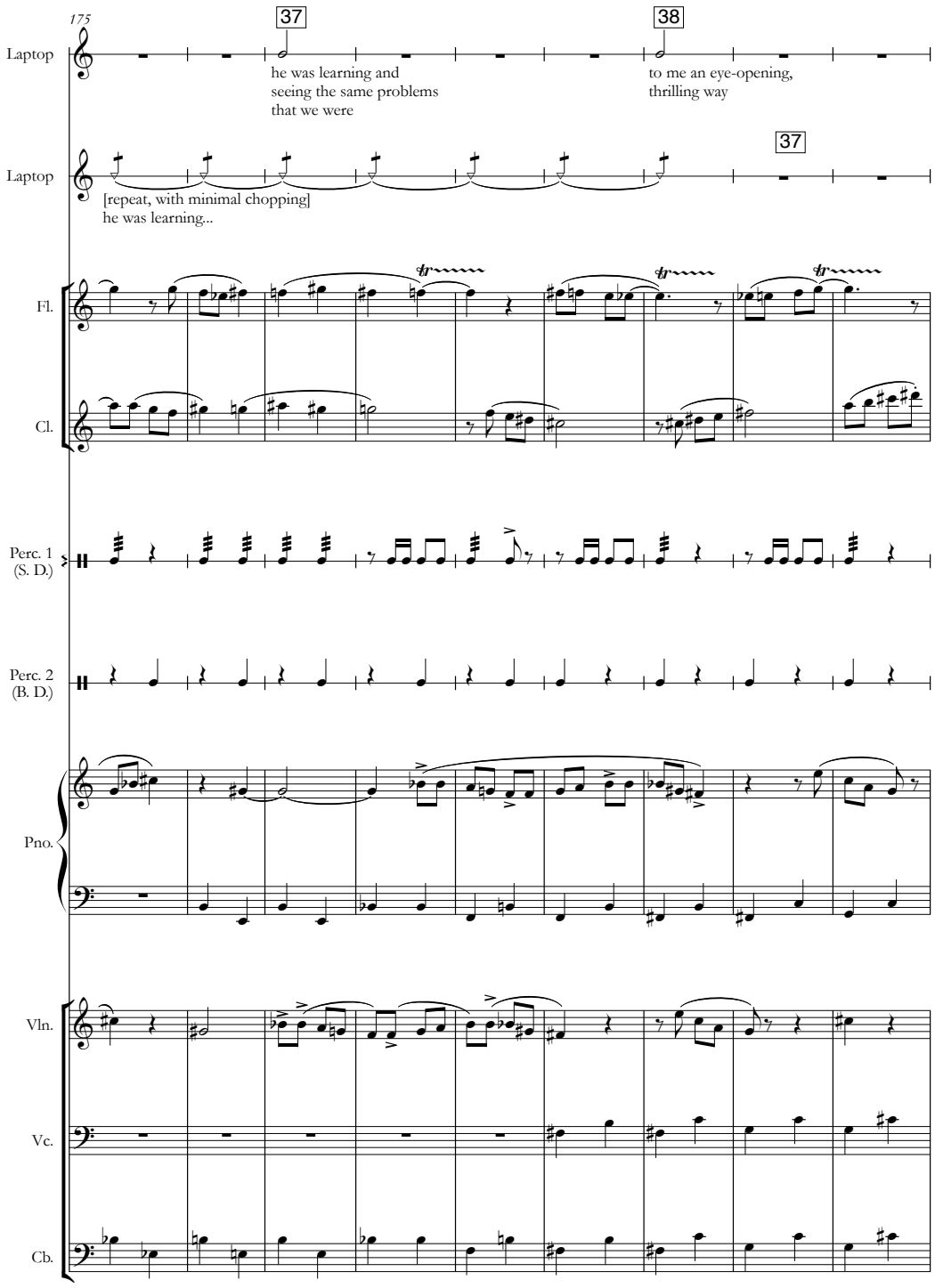
3. Davidson

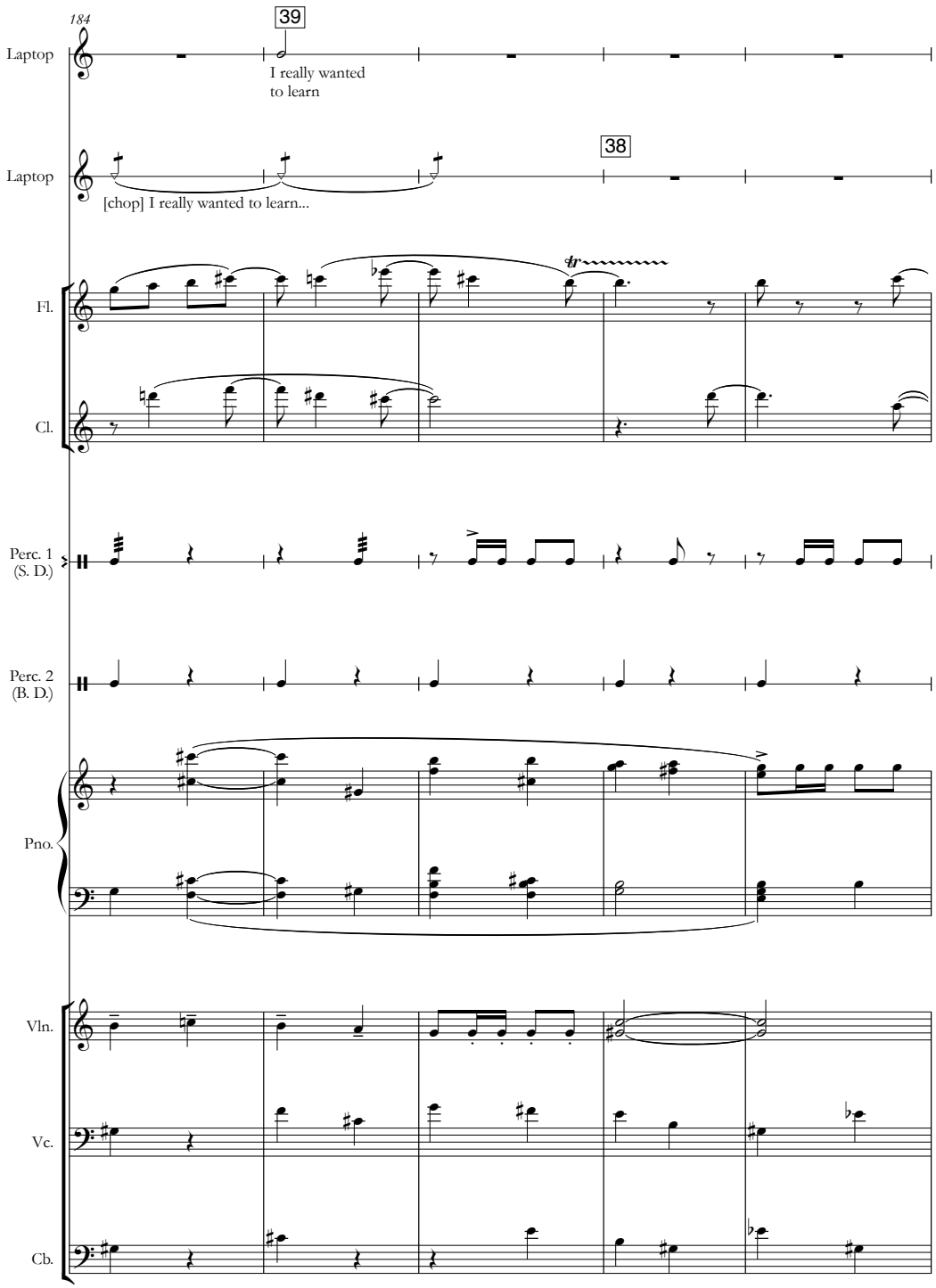

♩=40
27
28
29
30
Laptop I
I loved the farming part, growing the vegetables
biology sort of thing
28
29
30
Laptop II
Just his
Flute
mf
Clarinet in B♭
mf
Snare Drum
Perc. 1 (Snare Drum)
pp
Perc. 2 (Bass Drum)
Piano
mf
♩=40
Violin
mf
pizz.
Violoncello
mf
pizz.
arco
Contrabass
mf

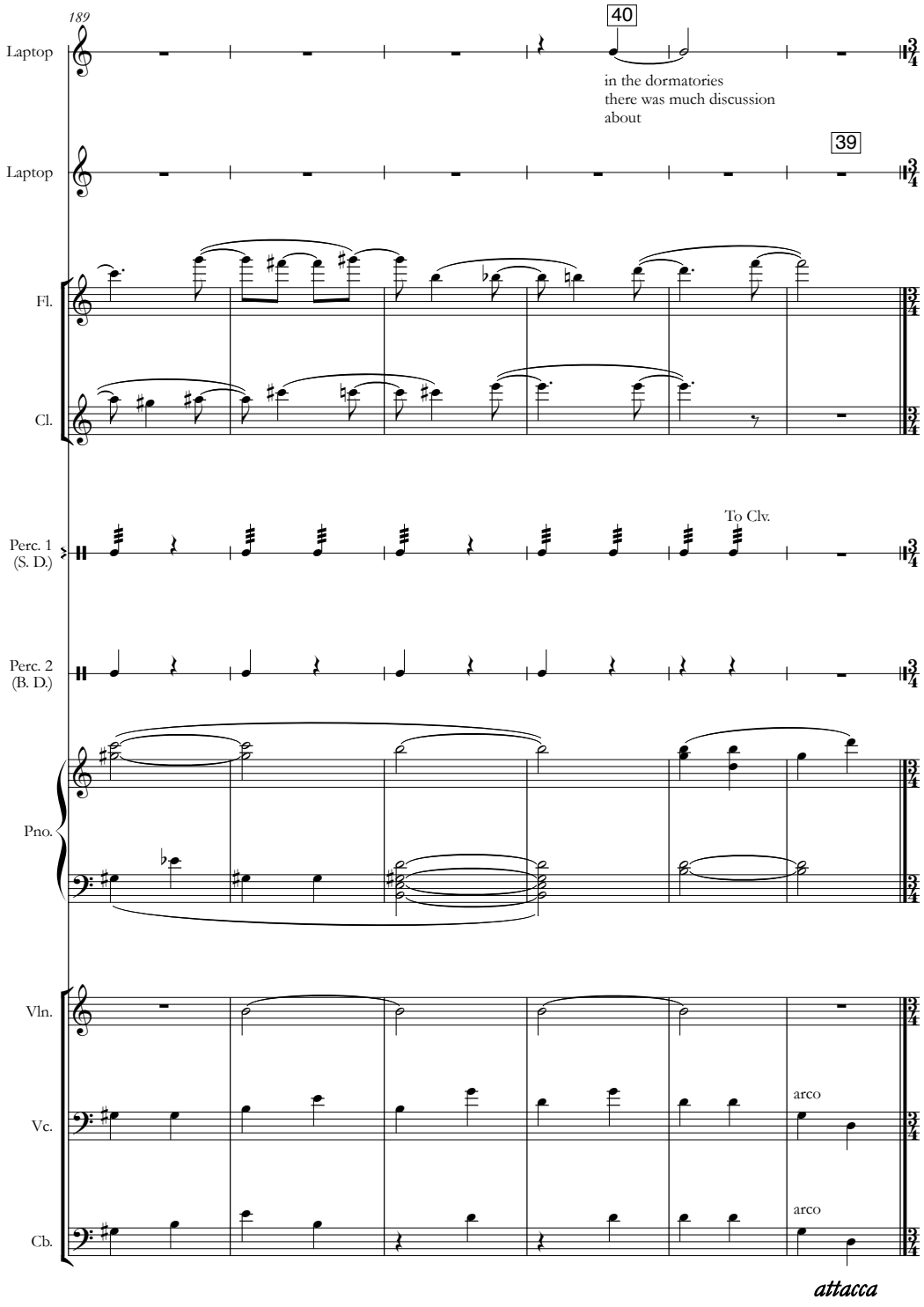

150
Laptop
Laptop
31
32
but
since I had not had any
physics in high school...
Fl.
Cl.
Perc. 1
(S. D.)
Perc. 2
(B. D.)
Pno.
Vln.
Vc.
Cb.
arco
pizz.
arco
pizz.
arco


157
31
32
33
(Unison)
Laptop
the first class
of physics
professor
walked in
and said
Only two weeks
ago did I find out
I was teaching this class
33
Laptop
Fl.
Cl.
pp
Perc. 1
(S. D.)
pp
Perc. 2
(B. D.)
Pno.
Vln.
Vc.
Cb.
pizz.
pp

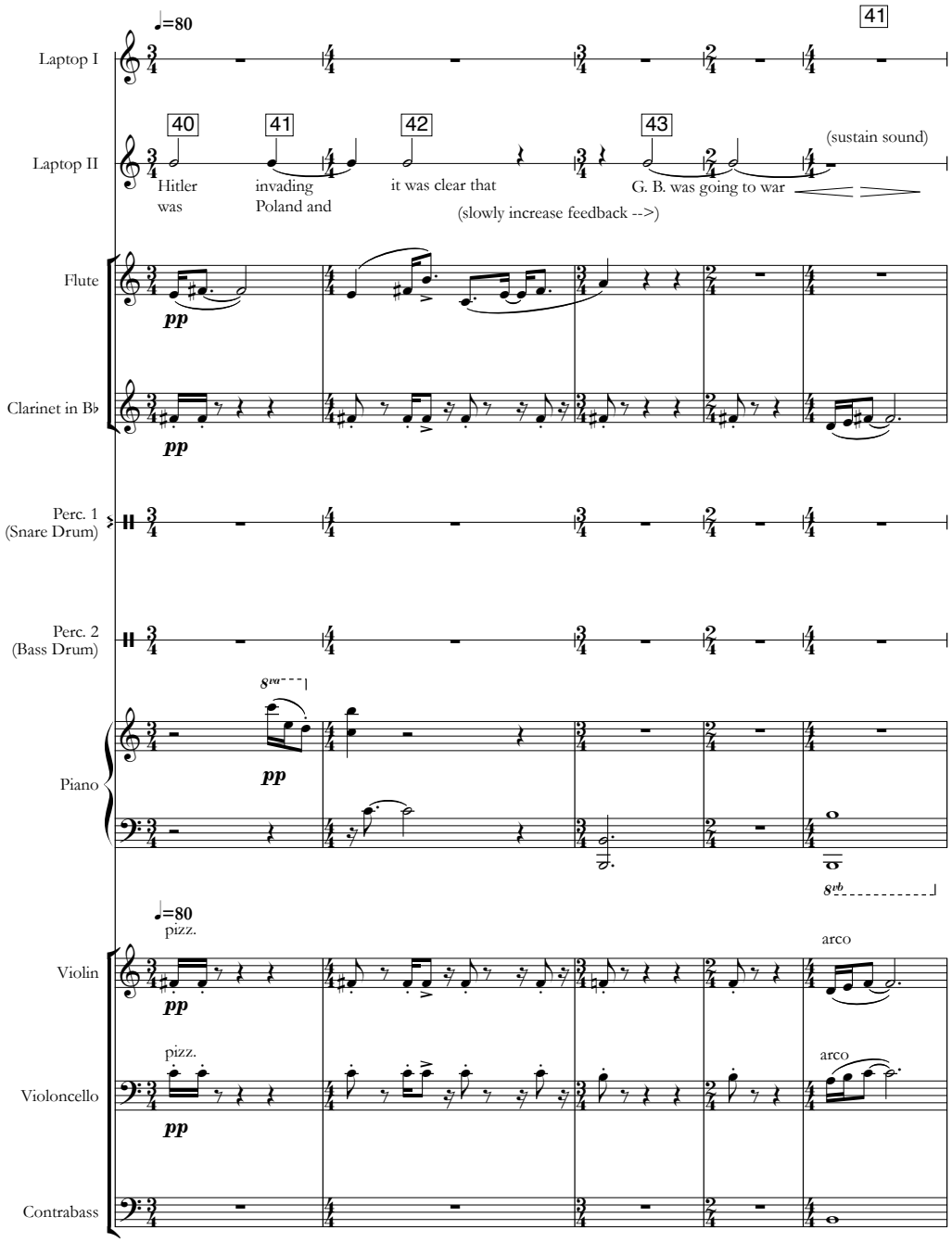

165
34
35
36
(Unison)
Laptop
I have two weeks lead on you, but we'll be learning this together
and this was actually a lovely challenge and worked out extremely well
Laptop
Fl.
Cl.
Perc. 1 (S. D.)
p
Perc. 2 (B. D.)
pp
Pno.
pp
Vln.
pizz.
Vc.
pp
Cb.

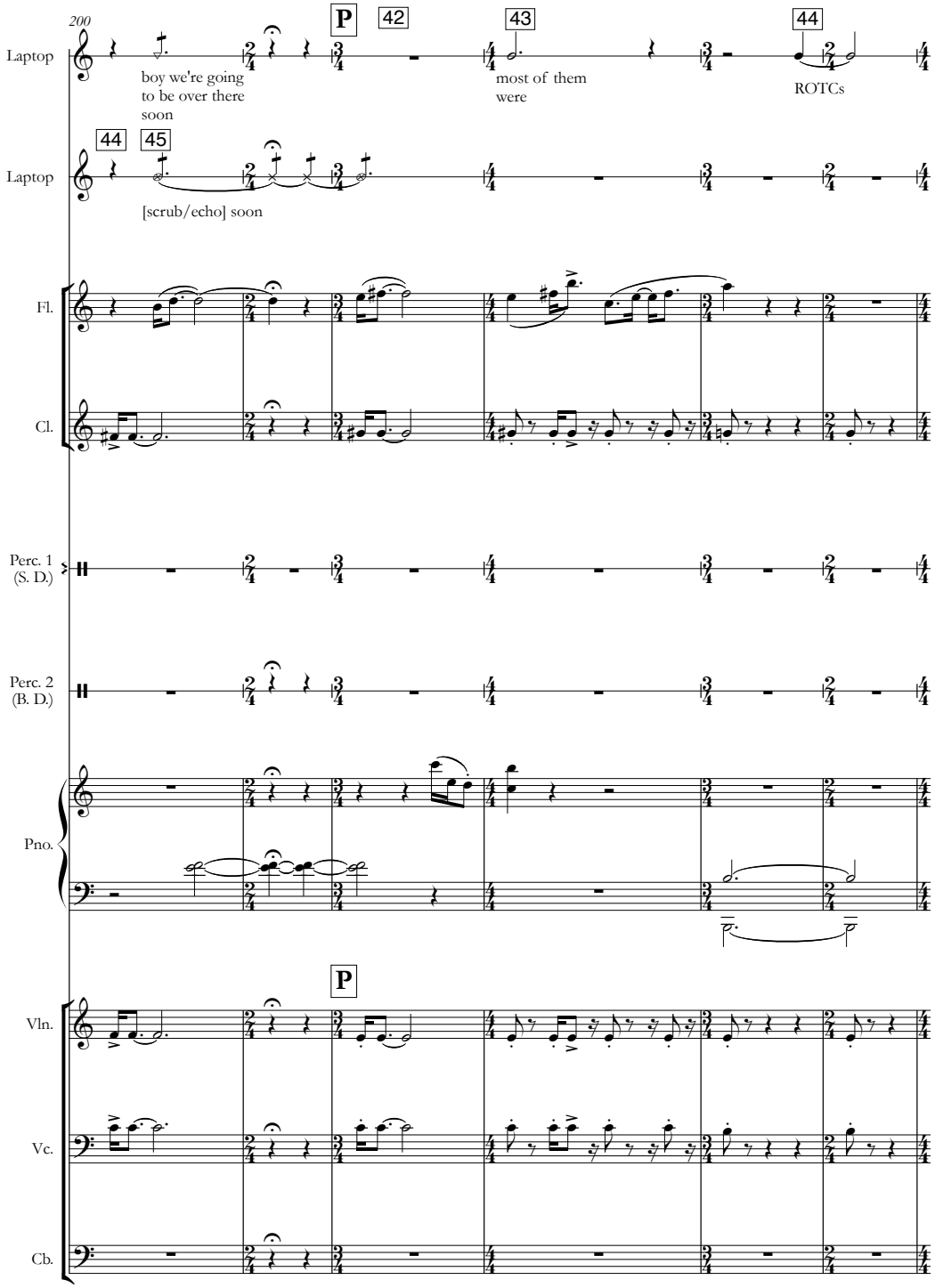

175
37
38
Laptop
he was learning and
seeing the same problems
that we were
to me an eye-opening,
thrilling way
Laptop
37
[repeat, with minimal chopping]
he was learning...
Fl.
Cl.
Perc. 1
(S. D.)
Perc. 2
(B. D.)
Pno.
Vln.
Vc.
Cb.

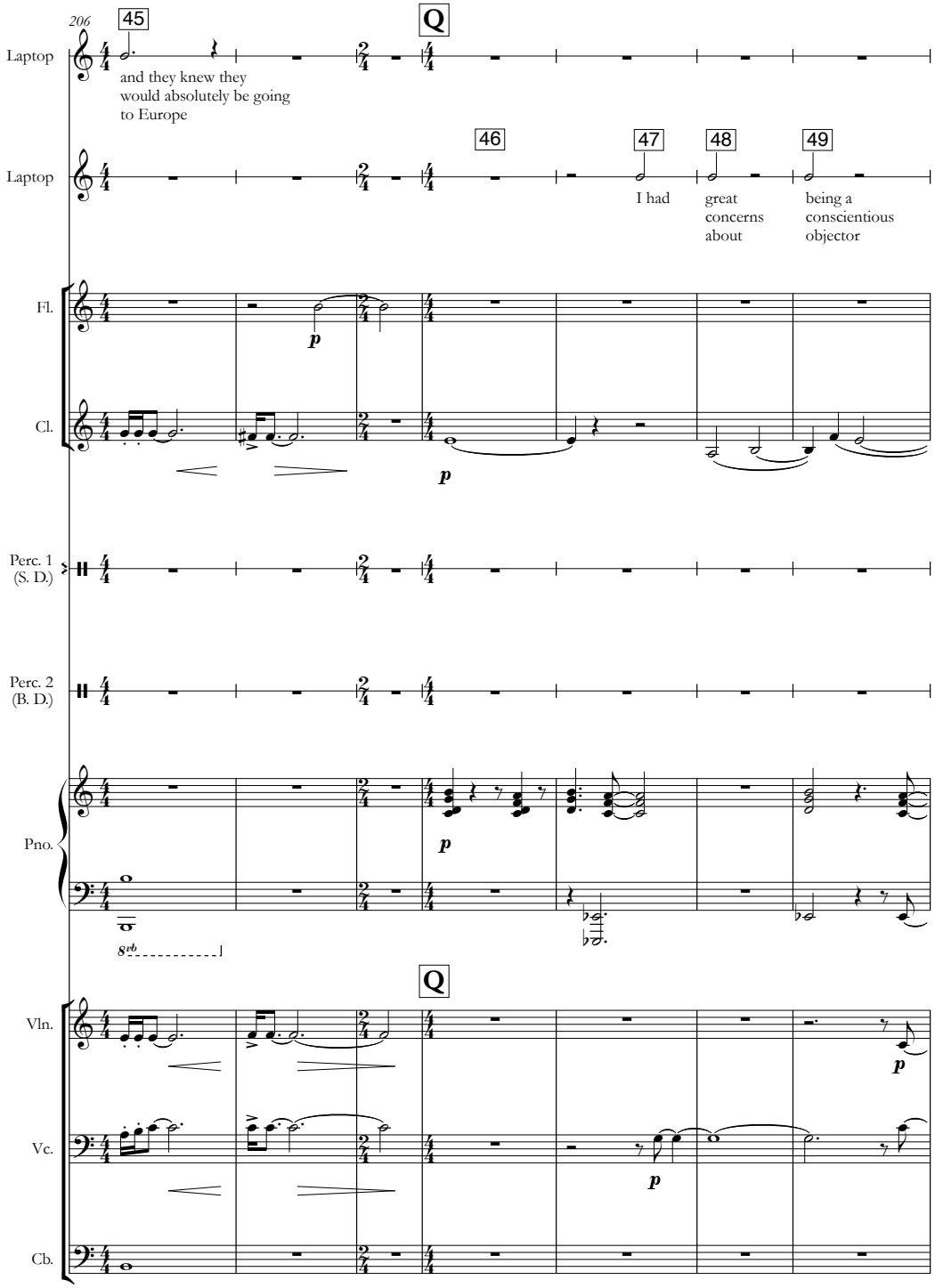

184
39
Laptop
I really wanted
to learn
38
Laptop
[chop] I really wanted to learn...
Fl.
Cl.
Perc. 1
(S. D.)
Perc. 2
(B. D.)
Pno.
Vln.
Vc.
Cb.

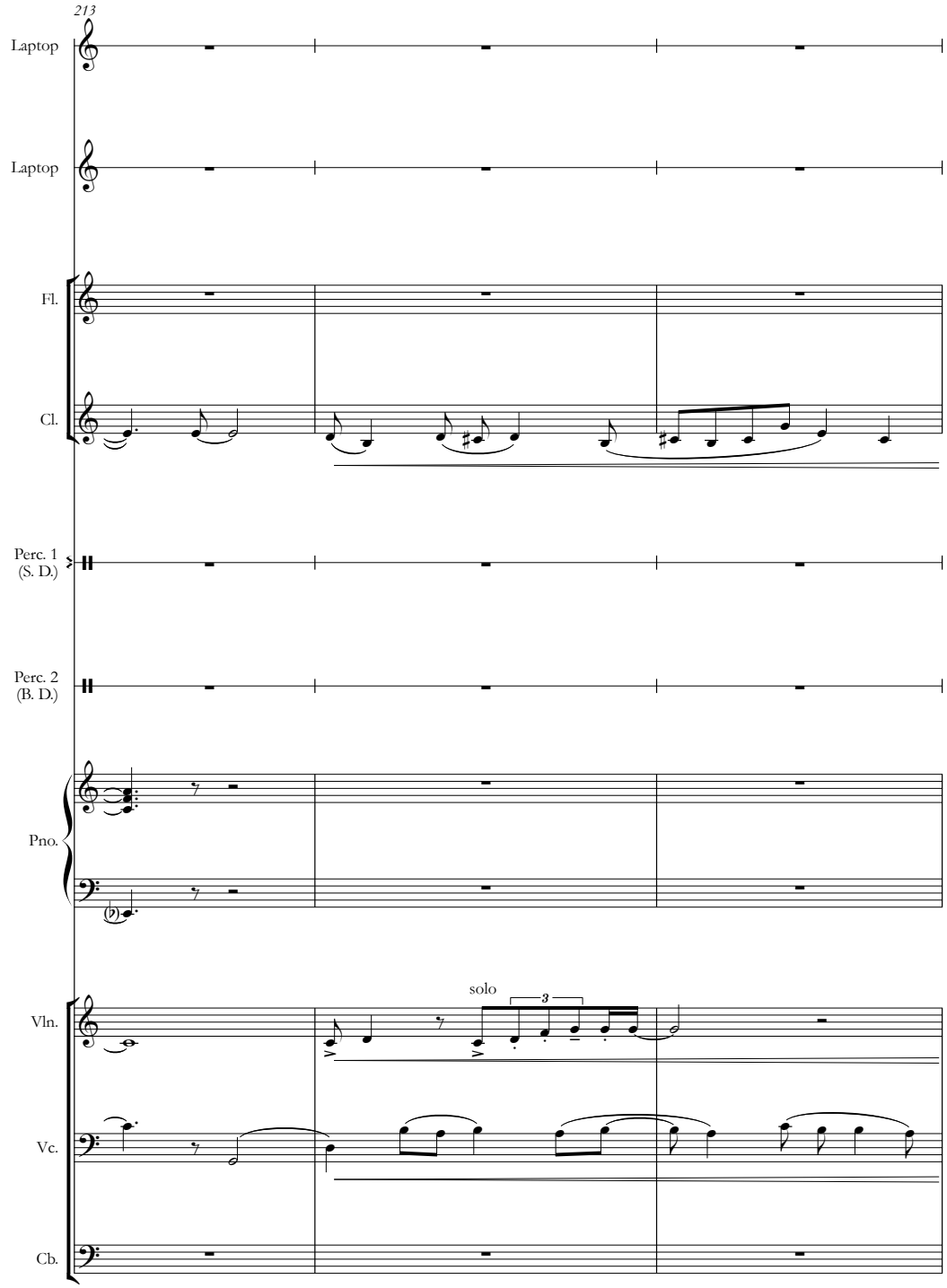

189
40
Laptop
in the dormatories
there was much discussion
about
39
Laptop
Fl.
Cl.
To Clv.
Perc. 1
(S. D.)
Perc. 2
(B. D.)
Pno.
Vln.
Vc.
arco
Cb.
arco
attacca

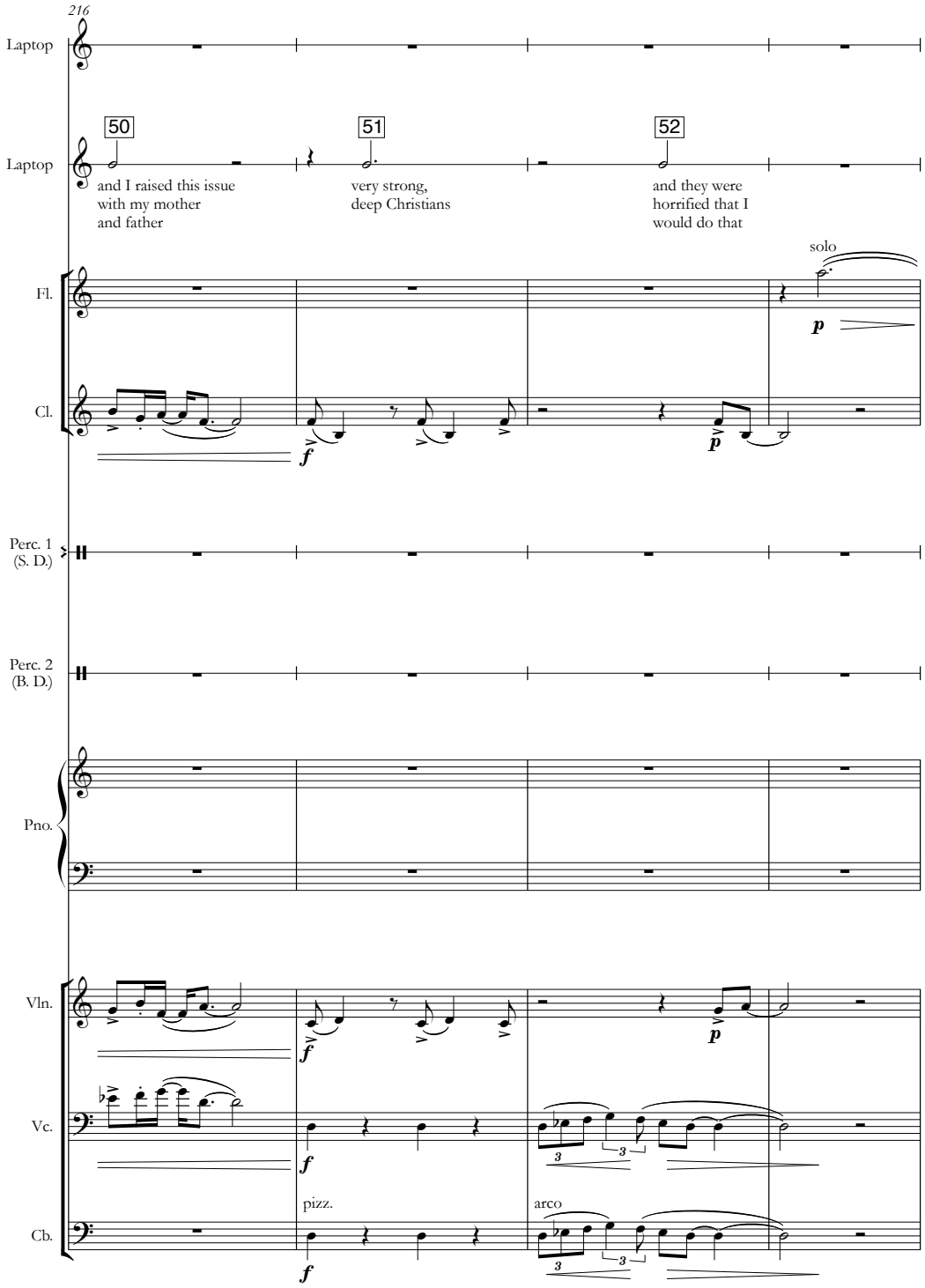
4. The Coming War

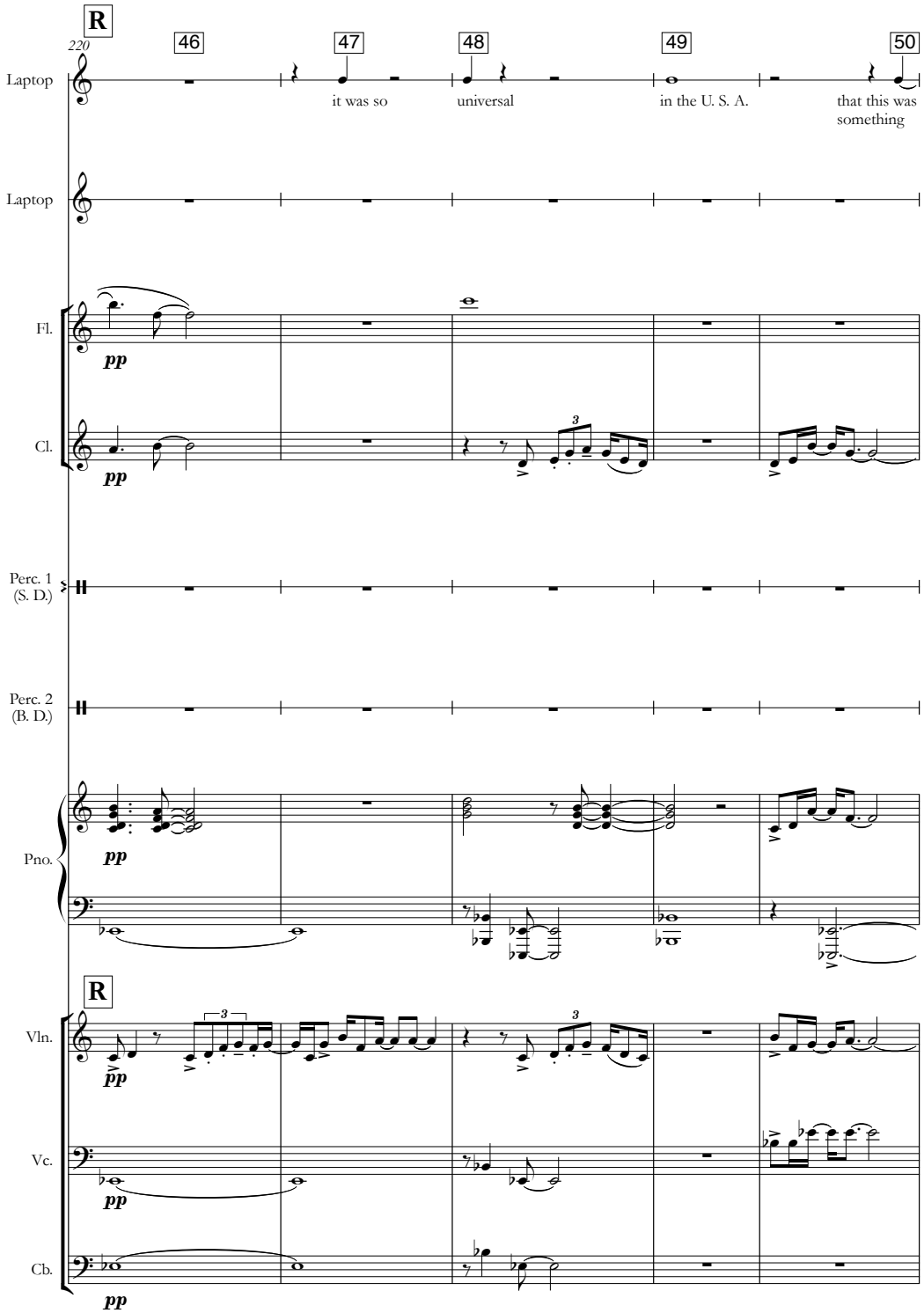


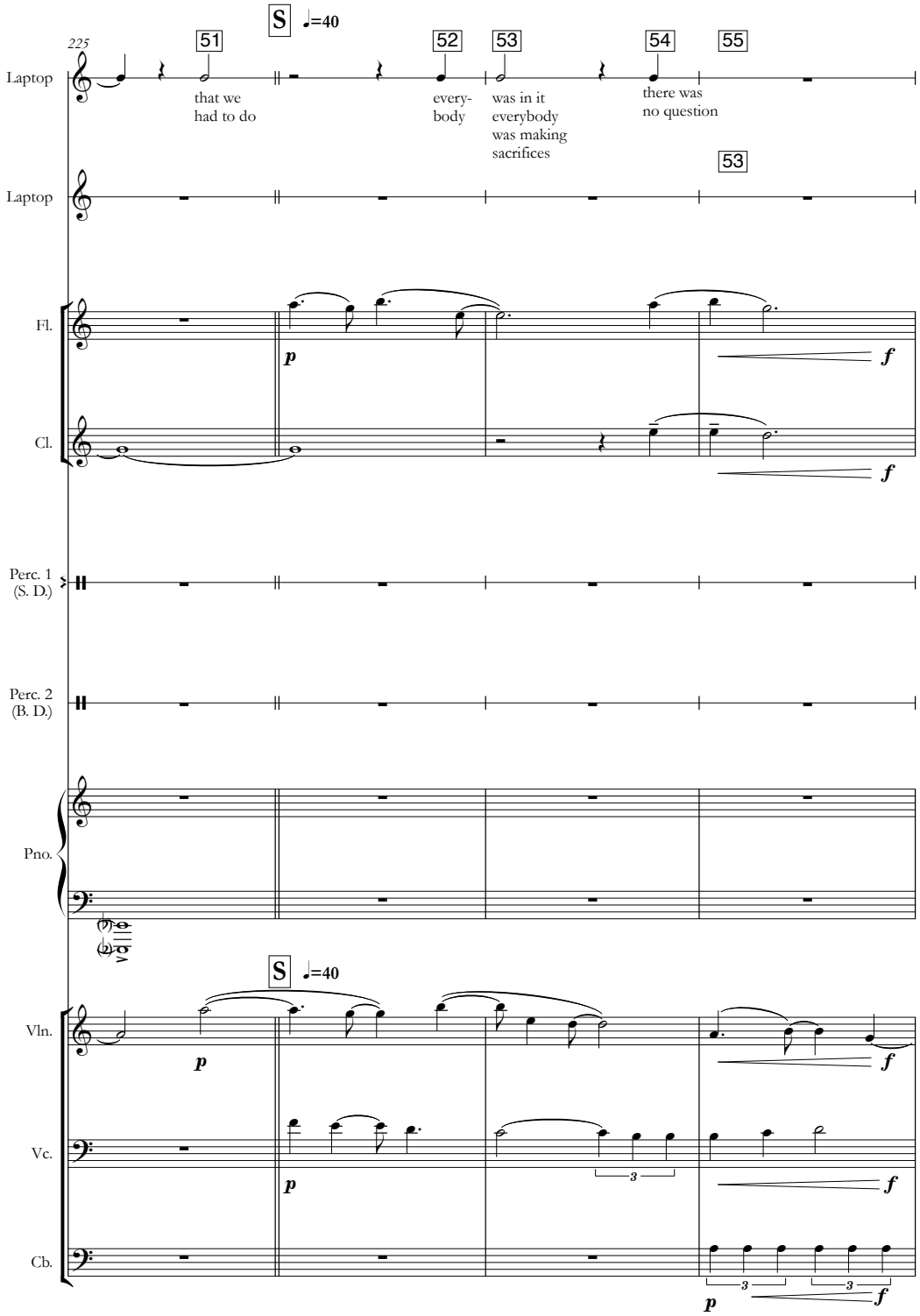

200
P
42
43
44
Laptop
boy we're going
to be over there
soon
most of them
were
ROTCs
44
45
Laptop
[scrub/echo] soon
Fl.
Cl.
Perc. 1
(S. D.)
Perc. 2
(B. D.)
Pno.
P
Vln.
Vc.
Cb.

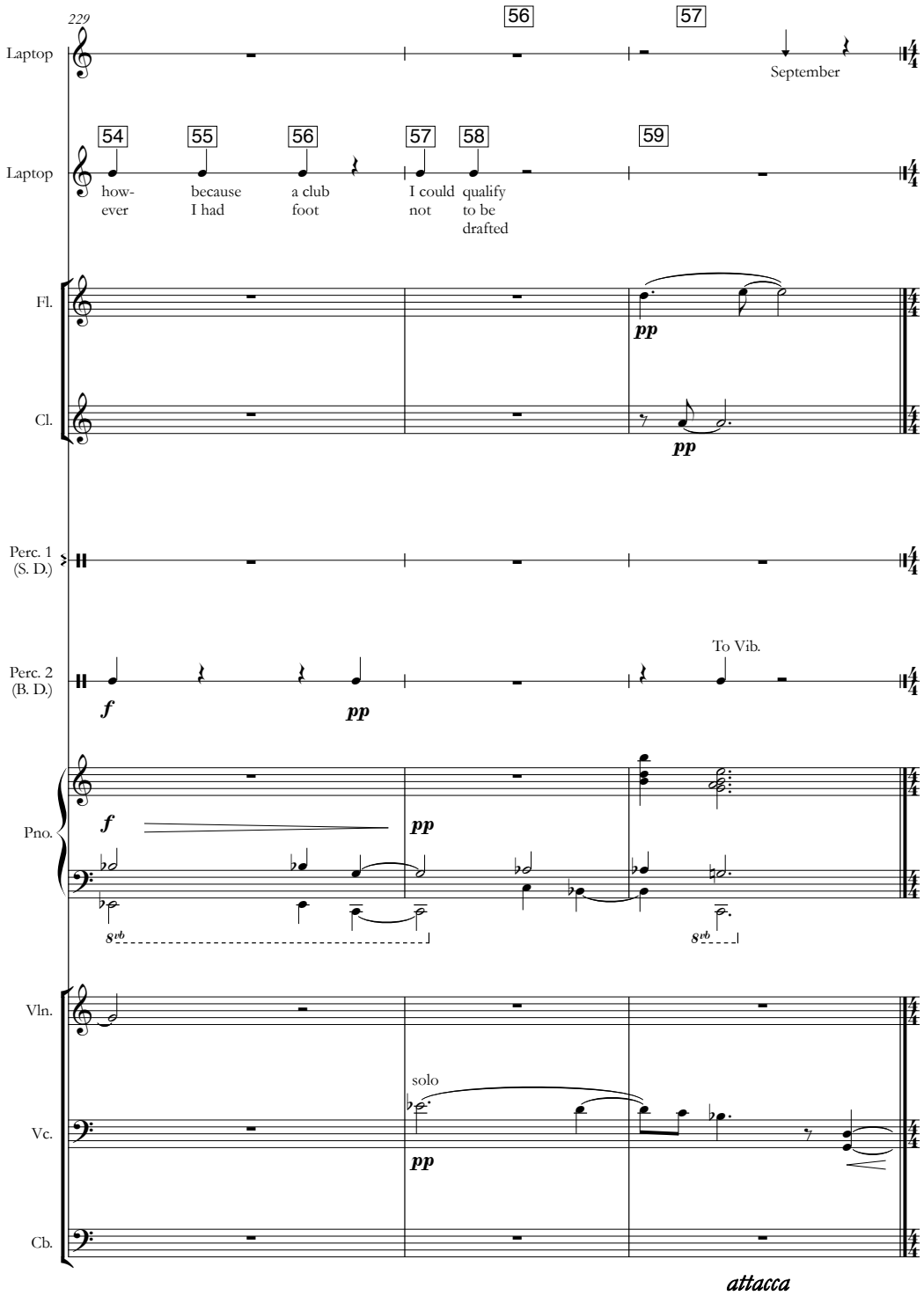

206
45
Q
Laptop
and they knew they would absolutely be going to Europe
46
47
48
49
Laptop
I had
great concerns about
being a conscientious objector
Fl.
Cl.
p
Perc. 1 (S. D.)
Perc. 2 (B. D.)
Pno.
8vb
Q
Vln.
Vc.
Cb.


213
Laptop
Laptop
Fl.
Cl.
Perc. 1
(S. D.)
Perc. 2
(B. D.)
Pno.
Vln.
Vc.
Cb.
solo
3

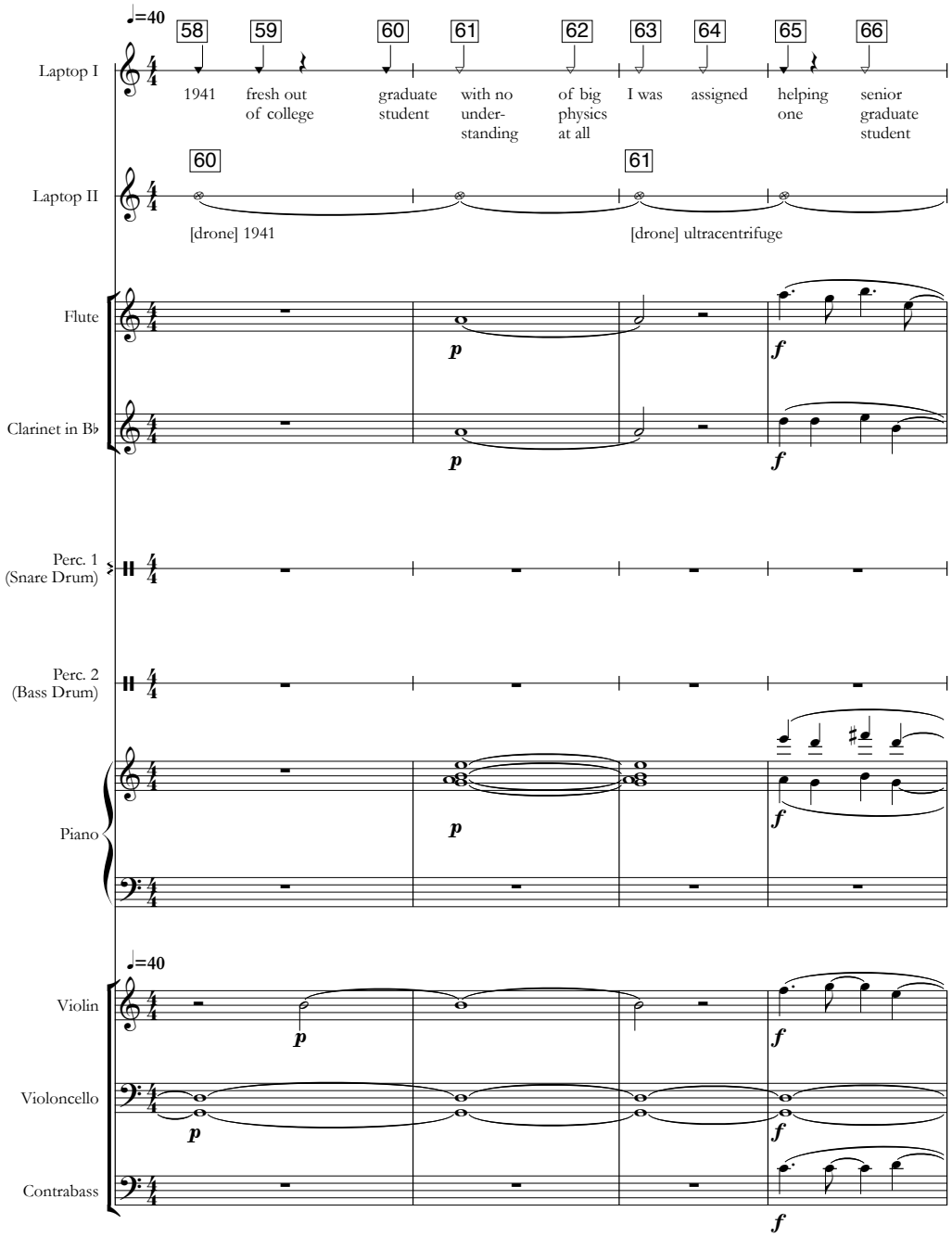

216
Laptop
50
51
52
Laptop
and I raised this issue
with my mother
and father
very strong,
deep Christians
and they were
horrified that I
would do that
solo
Fl.
Cl.
Perc. 1
(S. D.)
Perc. 2
(B. D.)
Pno.
Vln.
Vc.
Cb.
pizz.
arco

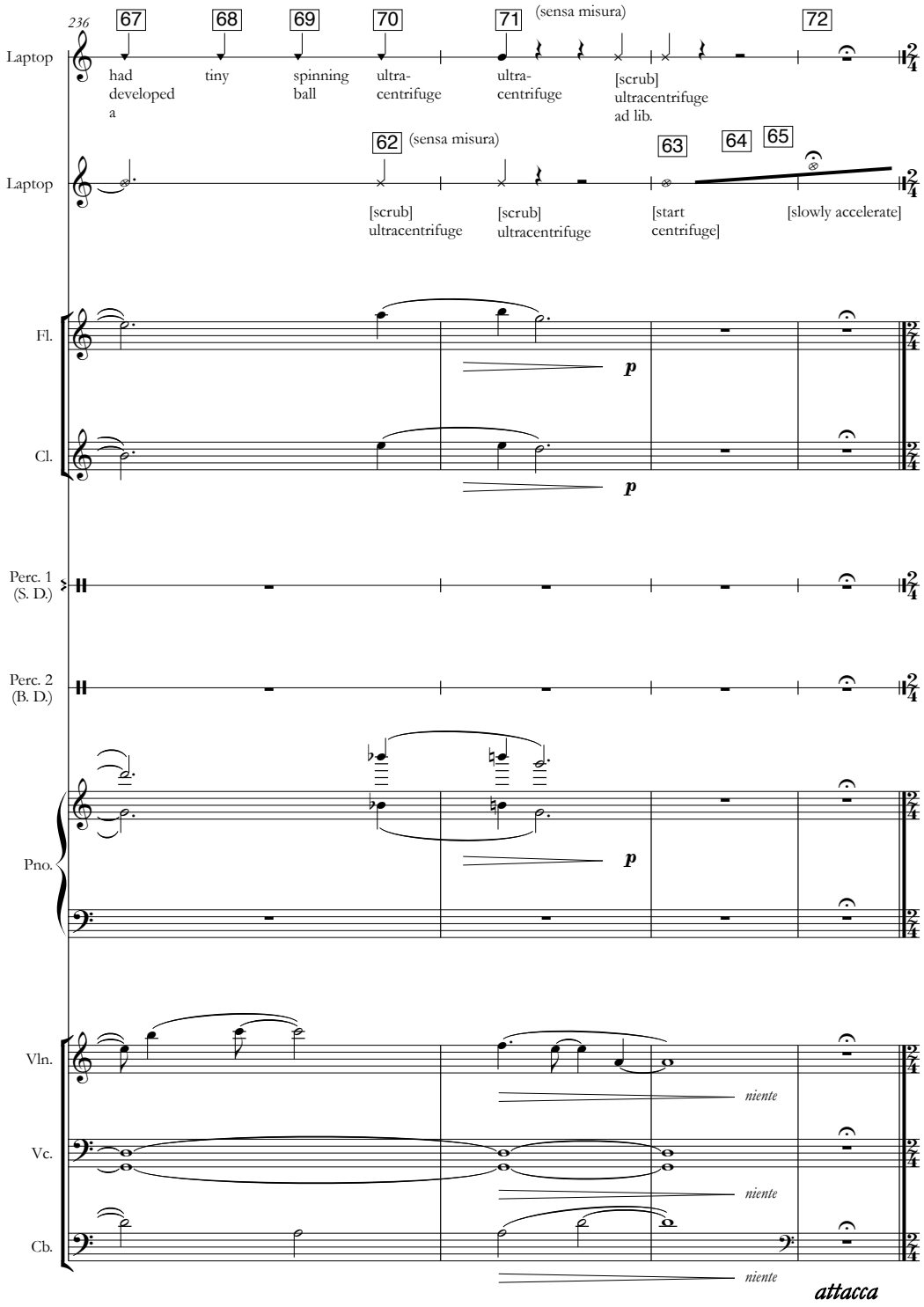

R
220
46
47
48
49
50
Laptop
it was so
universal
in the U. S. A.
that this was
something
Laptop
Fl.
pp
Cl.
pp
Perc. 1
(S. D.)
Perc. 2
(B. D.)
Pno.
pp
R
Vln.
pp
Vc.
pp
Cb.
pp


S ♩=40
225
51
52
53
54
55
Laptop
that we had to do
every- body
was in it everybody was making sacrifices
there was no question
Laptop
53
Fl.
Cl.
Perc. 1 (S. D.)
Perc. 2 (B. D.)
Pno.
S ♩=40
Vln.
Vc.
Cb.
p
f
3

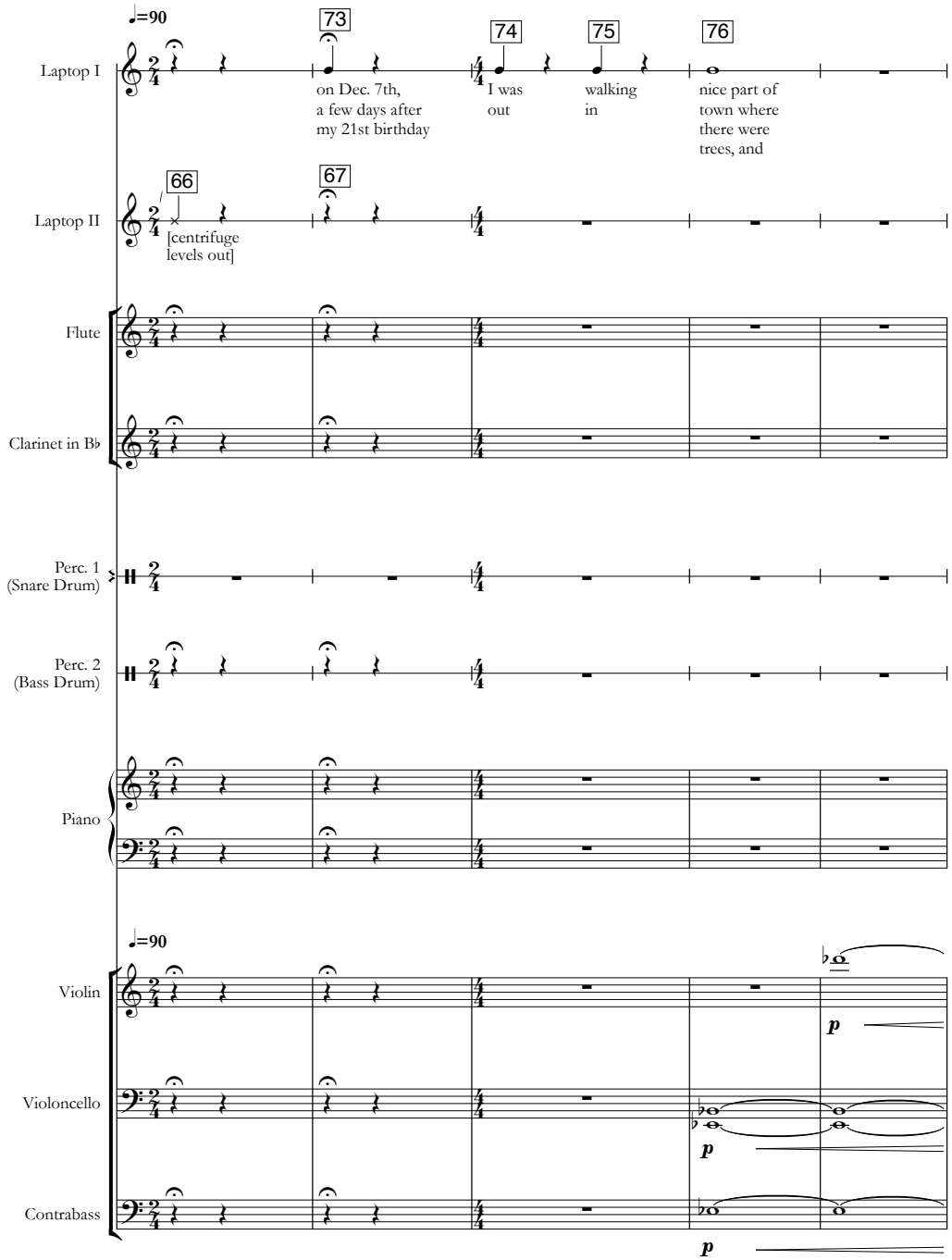

229
Laptop
56
57
September
54
55
56
57
58
59
Laptop
how-
ever
because
I had
a club
foot
I could
not
qualify
to be
drafted
Fl.
pp
Cl.
pp
Perc. 1
(S. D.)
Perc. 2
(B. D.)
To Vib.
f
pp
Pno.
f
pp
8vb
8vb
Vln.
solo
Vc.
pp
Cb.
attacca

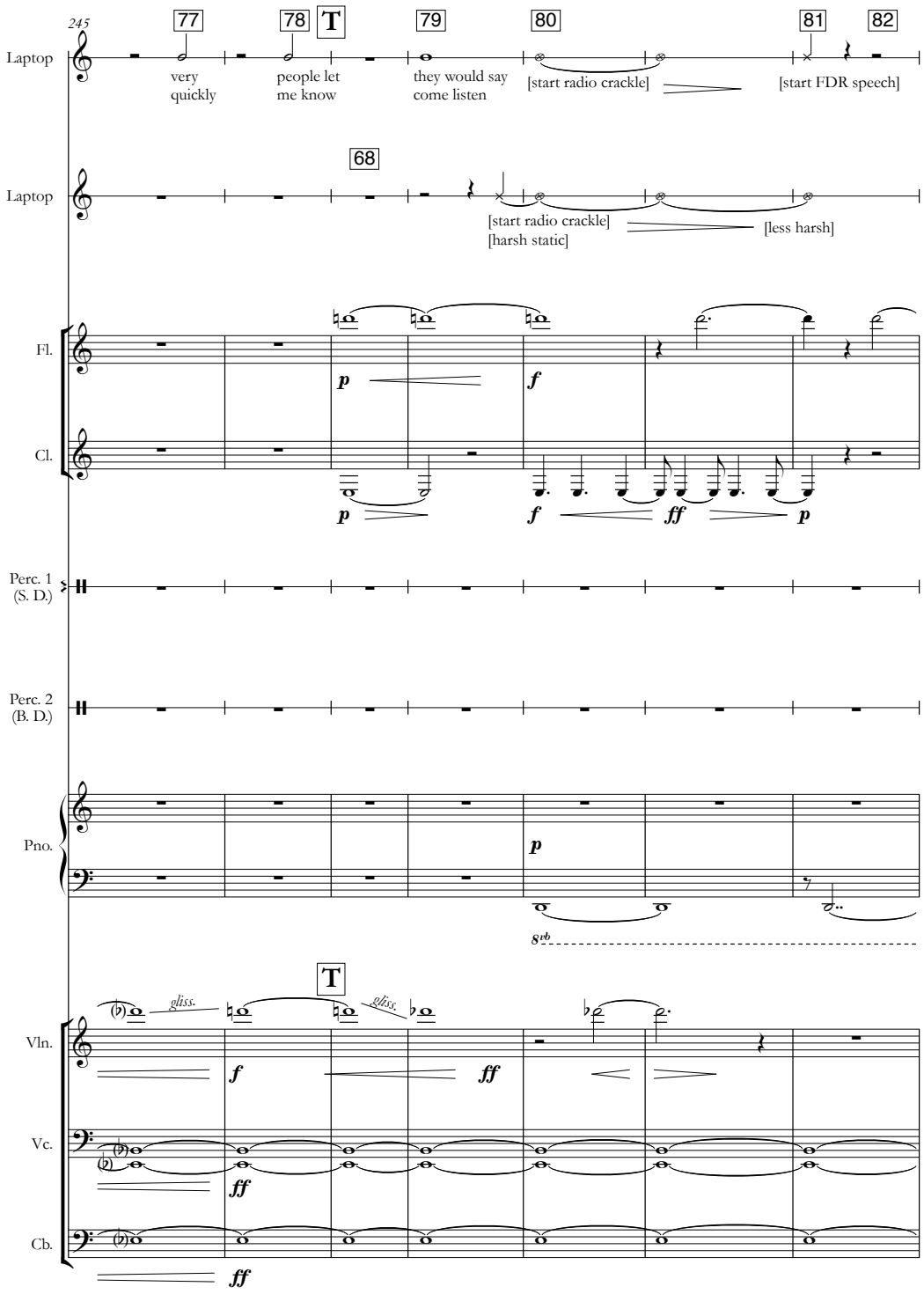
5. Starting Grad School

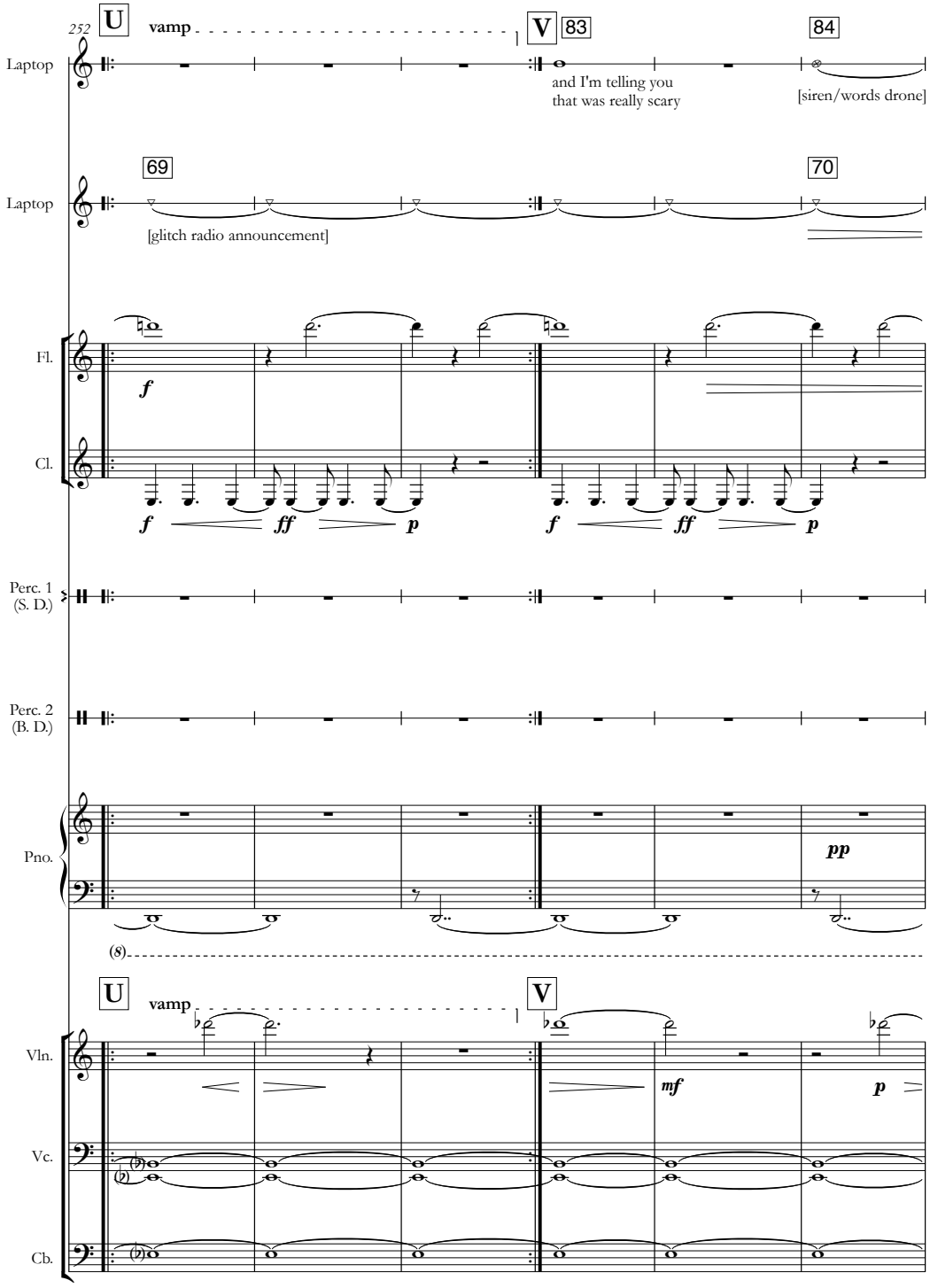


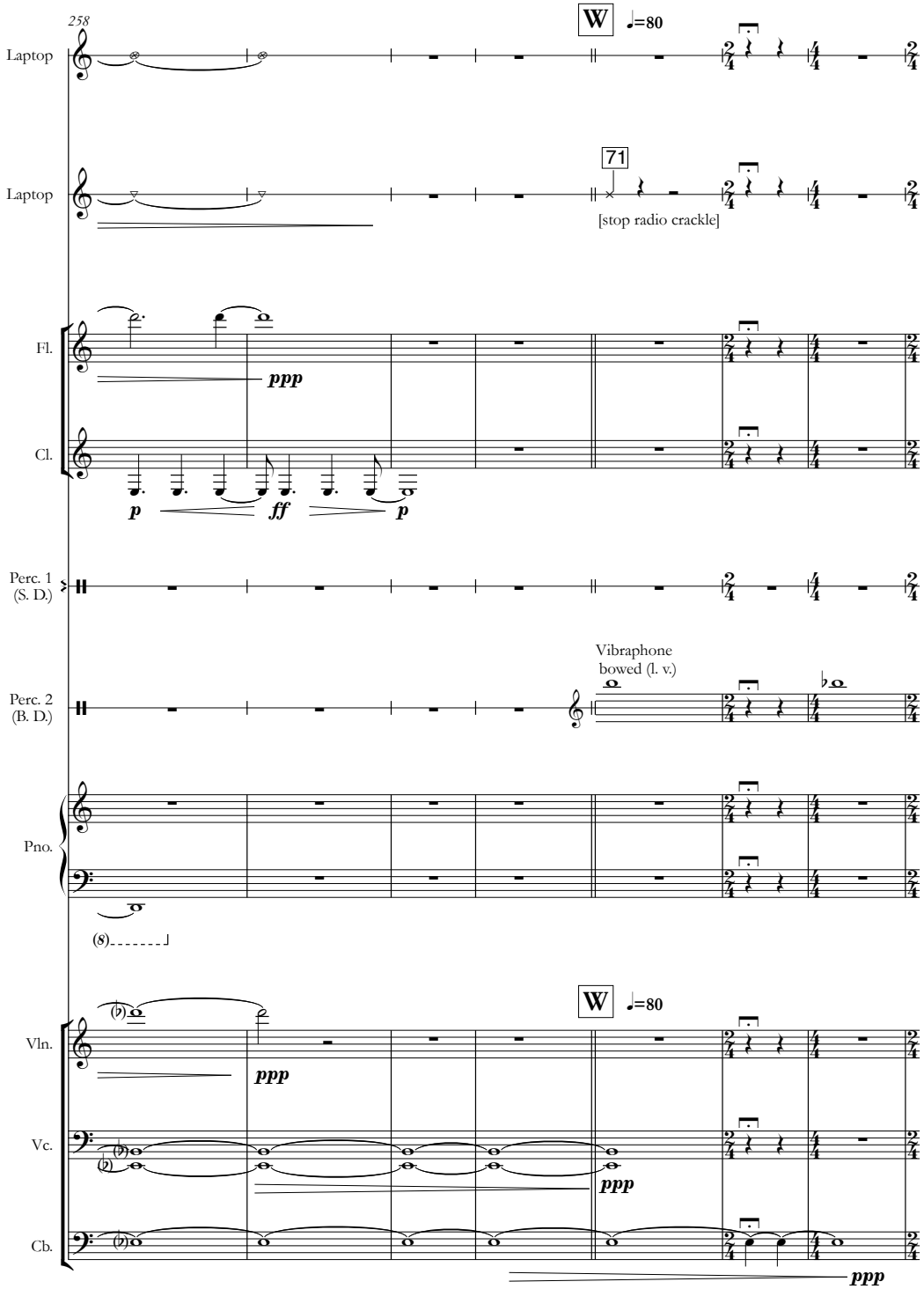

236
67
68
69
70
71
(sensa misura)
72
Laptop
had developed a
tiny
spinning ball
ultra-centrifuge
ultra-centrifuge
[scrub] ultracentrifuge ad lib.
62
(sensa misura)
63
64
65
Laptop
[scrub] ultracentrifuge
[scrub] ultracentrifuge
[start centrifuge]
[slowly accelerate]
Fl.
p
Cl.
p
Perc. 1 (S. D.)
Perc. 2 (B. D.)
Pno.
p
Vln.
niente
Vc.
niente
Cb.
niente
attacca

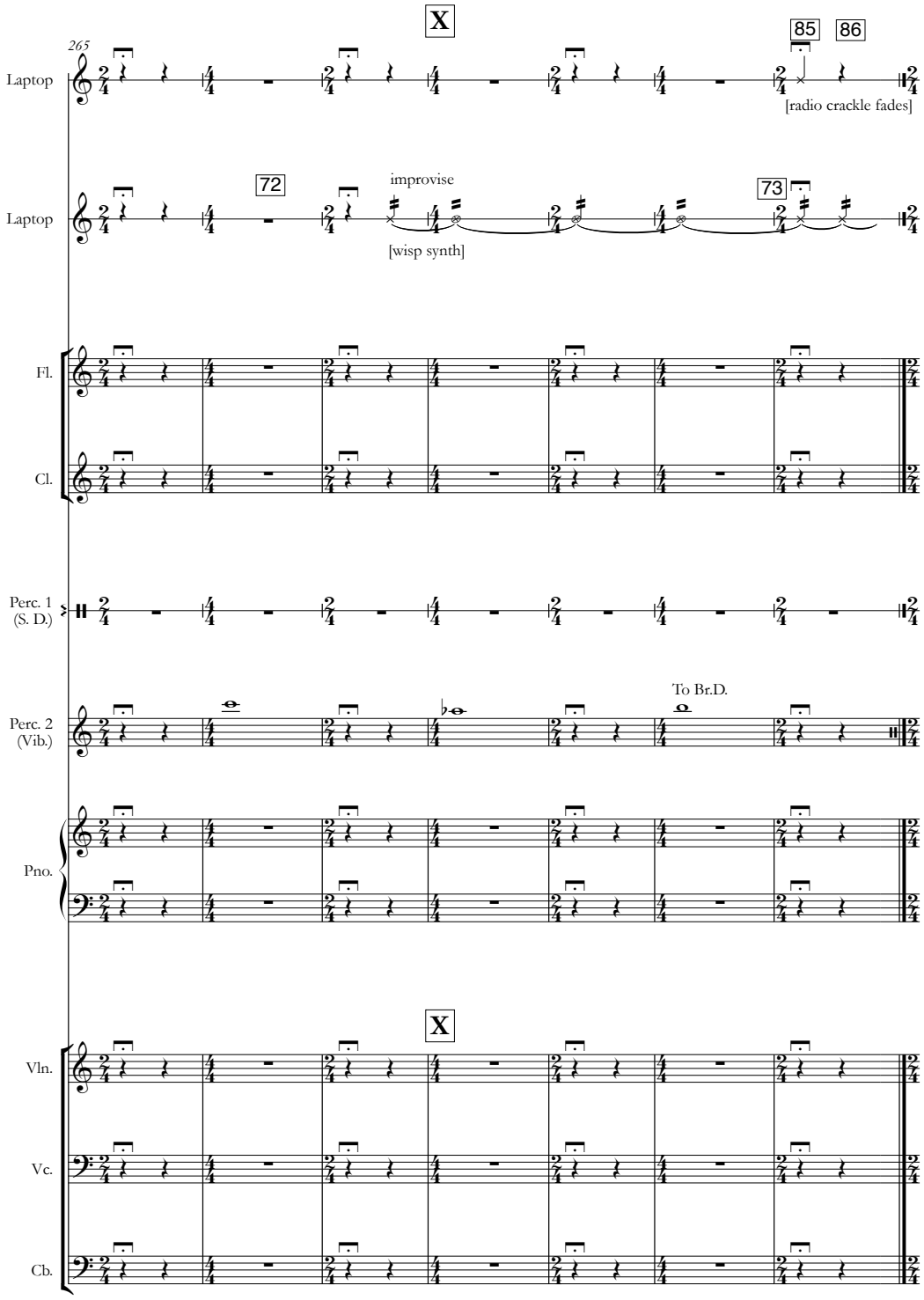
6. Pearl Harbor



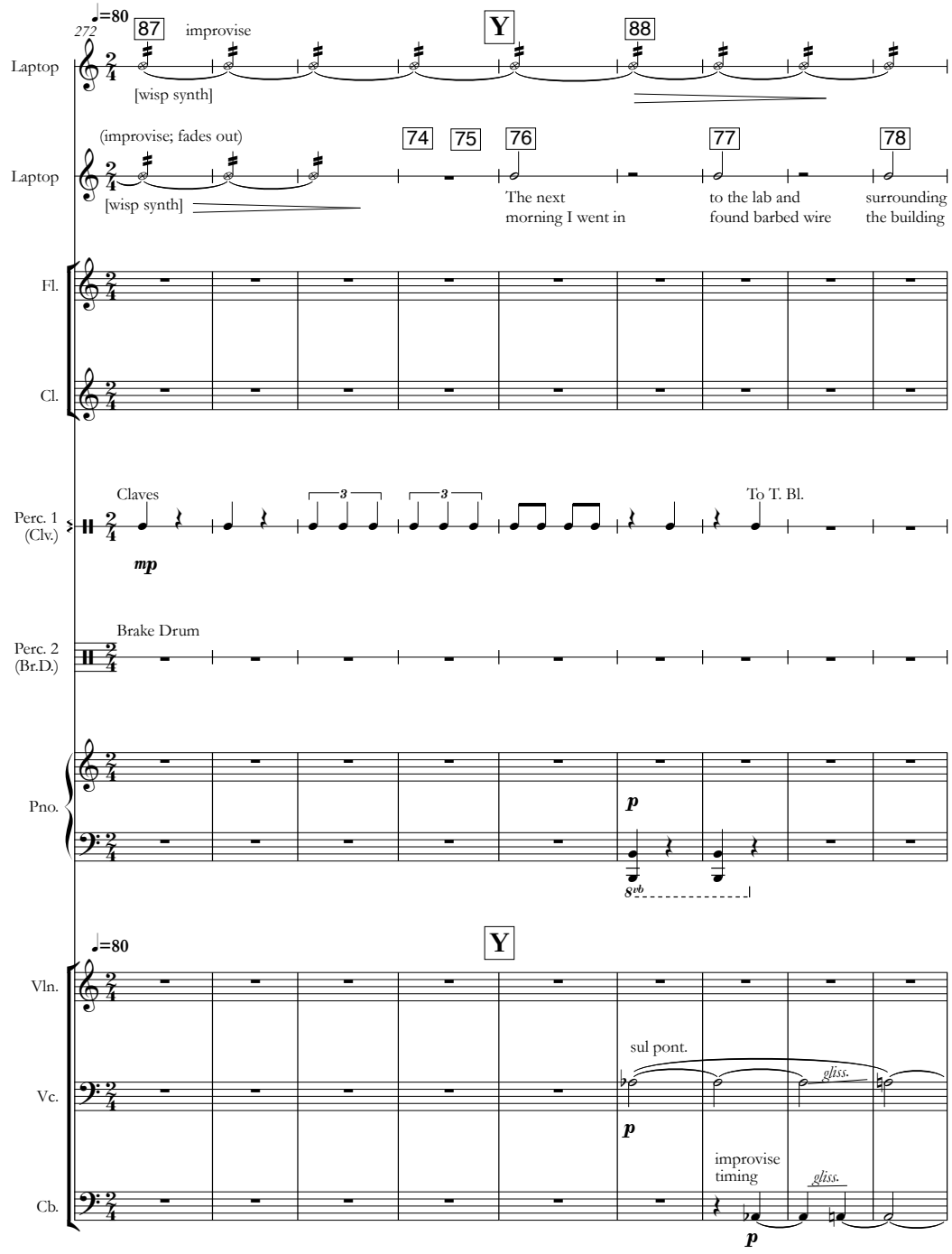

245
77
78
T
79
80
81
82
Laptop
very quickly
people let me know
they would say come listen
[start radio crackle]
[start FDR speech]
68
Laptop
[start radio crackle]
[harsh static]
[less harsh]
Fl.
Cl.
Perc. 1 (S. D.)
Perc. 2 (B. D.)
Pno.
8vb
T
gliss.
gliss.
Vln.
Vc.
Cb.

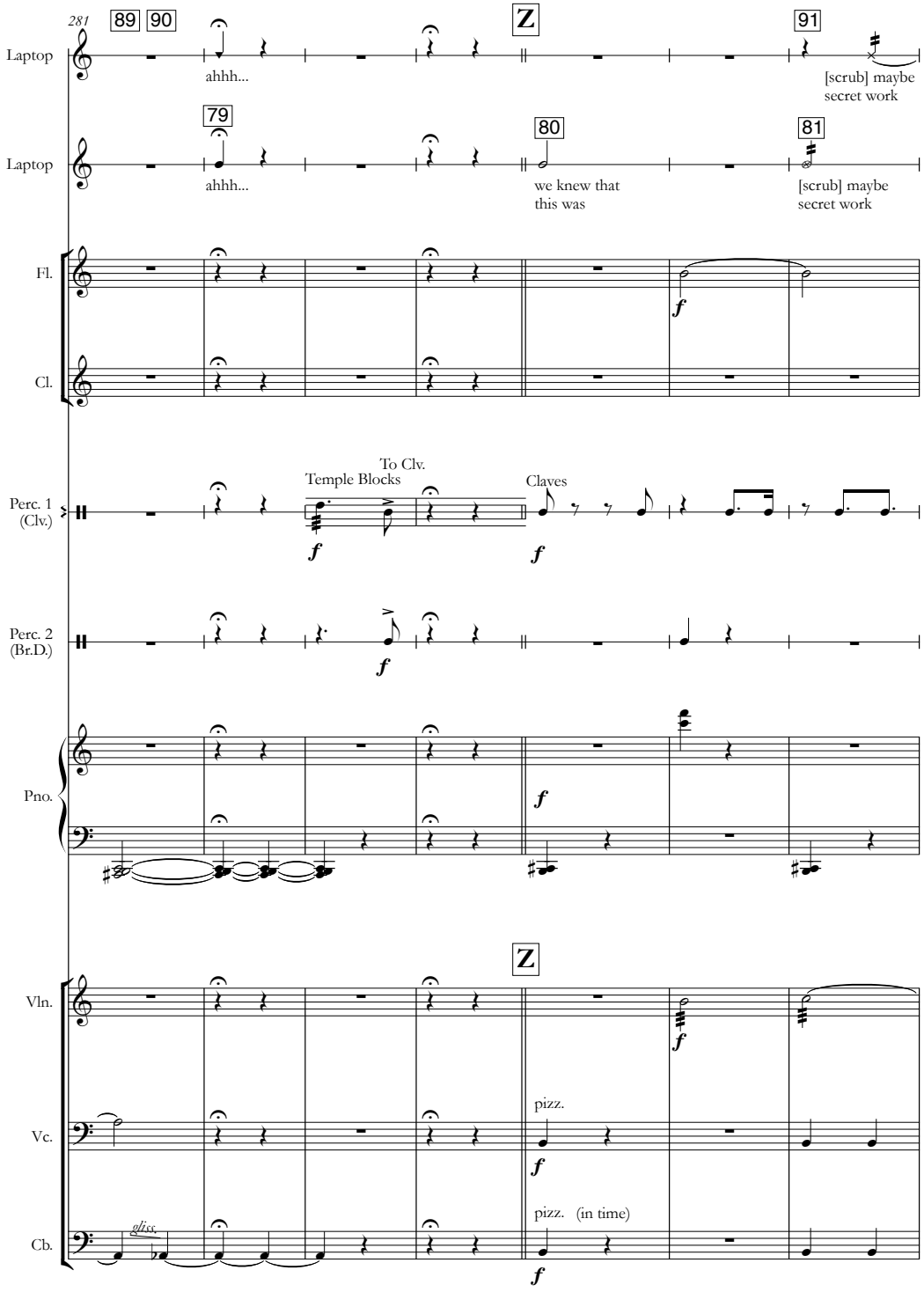

252
U
vamp
V
83
84
Laptop
and I'm telling you
that was really scary
[siren/words drone]
69
70
Laptop
[glitch radio announcement]
Fl.
Cl.
Perc. 1
(S. D.)
Perc. 2
(B. D.)
Pno.
Vln.
Vc.
Cb.

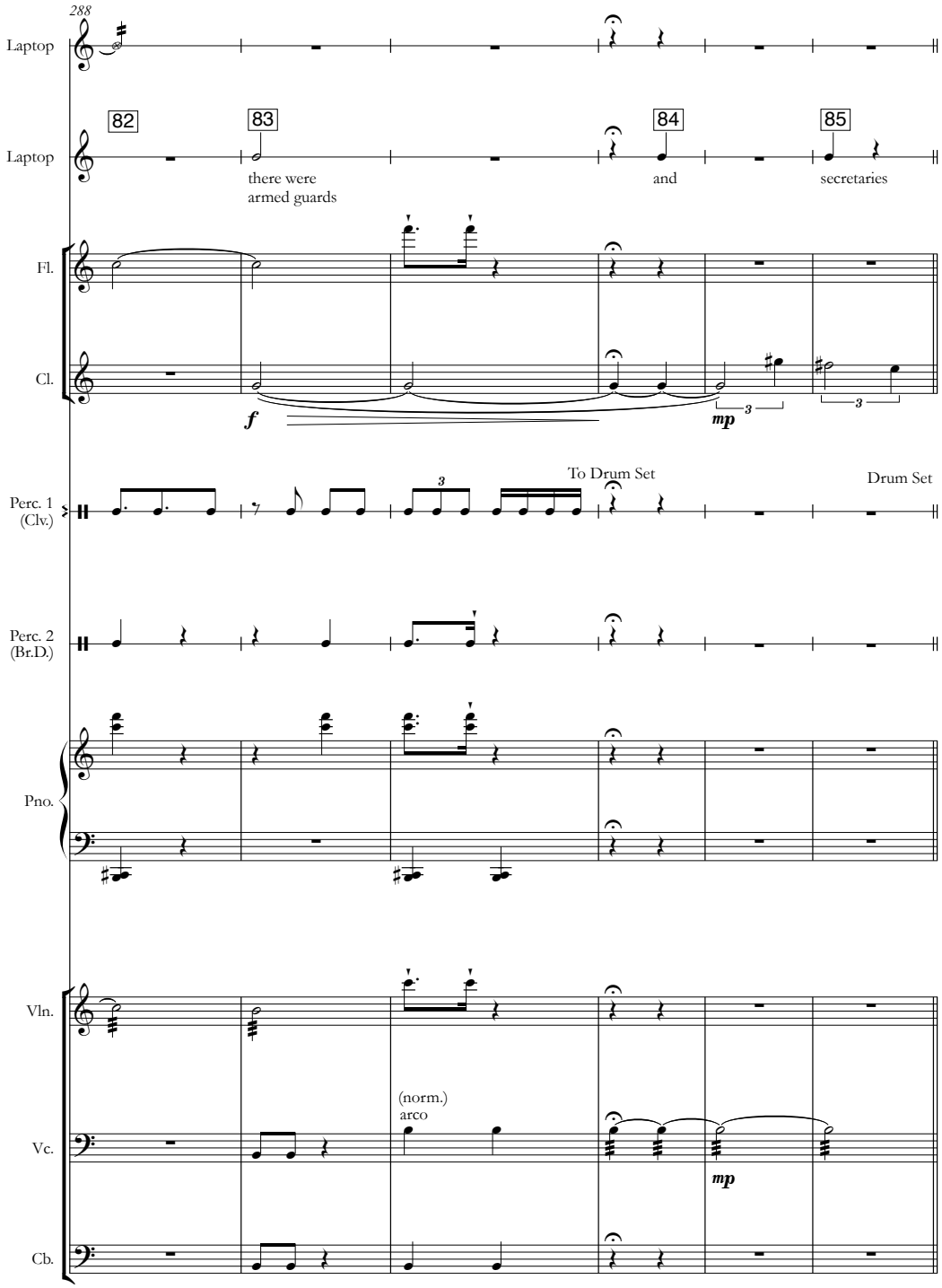

258
W
♩=80
Laptop
71
Laptop
[stop radio crackle]
Fl.
ppp
Cl.
p
ff
p
Perc. 1
(S. D.)
Vibraphone
bowed (l. v.)
Perc. 2
(B. D.)
Pno.
(8)
W
♩=80
Vln.
ppp
Vc.
ppp
Cb.
ppp

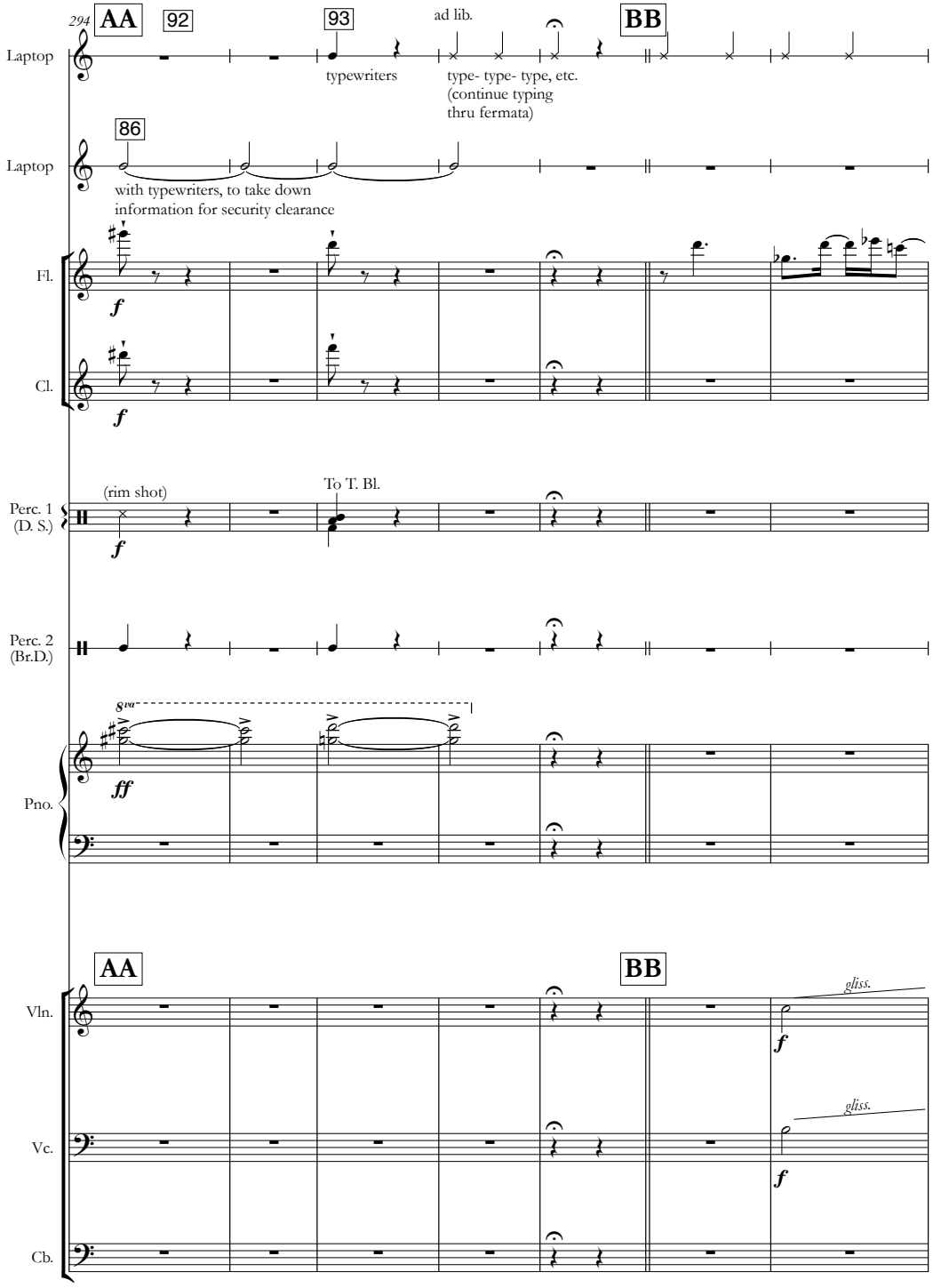

X
265
85
86
Laptop
[radio crackle fades]
72
improvise
73
Laptop
[wisp synth]
Fl.
Cl.
Perc. 1
(S. D.)
To Br.D.
Perc. 2
(Vib.)
Pno.
X
Vln.
Vc.
Cb.

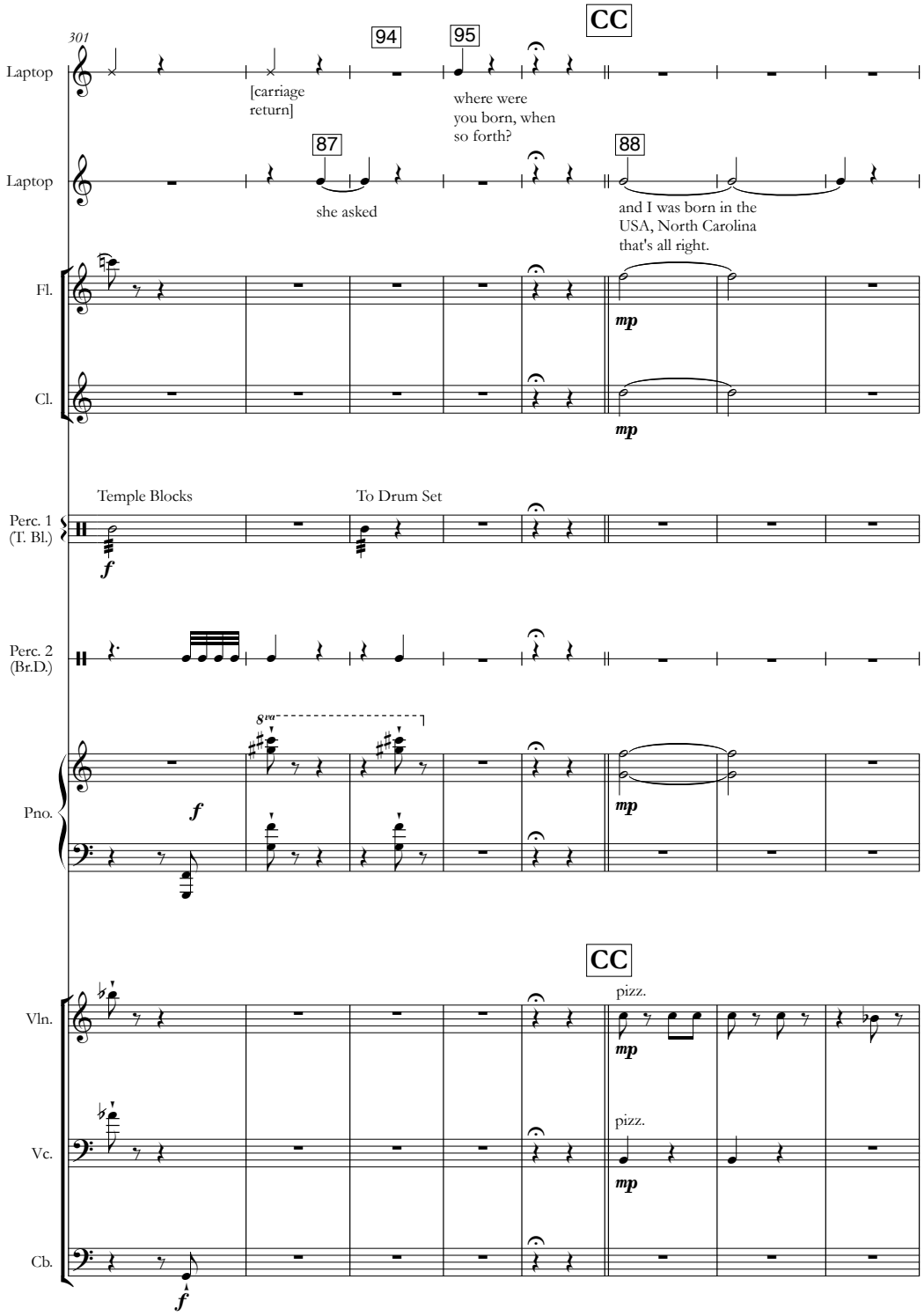
7. Kobe, Japan

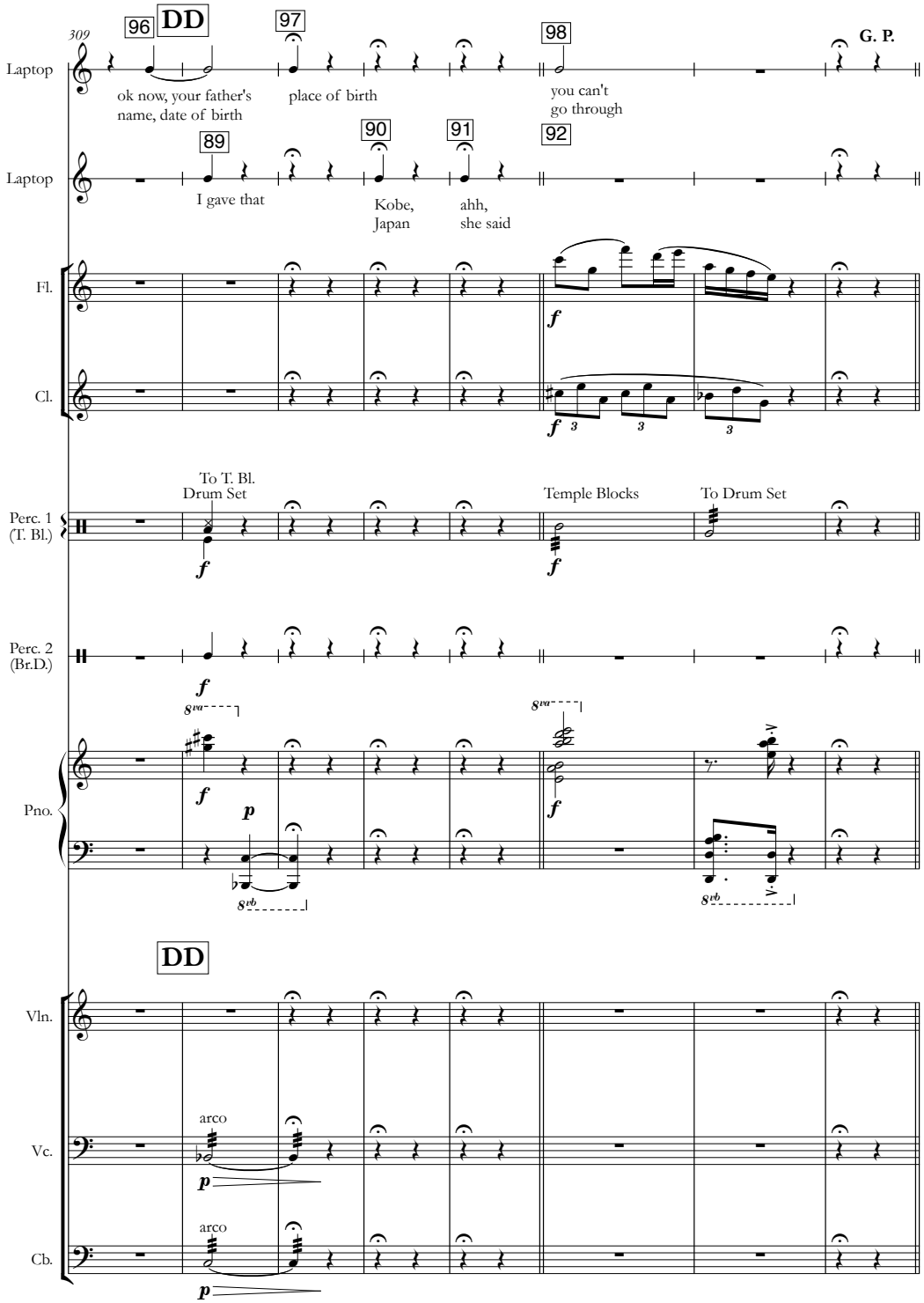

♩=80
272
87
improvise
Y
88
Laptop
[wisp synth]
(improvise; fades out)
74
75
76
77
78
Laptop
[wisp synth]
The next
morning I went in
to the lab and
found barbed wire
surrounding
the building
Fl.
Cl.
Claves
3
3
To T. Bl.
Perc. 1
(Clv.)
mp
Brake Drum
Perc. 2
(Br.D.)
Pno.
p
8vb
♩=80
Y
Vln.
sul pont.
Vc.
gliss.
p
improvise
timing
gliss.
Cb.
p

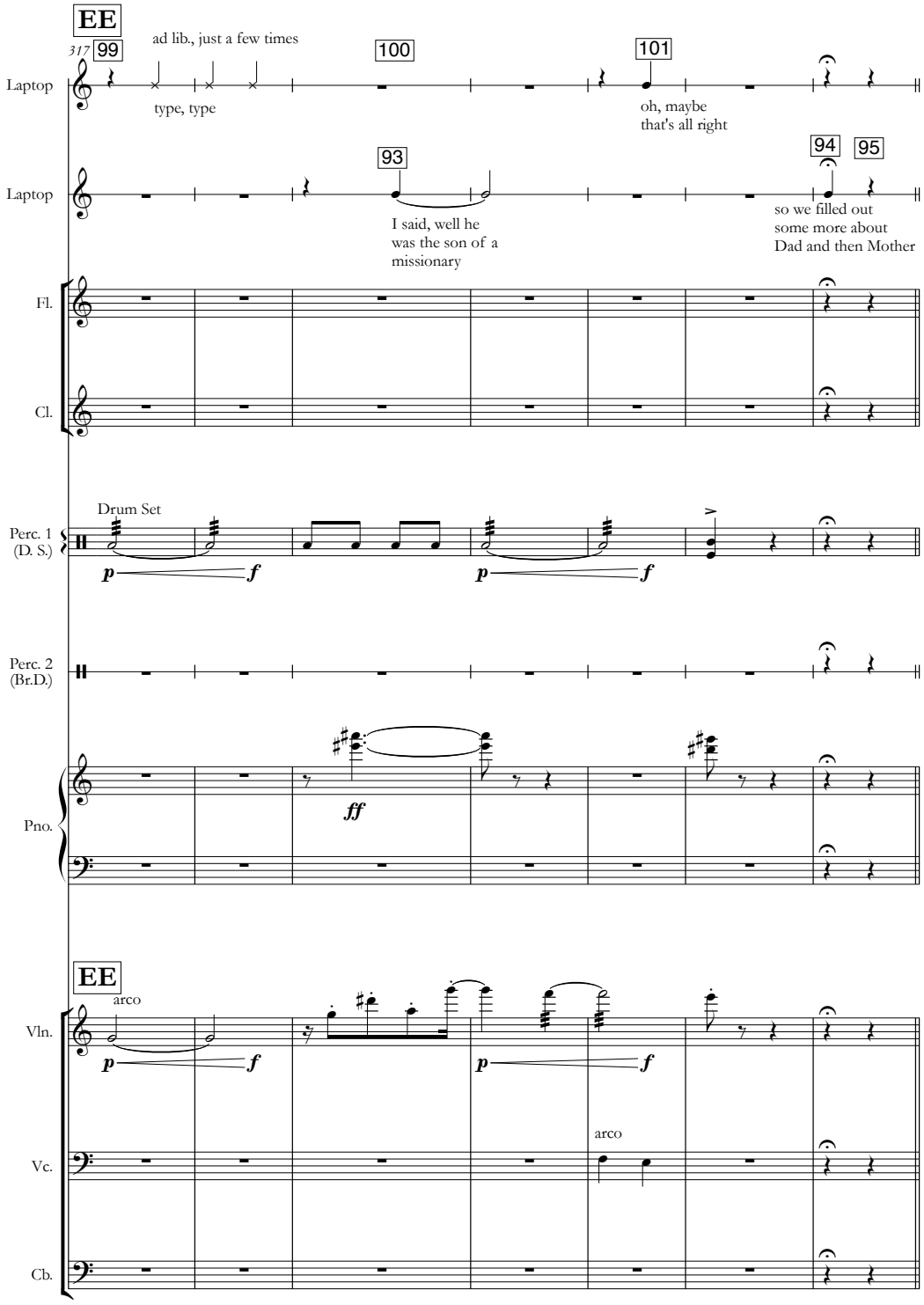

281
89
90
Z
91
Laptop
ahhh...
[scrub] maybe
secret work
79
80
81
Laptop
ahhh...
we knew that
this was
[scrub] maybe
secret work
Fl.
Cl.
To Clv.
Temple Blocks
Claves
Perc. 1
(Clv.)
Perc. 2
(Br.D.)
Pno.
Z
Vln.
Vc.
pizz.
Cb.
gliss.
pizz. (in time)

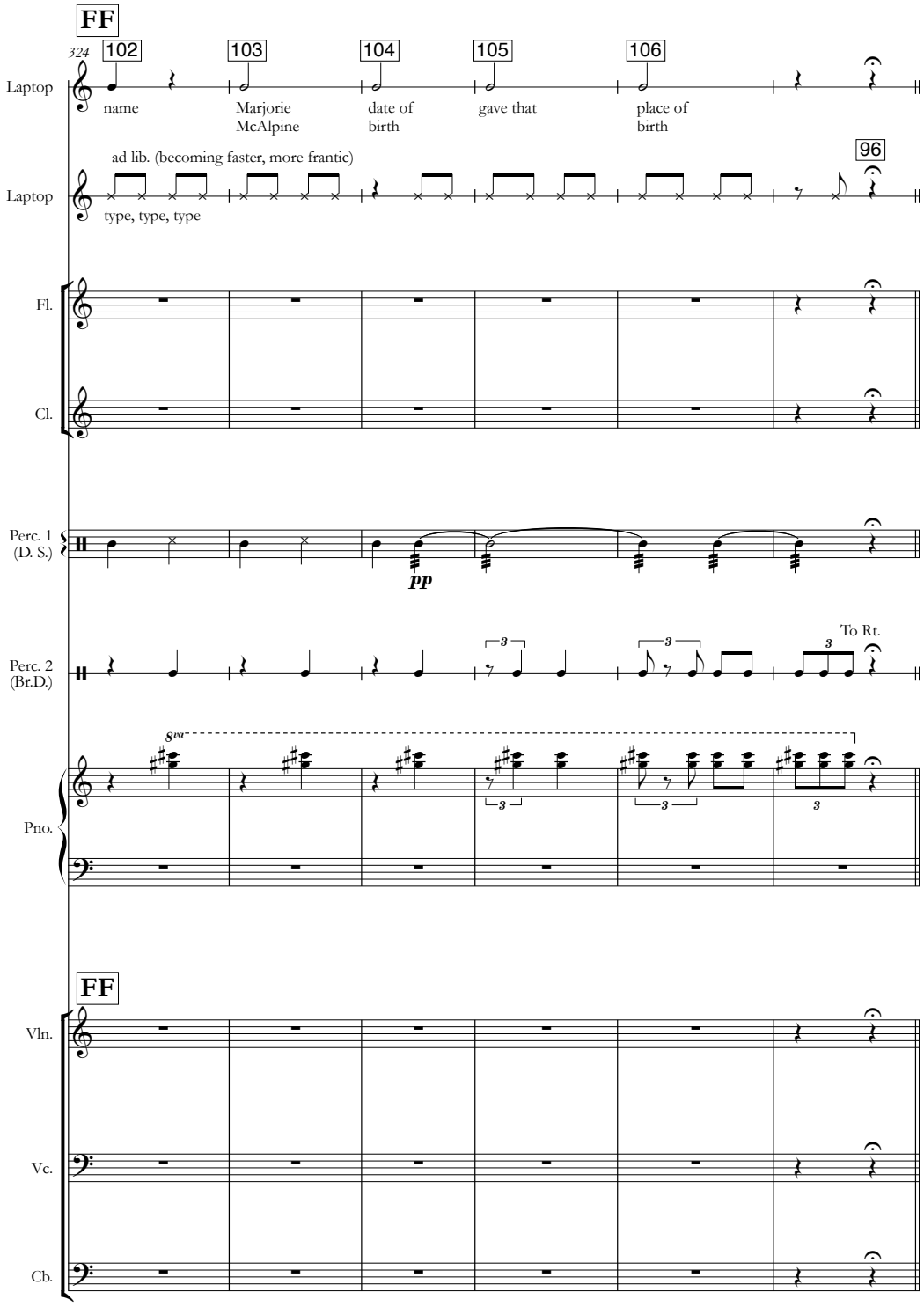

288
Laptop
82
83
84
85
Laptop
there were
armed guards
and
secretaries
Fl.
Cl.
f
mp
3
3
To Drum Set
Drum Set
Perc. 1
(Clv.)
3
Perc. 2
(Br.D.)
Pno.
Vln.
(norm.)
arco
Vc.
mp
Cb.

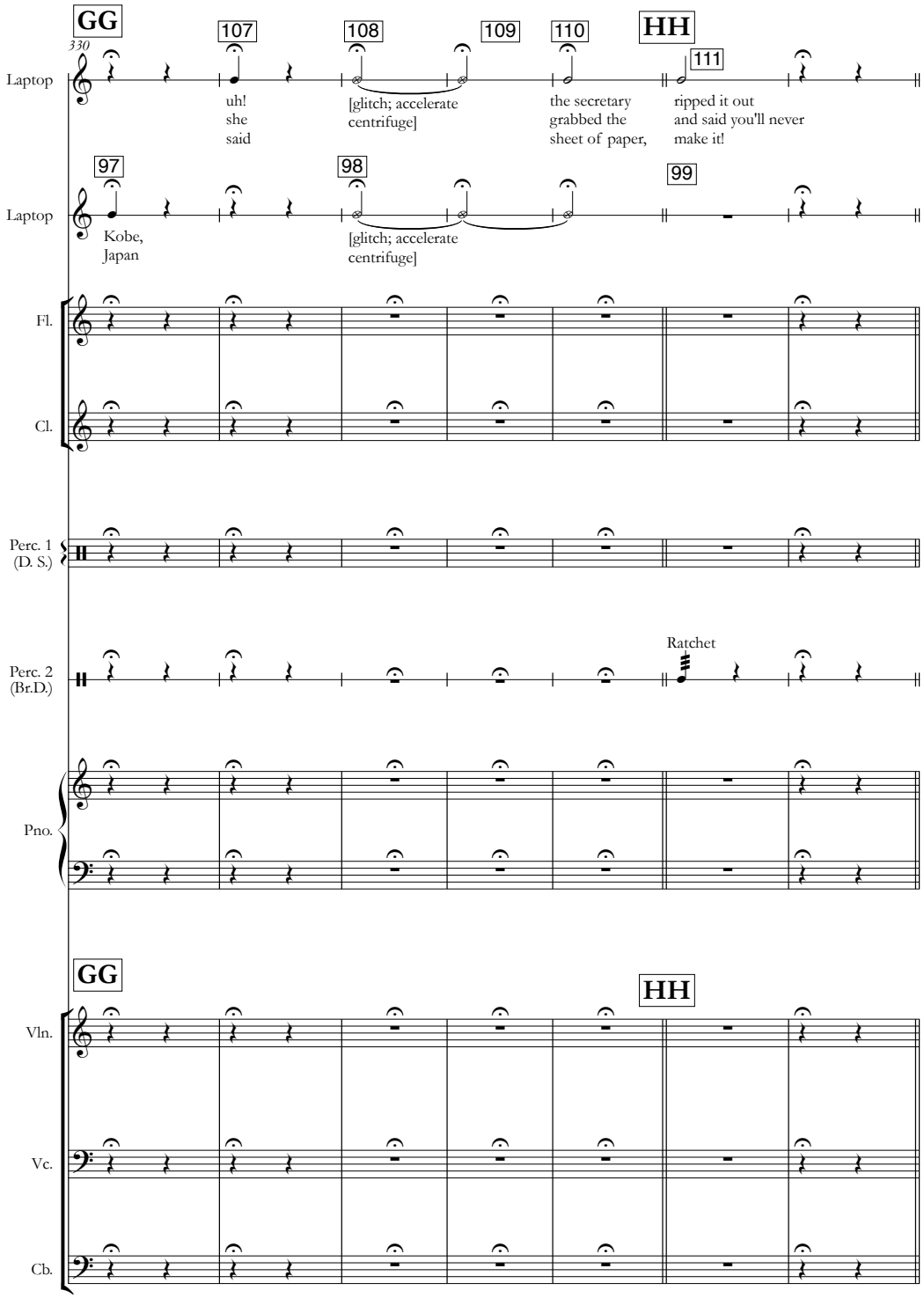

294
AA
92
93
ad lib.
BB
Laptop
typewriters
type- type- type, etc.
(continue typing
thru fermata)
86
Laptop
with typewriters, to take down
information for security clearance
Fl.
f
Cl.
f
(rim shot)
To T. Bl.
Perc. 1
(D. S.)
f
Perc. 2
(Br.D.)
8va
ff
Pno.
AA
BB
Vln.
gliss.
f
Vc.
gliss.
f
Cb.

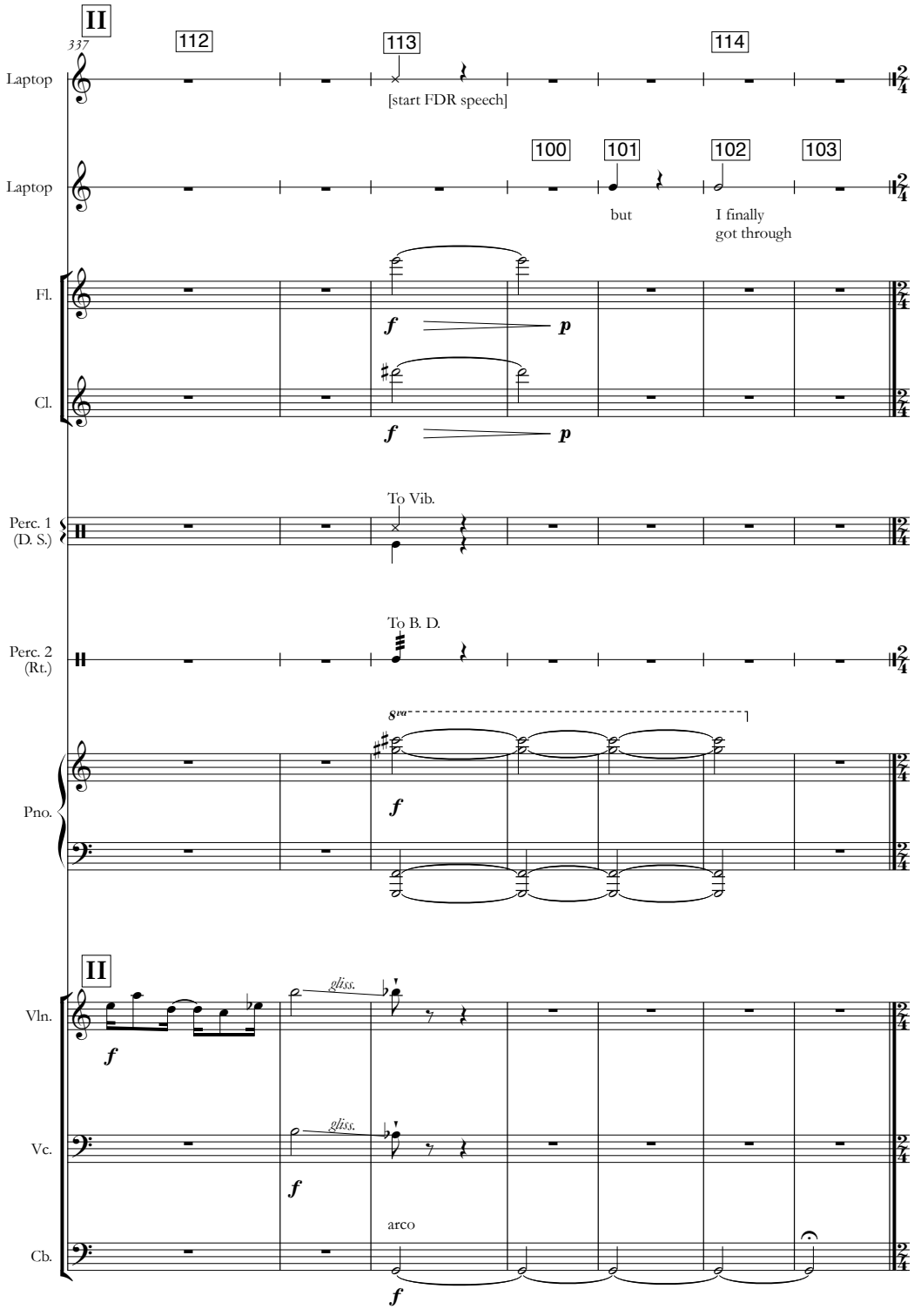

301
CC
94
95
Laptop
[carriage return]
where were you born, when so forth?
87
88
Laptop
she asked
and I was born in the USA, North Carolina that's all right.
Fl.
mp
Cl.
mp
Temple Blocks
To Drum Set
Perc. 1 (T. Bl.)
f
Perc. 2 (Br.D.)
8va
Pno.
f
mp
CC
pizz.
Vln.
mp
pizz.
Vc.
mp
Cb.
f


309
96
DD
97
98
G. P.
Laptop
ok now, your father's name, date of birth
place of birth
you can't go through
89
90
91
92
Laptop
I gave that
Kobe, Japan
ahh, she said
Fl.
Cl.
To T. Bl.
Drum Set
Temple Blocks
To Drum Set
Perc. 1 (T. Bl.)
Perc. 2 (Br.D.)
Pno.
DD
Vln.
arco
Vc.
arco
Cb.

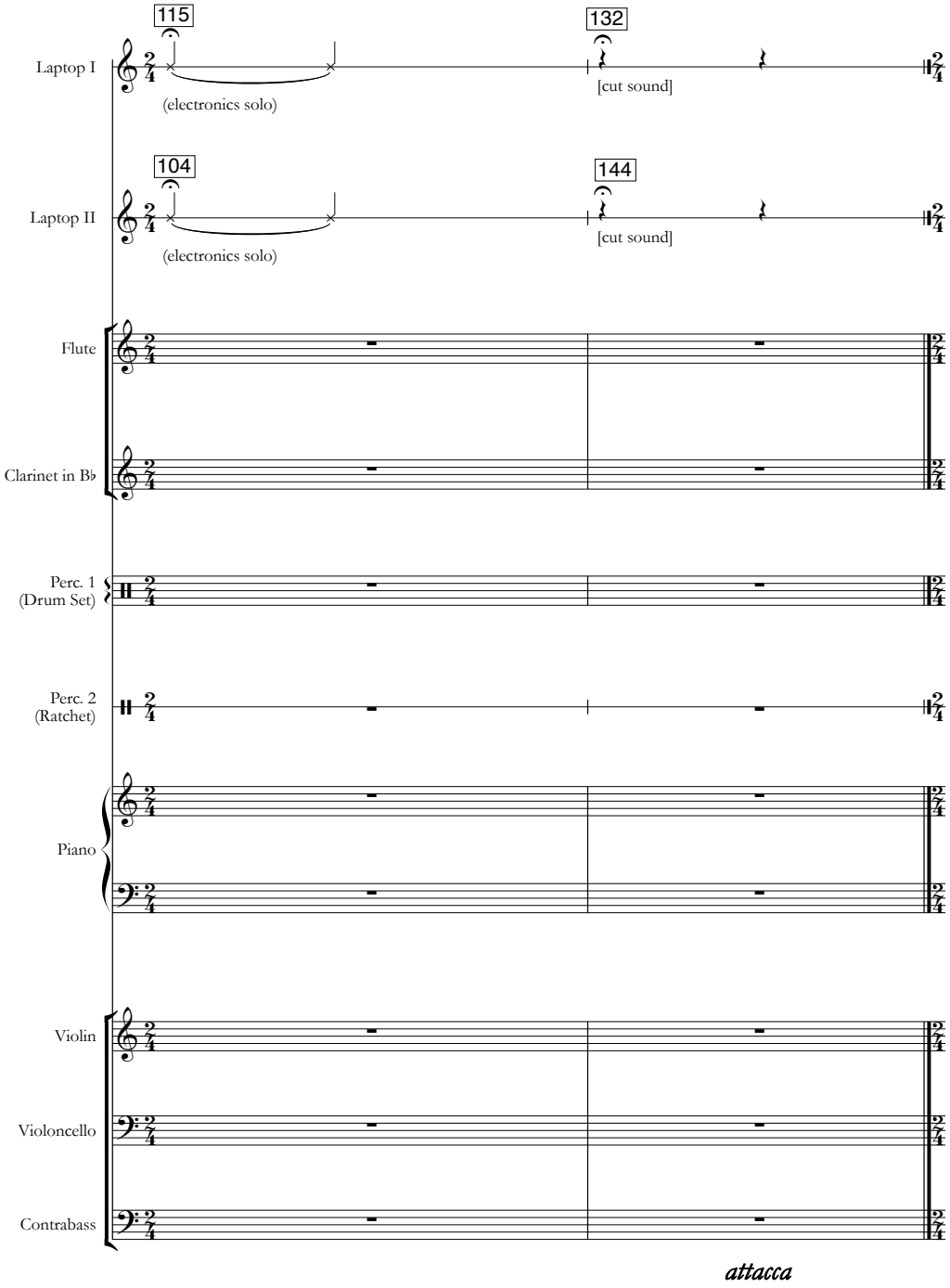

EE
317
99
ad lib., just a few times
type, type
100
101
oh, maybe
that's all right
Laptop
93
94
95
I said, well he
was the son of a
missionary
so we filled out
some more about
Dad and then Mother
Laptop
Fl.
Cl.
Drum Set
Perc. 1
(D. S.)
p
f
p
f
Perc. 2
(Br.D.)
Pno.
ff
EE
arco
Vln.
p
f
p
f
arco
Vc.
Cb.


FF
324
102
103
104
105
106
Laptop
name
Marjorie McAlpine
date of birth
gave that
place of birth
ad lib. (becoming faster, more frantic)
96
Laptop
type, type, type
Fl.
Cl.
Perc. 1 (D. S.)
pp
Perc. 2 (Br.D.)
To Rt.
8va
Pno.
FF
Vln.
Vc.
Cb.


GG
330
107
108
109
110
HH
111
Laptop
uh!
she
said
[glitch; accelerate
centrifuge]
the secretary
grabbed the
sheet of paper,
ripped it out
and said you'll never
make it!
97
98
99
Laptop
Kobe,
Japan
[glitch; accelerate
centrifuge]
Fl.
Cl.
Perc. 1
(D. S.)
Perc. 2
(Br.D.)
Ratchet
Pno.
GG
HH
Vln.
Vc.
Cb.


II
337
112
113
114
Laptop
[start FDR speech]
100
101
102
103
Laptop
but
I finally
got through
Fl.
Cl.
To Vib.
Perc. 1
(D. S.)
To B. D.
Perc. 2
(Rt.)
8va
Pno.
II
Vln.
gliss.
Vc.
gliss.
arco
Cb.

8. Manhattan Project



8. Manhattan Project
(Electronics Solo)

Player 1

115	"It wasn't until after"
116	"December 7"
117	"it was revealed"
118	"to us"
119	"over a period of time"
120	"that the lab"
121	"was part of"
122	FDR Speech to Applause
123	TACET
124	"the Manhattan Project"

125	Sequence: Szilard had been looking at. . .

("wrote a letter to FDR") ----------

(Szilard sequence finishes)

126	Begin Drone
127	Bubble Fragments, low feedback

Player 2

104	Short speech fragments, no feedback
105	Improvise on Wisp Synth

106	Bubble Fragments, low feedback

107	Begin Drone
108	TACET

109	It
110	was
111	amazing
112	the
113	amount
114	of
115	secrecy
116	could
117	be
118	maintained
119	with
120	such
121	a
122	vast

123	number
124	of
125	people
126	involved

127	Bubble Fragments, medium feedback

128	Sequence: Oak Ridge

129	Bubble Fragments, low feedback

128	Sequence: U-235 and U-238

129	Bubble Fragments, medium feedback

130	Sequence: I might have said we were working on. . .

131	Bubble Fragments, very slowly cresc to max feedback

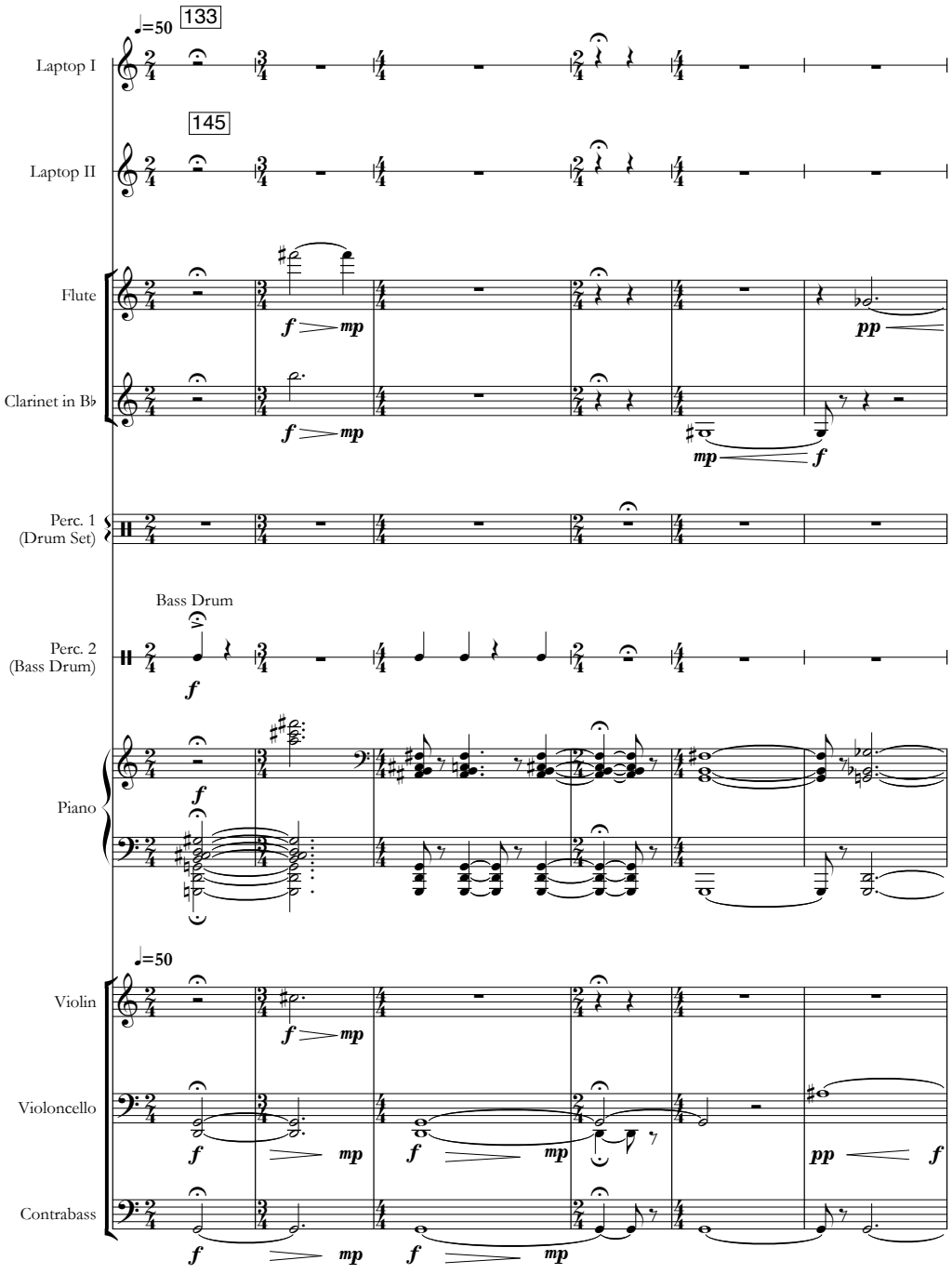
130	TACET
131	There
132	were
133	rumors
134	that
135	they
136	were
137	having
138	success
139	in
140	making
141	test
142	bombs

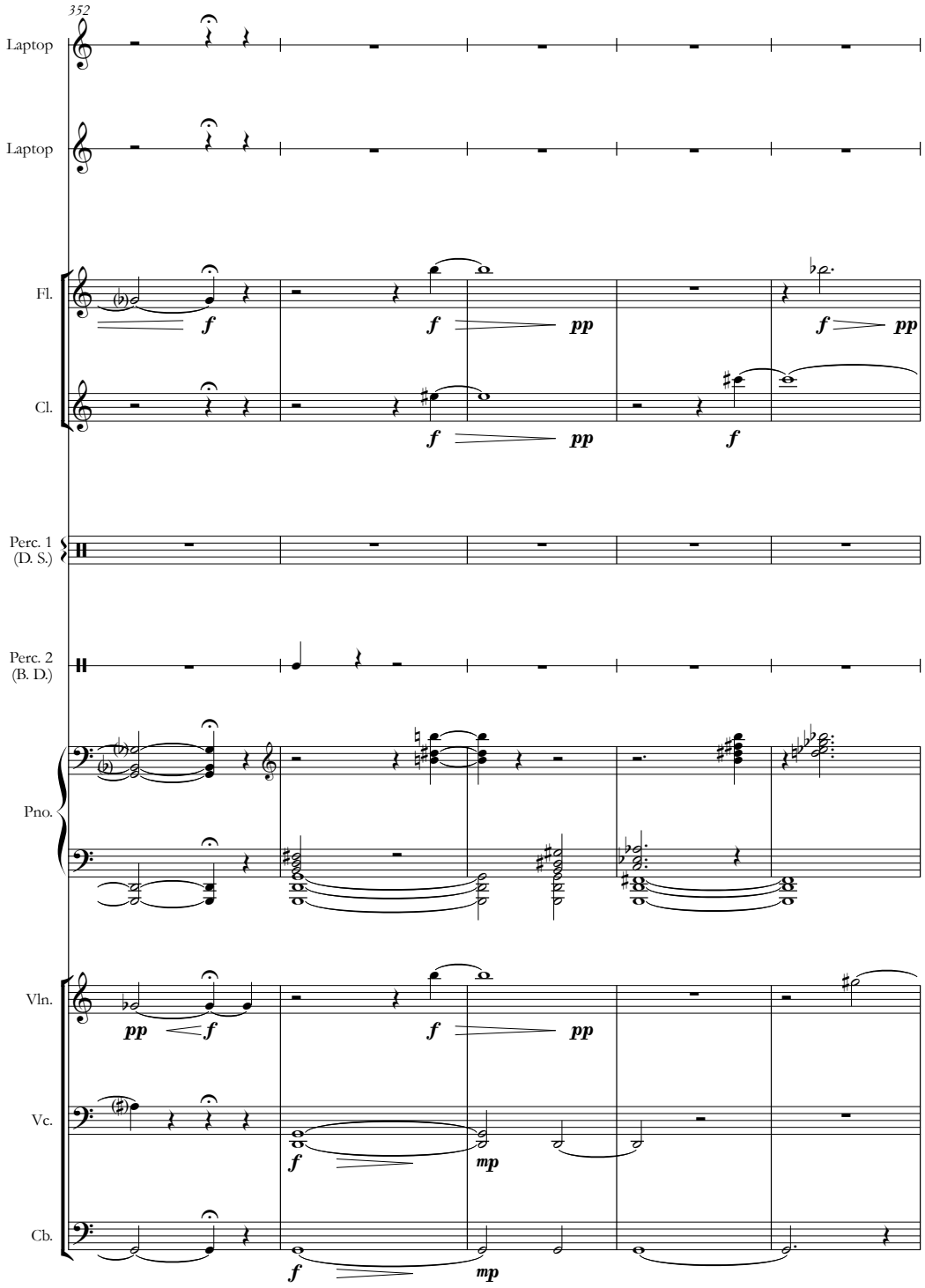
143	Bubble Fragments, very slowly cresc to max feedback

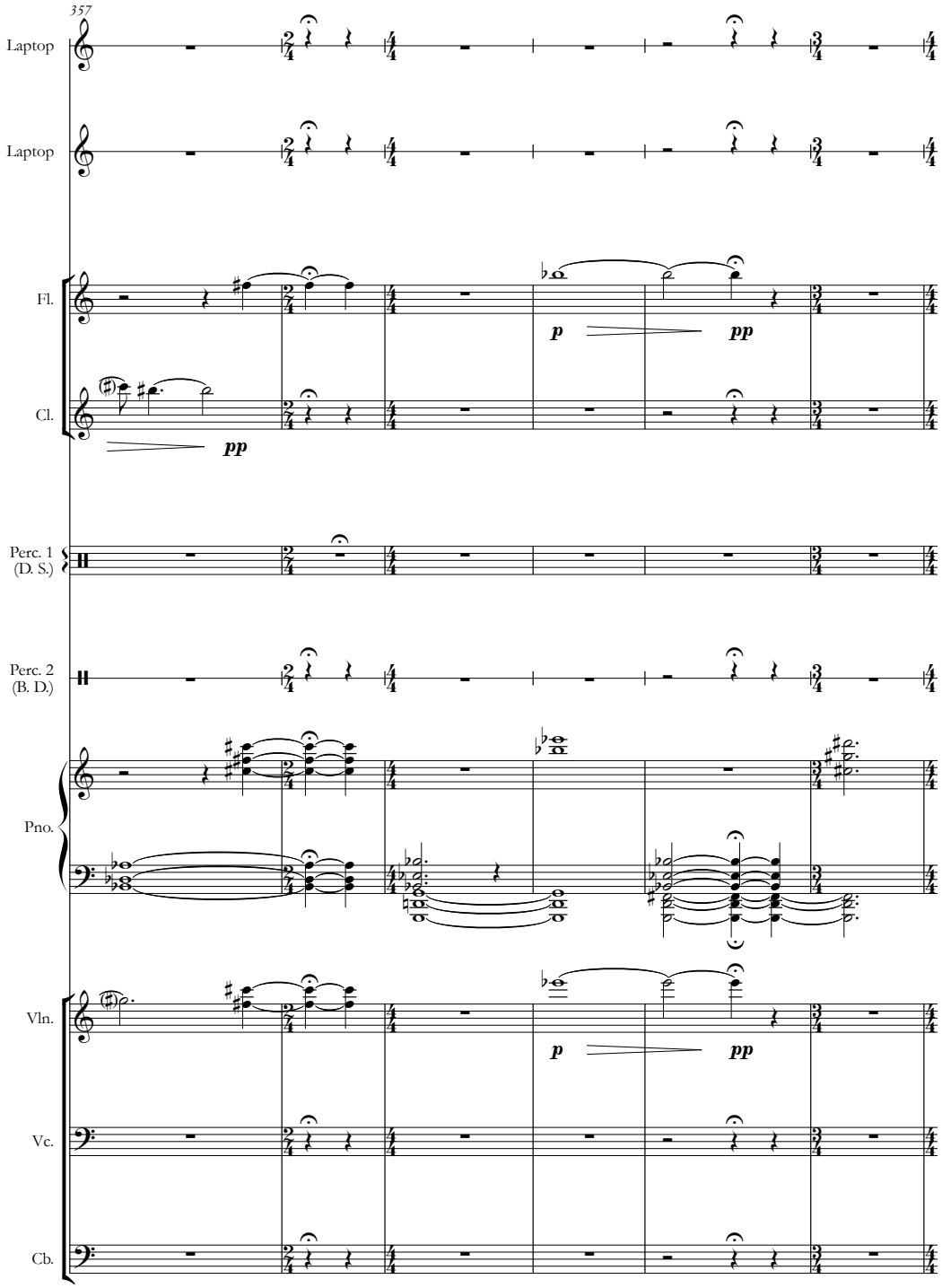
132	Cut Sound

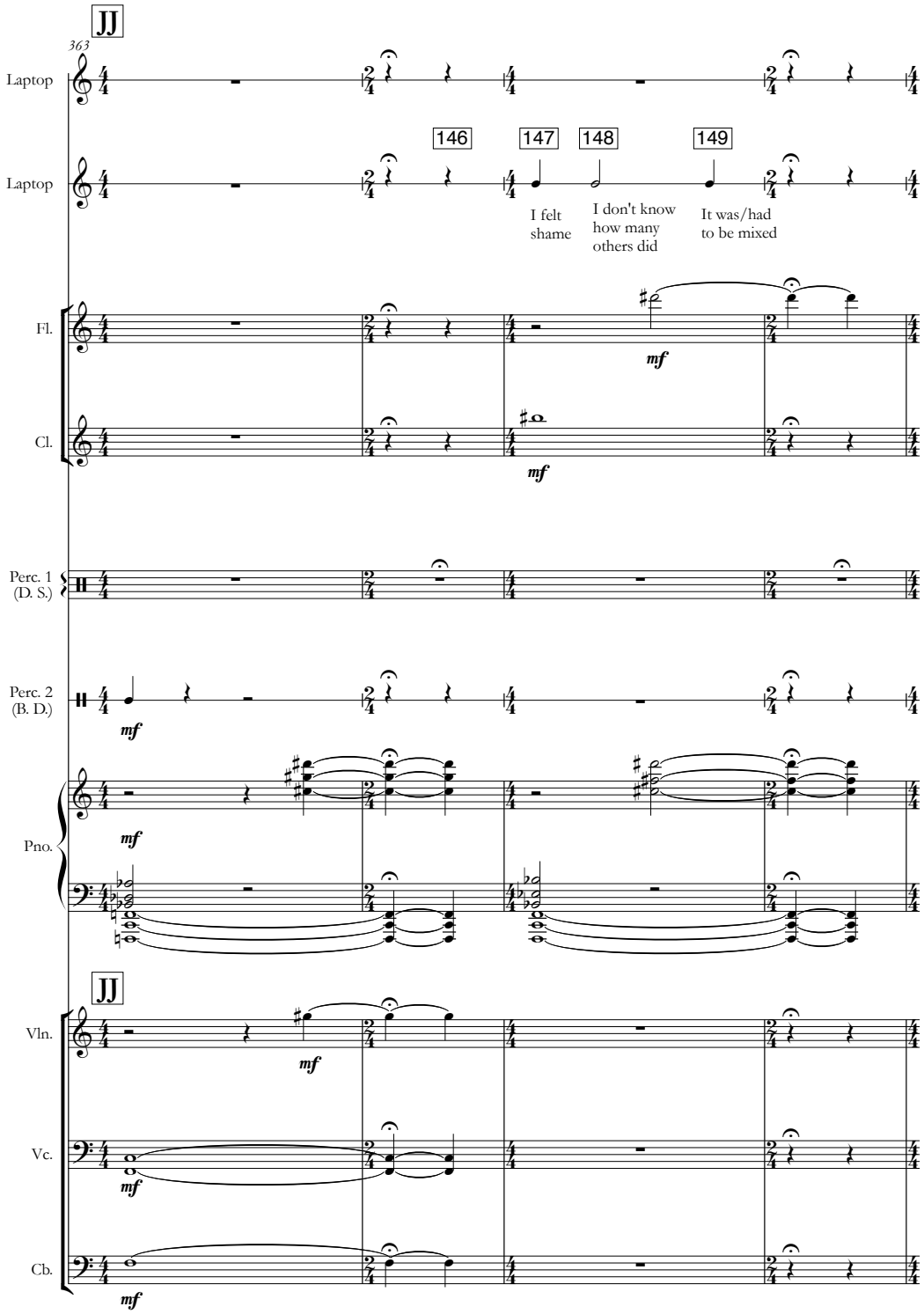
144	Cut Sound

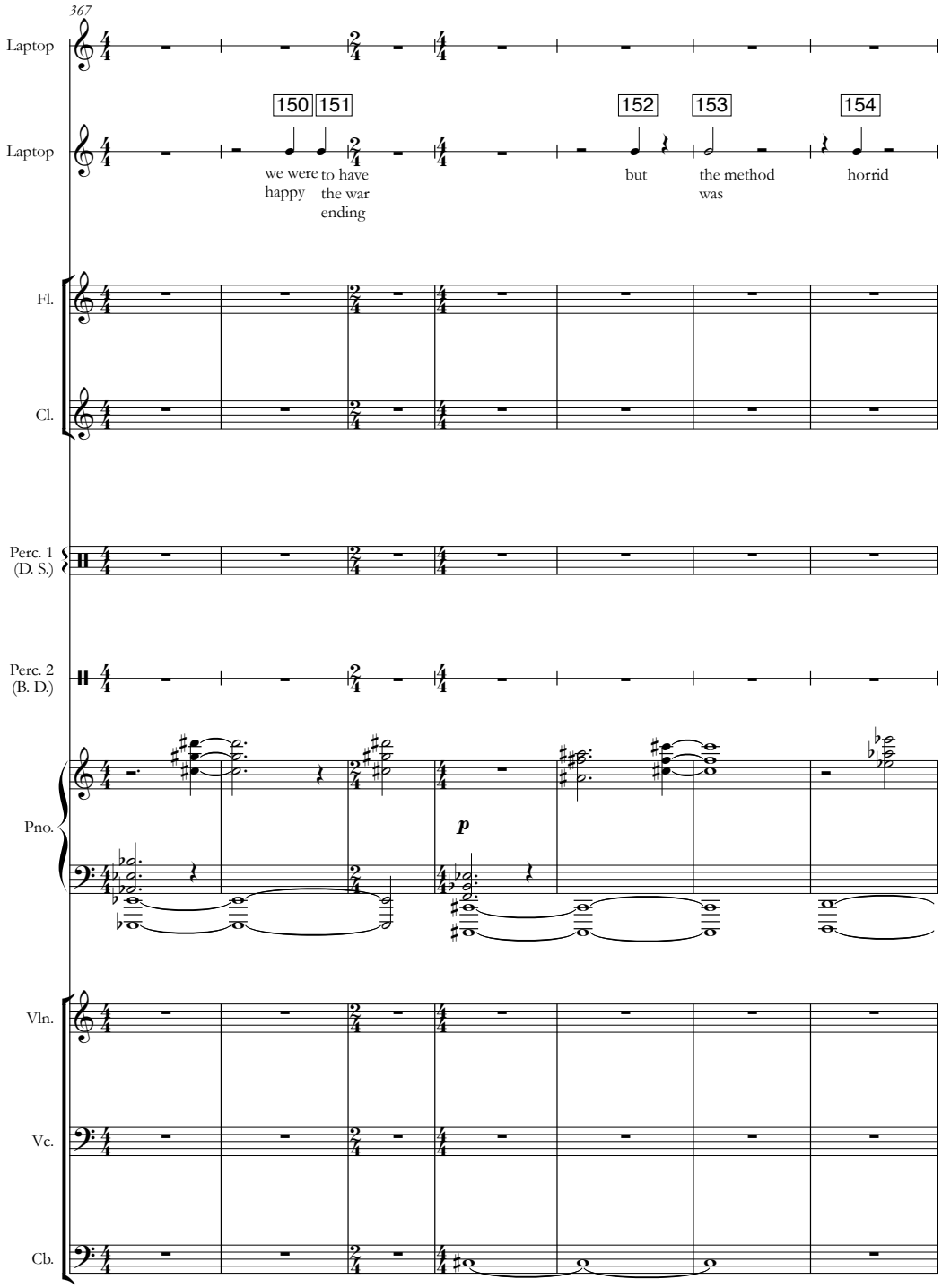
9. Afterwards

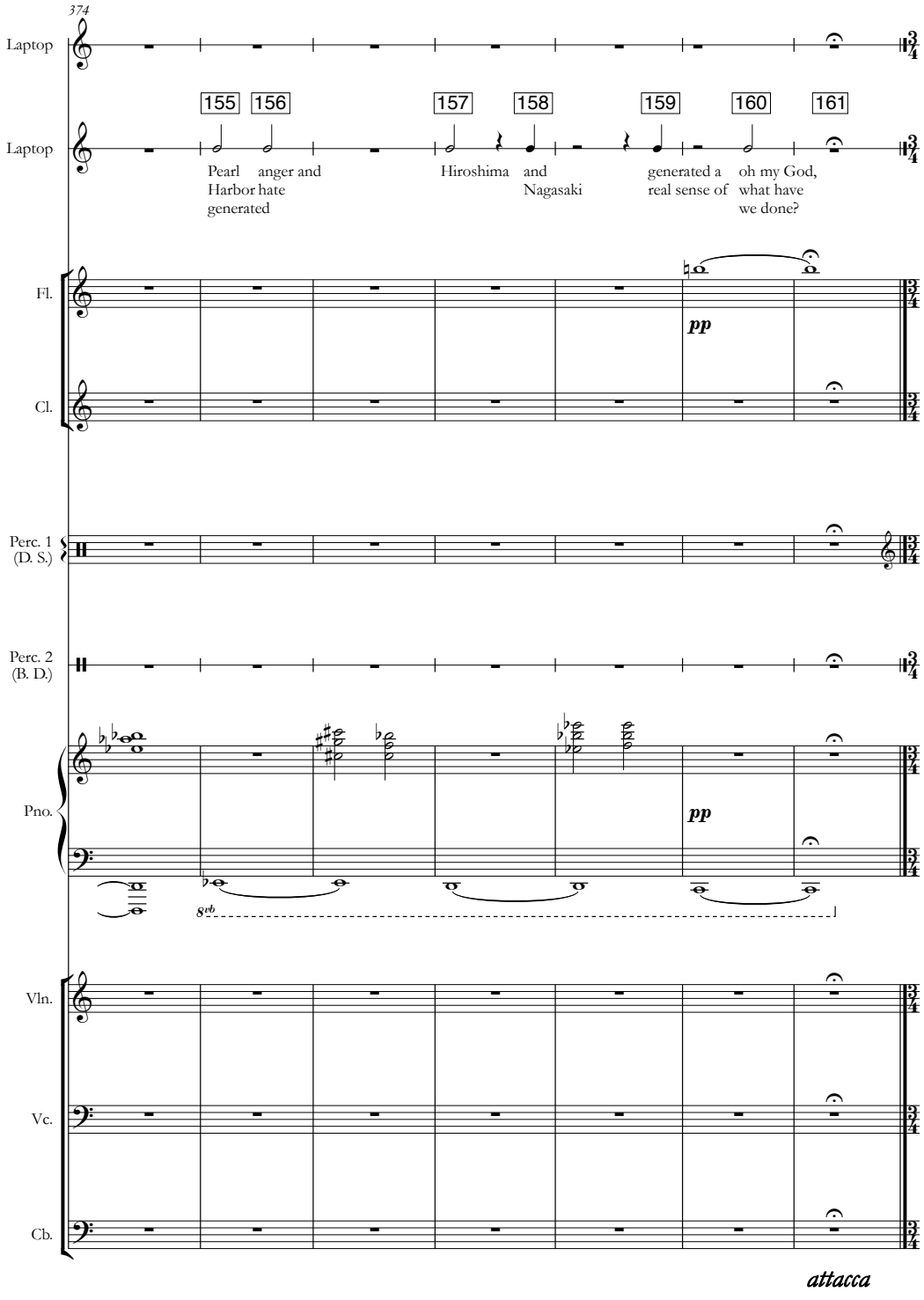



352
Laptop
Laptop
Fl.
Cl.
Perc. 1 (D. S.)
Perc. 2 (B. D.)
Pno.
Vln.
Vc.
Cb.
f
pp
mp

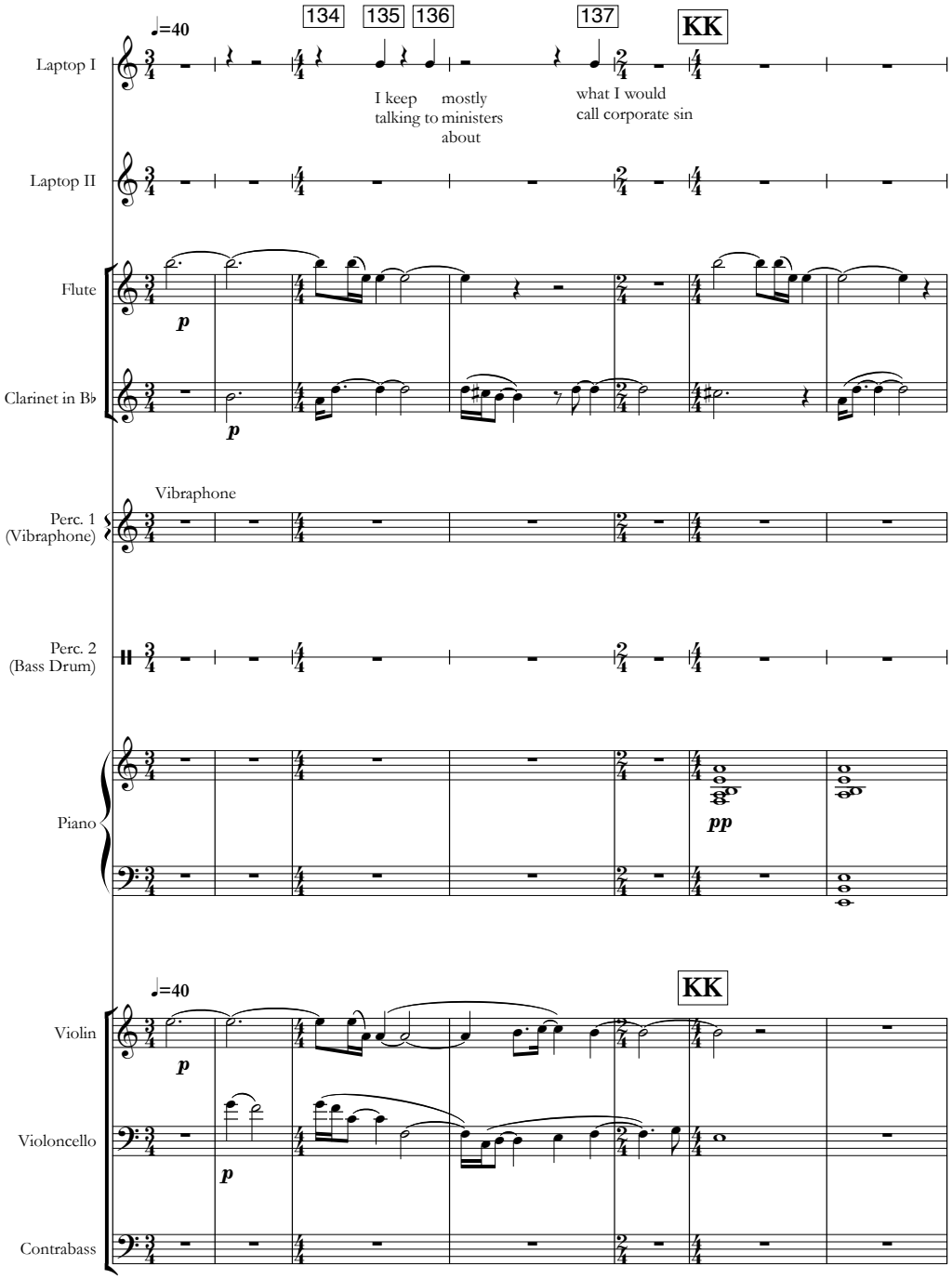

357
Laptop
Laptop
Fl.
Cl.
Perc. 1 (D. S.)
Perc. 2 (B. D.)
Pno.
Vln.
Vc.
Cb.
p
pp
pp
p
pp

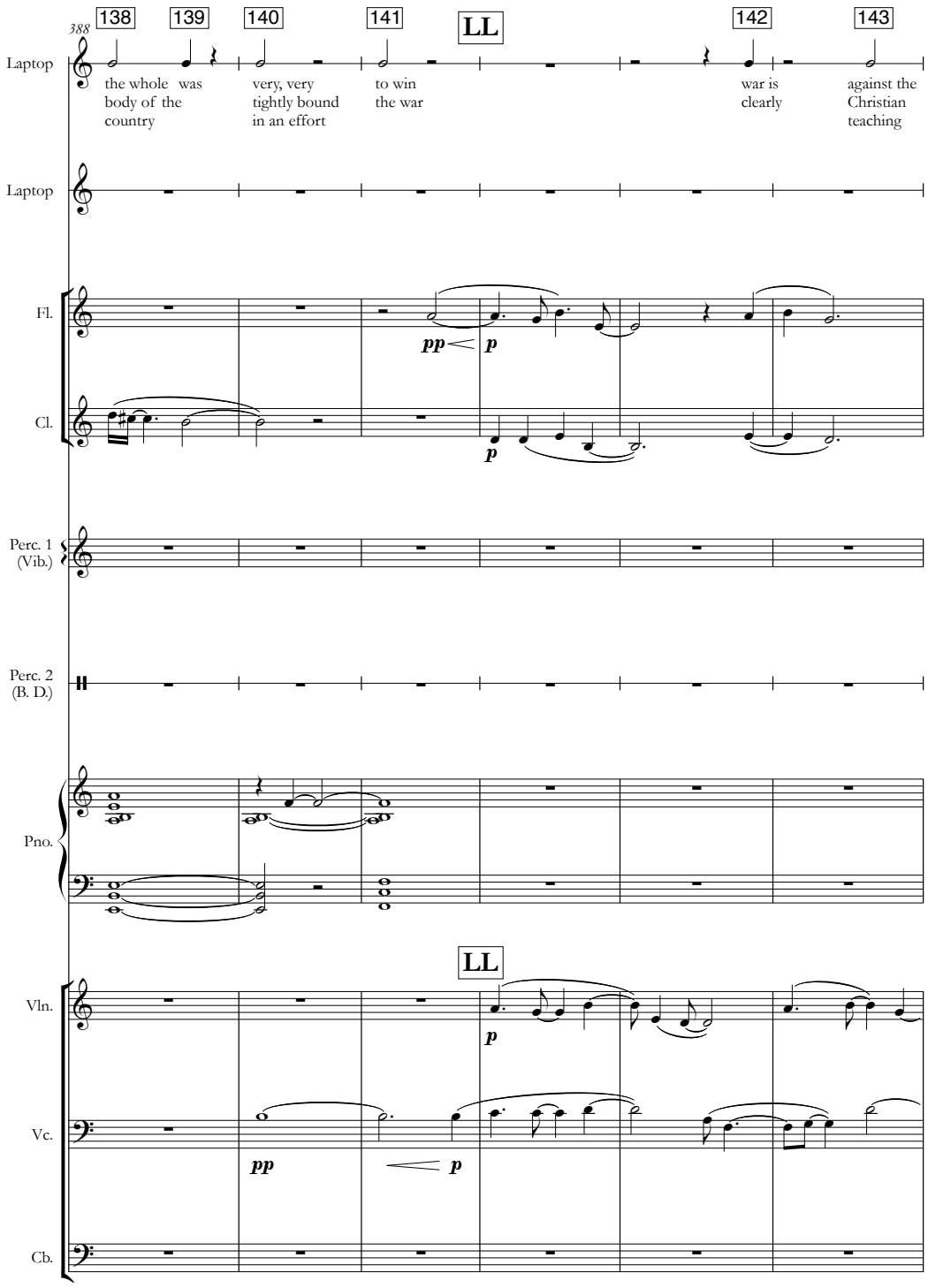

JJ
363
Laptop
146
147
148
149
Laptop
I felt shame
I don't know how many others did
It was/had to be mixed
Fl.
mf
Cl.
mf
Perc. 1 (D. S.)
Perc. 2 (B. D.)
mf
Pno.
mf
JJ
Vln.
mf
Vc.
mf
Cb.
mf

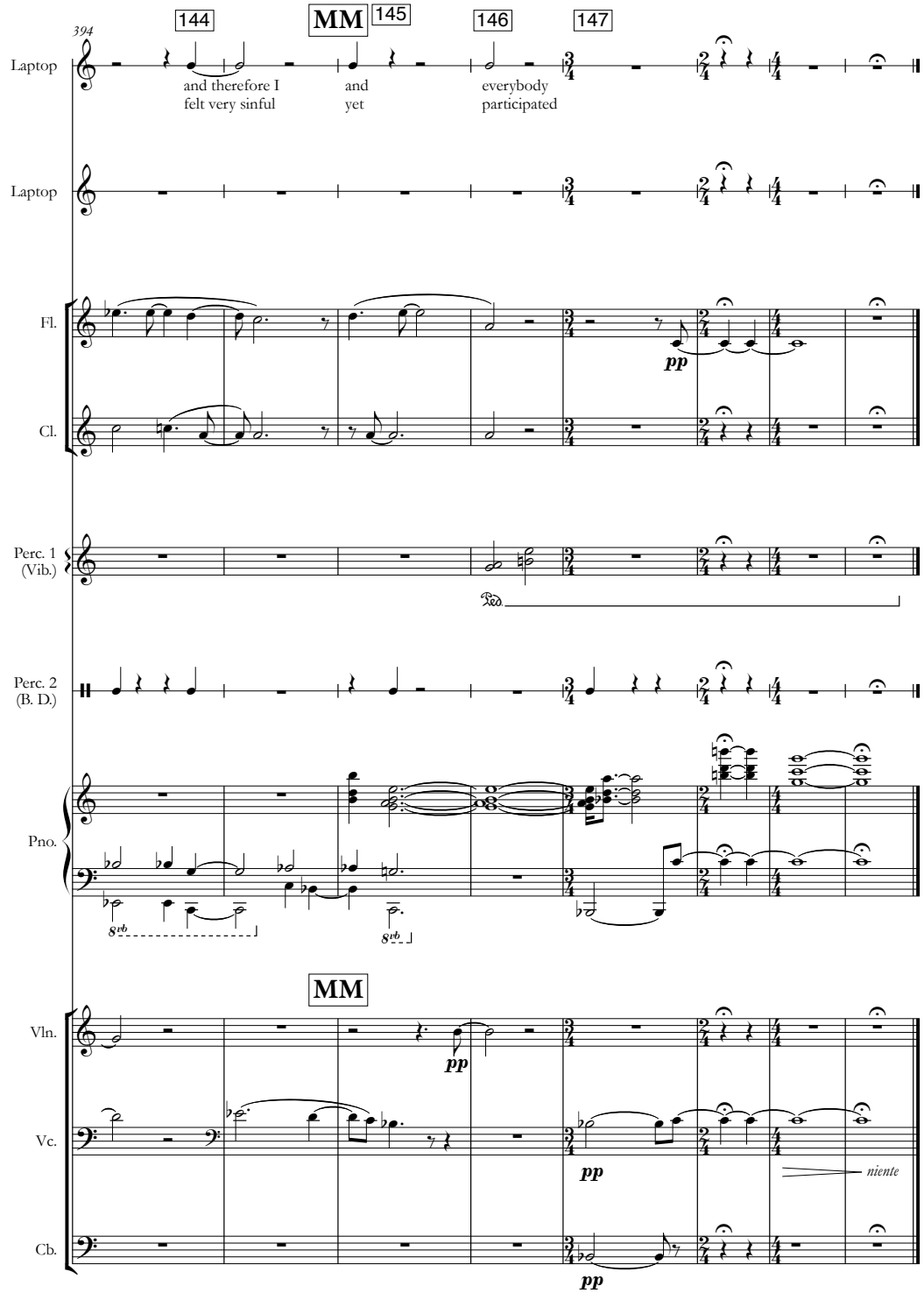

367
Laptop
150 151
152
153
154
Laptop
we were happy
to have the war ending
but
the method was
horrid
Fl.
Cl.
Perc. 1 (D. S.)
Perc. 2 (B. D.)
Pno.
p
Vln.
Vc.
Cb.


374
Laptop
155
156
157
158
159
160
161
Laptop
Pearl Harbor generated
anger and hate
Hiroshima
and Nagasaki
generated a real sense of
oh my God, what have we done?
Fl.
pp
Cl.
Perc. 1 (D. S.)
Perc. 2 (B. D.)
Pno.
pp
8vb
Vln.
Vc.
Cb.
attacca

10. Now


♩=40
134
135
136
137
KK
Laptop I
I keep talking to
mostly ministers about
what I would call corporate sin
Laptop II
Flute
p
Clarinet in B♭
p
Vibraphone
Perc. 1 (Vibraphone)
Perc. 2 (Bass Drum)
Piano
pp
♩=40
KK
Violin
p
Violoncello
p
Contrabass


388
138
139
140
141
LL
142
143
Laptop
the whole body of the country was
very, very tightly bound in an effort
to win the war
war is clearly
against the Christian teaching
Laptop
Fl.
pp
p
Cl.
p
Perc. 1 (Vib.)
Perc. 2 (B. D.)
Pno.
LL
Vln.
p
Vc.
pp
p
Cb.


394
144
MM
145
146
147
Laptop
and therefore I
felt very sinful
and
yet
everybody
participated
Laptop
Fl.
pp
Cl.
Perc. 1
(Vib.)
Ped.
Perc. 2
(B. D.)
Pno.
8vb
8vb
MM
Vln.
pp
Vc.
pp
niente
Cb.
pp

APPENDIX C

VIDEO RECORDING OF *THERE WAS NO QUESTION*

A video recording of *There Was No Question* can be found online at the following address: http://vimeo.com/32494250.

APPENDIX D

ELECTRONICS PATCHES FOR *THERE WAS NO QUESTION*

Below are descriptions of the various patches used in the piece. These patches are loaded automatically (based on a cue number) for the Wii performers to play over the course of the piece. The Max/MSP patches and audio files on which they depend are included on a supplemental disc.

Narration Patches

TriggerNarration: plays an audio clip without processing.

DelayNarration: plays an audio clip, but adds a minimal reverb and bubbling effect, controlled by the performer.

FlowNarration: allows the player to control the tempo of an audio clip's playback by moving the Wii remote back and forth, faster or slower.

ScrubNarration: The performer sees a waveform and can "scrub" through it by adjusting the vertical pitch of the Wii remote—playing it at varying speed, forward and backwards. Sound is only played when a button is depressed, meaning that the performer can jump between discontinuous chunks of audio.

ChopNarration: The player can start or stop the narration by flicking the wrist. A more active wrist will result in a more "chopping" of the sound, making it harder to

understand. While the narration is stopped, an "echo" of the section most recently played continues to loop.

SegmentNarration: Similar to ChopNarration, this patch starts and stops the playback of narration. On this patch, however, the narration will automatically stop after a given period of time (controlled by the roll of the nunchuck), so the performer must continue to flick the wrist to make the narration continue.

Text-Painting Patches

RadioStatic: uses a mixture of synthesized pink noise, filtering, and recorded radio static to let the Wii performer create and shape their own radio static texture.

ChickenVoice: The performer flicks the wrist to play narration samples which are convolved with the sounds of chickens' wings flapping. Flicking the wrist also restarts a sample (as in "chick- chick- chickens"). The buttons on the nunchuk allow the performer to trigger unprocessed water-splashing and wing-flapping sound effects.

Typewriter: the performer "types" with both hands in midair to repeatedly play the word "type;" a button on the nunchuk plays the carriage return sound effect.

Centrifuge: the performer slowly increases the vertical pitch of the Wii remote while holding down the "B" button to increase the speed of the centrifuge.

WispSynth: is a synthesizer played by moving the Wii back and forth; pitch is controlled using the nunchuk's vertical pitch.

Electronic Accompaniment Patches

FDRSpeech: push buttons to start or stop the FDR speech (with much reverb added), or to jump to the applause section of the recording.

Drone: is identical to ScrubNarration except that the sound is convolved with a looping cello drone sound. Additionally, the drone continues to loop after you have stopped scrubbing; you can change the drone by scrubbing again.

Bubbler: is identical to ScrubNarration except that the sound generated by scrubbing is fed into the SoundHack +bubbler, which converts it into many small grains of sound. Additionally, the feedback level of the bubbler is controlled by the nunchuk's vertical pitch.