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«…NO DESALINHO TRISTE DE MINHAS EMOÇÕES CONFUSAS…»

A MUSICAL COMPOSITION FOR PIANO AND LIVE-ELECTRONICS

by

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ABSTRACT

“No desalinho triste de minhas emoções confusas…” (2011), which translates as “…in the sad disarray of my confused emotions…” is a musical composition for piano and live-electronics written by Felipe de Almeida Ribeiro (1980). This composition presents several characteristics of the composer’s poetics, such as the tendency to value intuition and perception, to incline towards the use of non-teleological and non-narrative temporal and cognitive concepts, to reflect on the relationship between composition and self-knowledge, as well as to the instrument’s choice: piano with extended techniques and quadriphonic live-electronics via MaxMSP. Aesthetically speaking, this work manifests influences of Fernando Pessoa and Karlheinz Stockhausen, more specifically on the piece’s formal structure. In addition to the sounds naturally produced by the piano, the composer explores sounds that are artificially implemented, such as damped strings, *pizzicati*, harmonics and pin gliss. This dissertation will analyse and discourse on the aesthetic and technical issues mentioned above.

RESUMO

“No desalinho triste de minhas emoções confusas…” (2011) é uma obra musical para piano e live-electronics de autoria de Felipe de Almeida Ribeiro (1980). Esta composição possui traços gerais da poética do compositor, como a super-valorização da intuição e da percepção, o direcionamento temporal não-teleológico e não-narrativo, o refletir na relação entre o ato de compor e de autoconhecimento, assim como a instrumentação escolhida: piano estendido e eletrônica quadrifônica com processamento em tempo real implementada via MaxMSP. Esteticamente falando, a obra em discussão apresenta influências de Fernando Pessoa e Karlheinz Stockhausen, principalmente na questão da estrutura global da peça. Explora-se também nesta obra - além da sonoridade naturalmente obtida pelo piano - a emissão de sons artificialmente implementados no instrumento, como aqueles obtidos com o abafamento de cordas, *pizzicati*, harmônicos, ou ainda com *glissandi* perto das cravelhas. Este texto visa analisar todas as características acima citadas. O estudo se dividirá em capítulos que tratarão tanto de reflexões a respeito da estética da peça quanto de analisar tecnicamente a partitura para piano e o *patch* criado em MaxMSP.

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1.THOUGHTS ON AESTHETIC ISSUES[1]

This first chapter presents four texts that describe some of my ideas and understandings on music and composition, especially on the musical work under discussion. One must be conscious of their subjective nature, and that they are meant to be read as general reflections and observations. Since *…no desalinho triste de minhas emoções confusas…* presents many abstract and subjective issues, a study on it also needs a flexible and open understanding. The four texts are:

1.1 On creativity and aesthetics
1.2 Performing issues
1.3 The influence of Pessoa and Stockhausen
1.4 Regarding perception and referentiality

1.1 ON CREATIVITY AND AESTHETICS

As a composer, I am constantly seeking an intelligent dialogue between intuition and reason, one that is malleable and persistently reconsidering its interconnections. Therefore, I believe that the process of artistic creation biased merely on either intuition or reason could lead to failure. However, compositions purely based on either of the two are non existent: they always present both sides with different levels and proportions. What appears to be opposing ideas are actually complementary forces. The matter in question is what I seek as an artist: my own understanding on these concepts' relationship, something that is popularly described as the 'composer's own voice'.

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[1] All musical examples in this dissertation refer to the revised version of the score.

In general, what people commonly refer to as 'masters of music' makes allusion, even if subconsciously, to what was mentioned above. To the casual eye, Karlheinz Stockhausen (1928-2007), Ludwig van Beethoven (1770-1827), or Heitor Villa-Lobos (1887-1959) are landmarks in the history of music. On the other hand, one can think of them as minds that sought for this tension in their own musical language. They are examples of remarkable composers because of their unique view of this dichotomy. To some extent, it is misleading to identify Stockhausen or Beethoven, for instance, as icons only because one used the Fibonacci series and the other a double fugue. They were unique composers because they reached an authentic level of understanding of these techniques. It seems that most people acknowledge them more for their technical, material or even "palpable" achievements than for their spiritual capacity.

In the academy, students go over some of these techniques as models. At some point, it is part of their learning process to synthesize, or even break with these laws in order to develop the so called original voice. What I want to emphasize is the importance of mediating these two forces. I cannot think of any creative process based only on intuition or reason. Take a jazz ensemble, for instance. Even if the repertoire is highly improvised, at some level all players make use of methodological procedures: form, instrumentation, fingerings, scales, breathing techniques, etc. On the other hand, imagine asking someone illiterate in music to write a *concerto grosso*. This individual will probably lack the skills to accomplish this task, but it does not mean that this person is not creative. Conversely, music based purely on reason is also nonexistent. At some point, musicians have to take decisions based on some sort of arbitrariness or even chance (this does not necessarily defines intuition). An additional example: a visual art student may have the skills to perfectly copy a Matisse, but is that an acceptable example of creativity?

If those examples on reason and intuition are true, or at least make sense for the reader, how does one work with these two forces that are akin to oil and water? Could we imagine reason and intuition as one? Stockhausen's use of the Fibonacci series in *Klavierstück #9* has more to do with intuition or reason? I am inclined to believe that true creativity is a combination of the two, or as in Fernando Pessoa's words, one should "(…) be able to think with the emotions and feel with the mind; not to desire much except with the imagination (…)."[2]

Because of its complex nature, creativity cannot be deconstructed into a model. If one analyses the repertoire one will notice different composers with different tendencies. For instance, Boulez and Feldman may be seen as opposed sides regarding intuition and reason. So does Feldman himself: "Boulez, who is everything I don't want art to be… Boulez, who once said in an essay that he is not interested in how a piece sounds, only how it is made."[3] In a certain way, both composers are biased, because art - unlike 'hard' science - does not deal with a single truth; it allows multiple truths, each artist's truth. We are not in search of an ideal model, or in Jean-Luc Godard's words:

> Culture is the rule, and art is the exception. Everybody speaks the rule; cigarette, computer, t-shirt, television, tourism, war. Nobody speaks the exception. It isn't spoken, it is written; Flaubert, Dostoyevsky. It is composed; Gershwin, Mozart. It is painted; Cézanne, Vermeer. It is filmed; Antonioni, Vigo. Or it is lived, then it is the art of living; Srebrenica, Mostar, Sarajevo. The rule is to want the death of the exception.[4]

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[2] Pessoa p.151

[3] Feldman p.33

[4] Godard *Je vous salue, Sarajevo*

A sound cannot be wrong, but an arithmetic equation can. If I want to know how much an object weights in grams, there is an ideal answer for that, but such procedure does not make sense in art. There is no universal ideal to be reached in art, so there should not be expectations on what art should or not be. In addition, truth in art should be seen as a concept within each work of art alone, i.e. “every piece has to teach the listener how to listen to it: what matters, what does not matter, what is at work.”[5]

These issues are important to explain my music. Usually, I spend more time revising what I composed than creating the actual musical ideas. Perhaps the genuine creative process is more associated with the second draft. In my piano piece, I made several revisions until reaching the present version. The final score shows many changes, such as new measures, the exclusion of others and more importantly, the overall organization of the musical ideas. Because my creative process is highly intuitive, consequently my music becomes extremely improvised. If one realizes that our intuition is based on previous sensorial experiences, then creativity, in the true sense of imaginative process, is limited. According to Miranda Fricker:

> The definitive feature of intuition in [Thomas] Kuhn’s account, however, is that it depends crucially upon *experience*. Scientists are able to have intuitions about how to solve new scientific puzzles in virtue of a stockpile of lessons learned from past experience. These lessons do not take the form of consciously held beliefs, but rather they amount to a *capacity* for increasingly educated hunches regarding a particular subject-matter. This capacity is so internalized that the process by which we generate the hypothesis is usually subconscious, with the result that the subject will not know quite by what train of thought it was reached.[6]

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[5] Czernowin p.3

[6] Fricker p.182-183

Similarly to Thomas Kuhn, I understand the relationship between intuition and experience as crucial for the creative process. However, the most dangerous aspect of intuition, in my music, is the tendency to repeat ideas (experiences) without having the intention to sound repetitive in an intriguing way, such as in Salvatore Sciarrino or Steve Reich. In addition, intuition, as accumulation of experiences, is sometimes manifested through improvisation (the act to 'shuffle' our experiences).

I believe in fine qualities when dealing with intuition and improvisation, but at the same time these elements are exactly what I end up adjusting after listening to the work for the first time. In general, I spend more energy dealing with intuition and improvisation in the first version, and with reason and perception afterwards. In this piece, and in most of my works, I rarely work the other way around, i.e. with a pre-compositional plan. Thus, to write music is sometimes a process of self-knowledge, and I often find my composition more coherent when I respect that specific chain of thoughts. It is not a coincidence that one of Feldman's humorous statements keeps "haunting" me: "The composer makes plans, music laughs."[7]

Having that in mind, my revisions are mostly processes of identification, modification and sometimes even elimination of these elements. In fact, they are similar to processes of reorganization. Because improvisation and intuition are excellent means to create musical materials, when I revise a work, good ideas are esteemed and reorganized for better appreciation in the overall timeline. As previously discussed, the goals of art and science are not the same. There is not a unique truth in art, therefore art allows multiple ways. Fernando Pessoa talks about this openness, in a general sense, as imperfection: "We're well aware that every creative work is imperfect (…). But everything is imperfect. There's no sunset so lovely it couldn't be yet lovelier, no gentle breeze bringing us sleep that couldn't bring a yet sounder sleep."[8] Because I am aware of the openness aspect in art, I am also aware that every composition allows multiple paths for its completion. Creativity, as I understand it, grows depending on how receptive and open-minded one is regarding all sorts of sensorial and cognitive experiences. Stockhausen talked about creativity in one of his experiences with Theodor Adorno at Darmstadt:

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[7] Feldman p.111

> At the 1951 Darmstadt summer school for new music [Karel] Goeyvaerts and I played his piano sonata. (…) It was violently attacked by Theodor Adorno. (…) He attacked this music of Goeyvaerts, saying it was nonsense (…). Adorno couldn't understand it at all. He said, there is no motivic work. So I stood there (…) and defended this piece (…). I said, but Professor, you are looking for a chicken in an abstract painting. (…) even though Adorno had been a student of Alban Berg and had composed a great deal, and though he wanted to be known as a composer more than as a philosopher, he was not basically a creative person. A creative person is always excited when something happens that he cannot explain, something mysterious or miraculous. Then he is very nervous.[9]

Feldman, on the other hand, believed in a slightly different view. He believed that composing involves to knowing "the right note in the right place with the right instrument."[10] Although somewhat intuitive, Feldman shows a will for control. In a similar way, and that will link to my next point, Pauline Oliveros goes even further, in the sense that she expands this line of thought to what could possibly be related to the performers as well: "It is not enough just to play the right notes at the right time in the right way; one must also have the right consciousness."[11]

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[8] Pessoa p.41

[9] Stockhausen p.36

[10] Feldman p.160

[11] Oliveros *in* Lucier p.8

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1.2 PERFORMING ISSUES

The creative process of the piece under discussion could only be completed with the assistance of the two pianists involved in this project: Beatriz Furlanetto (first version) and Luciane Cardassi (second version). As a result, I had the chance to revise the work between the two performances, and to hear the musical materials played by different performers during rehearsals and concerts.

In terms of the player's approach, it is important to observe that this piece demands particular attention from the performers. It is the type of piece that mixes interpretation with creation, because it transcends the conventional use of our music notation system. For instance, the score presents pitch and rhythms as in a standard five-lines staff, but one needs to realize that the piece deals with other elements disregarded by this system, such as: timbre, and space. Alvin Lucier's thinking resonates with my words, as he steps out of the score to embrace perception:

> Most attention has been focused on the conception and generation of sound, very little on its propagation. Written notes are two-dimensional symbols of a three-dimensional phenomenon. (…) We have been so concerned with language that we have forgotten how sound flows through space and occupies it. (…) I began experiencing a sensibility to sound and its production different from that of other musics based on ideas of tension, contrast, conflict, and other motions of drama.[12]

In a conversation with Cardassi, for instance, we spent a day to define and adjust the right timbre for the damped sounds. The textual instructions were not enough to explain the type of sound that I was looking for. In this case, all damped

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[12] Lucier p.430-432

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sounds needed a precise proportion between original pitch level, envelope, and overall resonance. It was not possible to define this sonority with words or any sort of notation. To put instructions such as “30% pitch and 70% resonance” was also too vague. The best solution was the realization of *tête-à-tête* rehearsals and the use of recorded examples of each sonority to clarify my intentions. It is not a problem of interpretation, but one of communicative nature between composer and performer.

Similarly, Roberto Fabbriciani talks about the difficulty to perform Luigi Nono’s music since the composer’s death. Part of the interpretation process was achieved by oral transmission, with the tutoring of the composer himself. Nowadays, it lives on those who worked closely with Nono.

> All of this, for me, points towards an important objective and one which I now consider to be essential: the creation of a Nono tradition, with performers who have worked with the composer for a long time and with great commitment, giving guidance on the achievement of faithful interpretations of his music. In this way one would solve the problem of inscrutability and the criticism often levelled at his scores for their being difficult to decode (…).[13]

Another difficult issue to execute this piece was dealing with different instruments and concert halls not only in terms of composing but also performing. Two presentations of this piece were given up to the present, one at the *Sesc Paço da Liberdade* with Beatriz Furlanetto (Brazil, September 2011) and another at the *Capela Santa Maria* with Luciane Cardassi (Brazil, November 2011). Naturally, we used different halls and instruments: a modern electronic music oriented concert hall versus a church hall; and a Steinway Baby Grand Piano versus a Steinway Concert Grand Piano. These two experiences showed a few fragilities of

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[13] Fabbriciani p.10

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this piece in the matter of its execution viability. First, a few sounds, such as the "@PIN" technique, would not sound adequate in the Baby Grand. Perhaps, this was a problem regarding that specific instrument. On another situation, however, some harmonics would rest underneath the dampers or the metal structure bar of the Concert Grand. In order to complete the piece, I had to adequate the score to one instrument. And so I did. For the final version of the score, I used a Steinway Concert Grand. This does not eliminate the issue of playability, since a rehearsal was made with a Bösendorfer Concert Grand Piano at the *Auditório do Teatro HSBC* (Brazil, October 2011), resulting in similar problems.

1.3 THE INFLUENCE OF PESSOA AND STOCKHAUSEN

Two external artistic works influenced me as composer, and, as a consequence, had an impact on my piano piece. These works are Fernando Pessoa's *The Book of Disquiet*[14] and Karlheinz Stockhausen's *Kontakte*. I will discuss both influences on the following paragraphs.

Fernando Pessoa was a Portuguese poet born in Lisbon in 1888. He made a living mostly on translating foreign correspondence and wrote most of his poetry under three pseudonyms: Alberto Caeiro, Alvaro de Campos, and Ricardo Reis, not to mention other personas such as the bookkeeper Bernardo Soares, the imaginary author of *The Book of Disquiet*. The title of my piece, *…no desalinho triste de minhas emoções confusas…*, which translates as *…in the sad disarray of my confused emotions…*, is an excerpt from *The Book of Disquiet*:

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[14] Original title: *O Livro do Desassossego*.

> …in the sad disarray of my confused emotions…
>
> A twilight sadness made of fatigue and false renunciations, a tedium of feeling anything at all, a pain as of a choked sob or a discovered truth… A landscape of abdications unfolds in my oblivious soul: walkways lined by abandoned gestures, high flower beds of dreams that weren't even well dreamed, incongruities like hedges separating deserted paths, suppositions like old pools whose fountains are broken. It all gets entangled and squalidly looms in the sad disarray of my confused sensations.[15]

Pessoa's writings had an impact on me on two levels: his highly philosophical poetry, and the temporal structure of *The Book of Disquiet*. The first verse of this excerpt touched me to write a musical composition, and I decided to work with it for my dissertation. It did not give me any musical material, just an intuitive inspiration. The later influenced me on how to treat the formal division of my own piece.

If one tries to read *The Book of Disquiet* as a standard novel, one might get bored and lost. In this book, Pessoa works in a non-teleological form, i.e. each chapter does not justify the preceding or the subsequent content. It becomes extremely fragmented if one does not realize its purpose: it is a book of memories, of thoughts, almost as a diary. More than literature, it is philosophy. Pessoa, seems to me, did not plan the length of each section. He did, however, partially plan the temporal flow of the texts, otherwise one could shuffle all sections at will, which, in my opinion, would not affect ones overall impression of the book.[16] Nevertheless, even within the temporal organization, there is no apparent "reason" on which a sequence of texts should be used. More than an original global formal division, it seems to me that Pessoa was more interested on moments. Each section, no matter how long, is self-sufficient and has “(…) a beginning, a middle, and an end… but not necessarily in that order.”[17] Some sections of *The Book of Disquiet* evoke landscapes, states of mind, while others describe biographical episodes. There are momentary oriented timelines, where several texts deal with the same topic and develop an idea, but they always end up disrupting the matter in question. After reading this book, I had a different view on how I could organize my music. That leads me to discourse on the influence of *Kontakte*, which behaves in a similar way to *The Book of Disquiet*.

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[15] Pessoa p.151

[16] Note that *The Book of Disquiet* is considered an unfinished work and that the texts' order is decided by an editor.

Through an analysis made on *Kontakte* during my doctoral studies, I got in touch for the first time, even if partially, with Stockhausen’s concept of moment form. Similarly to many other contemporary music composers, I had my musical training based on European tonal music, which repertoire would mostly be restricted to the Baroque, Classical, and Romantic periods. During the time I was a student in conservatoires and universities in Brazil, musical form was always seen from a scientific perspective, i.e. musical works that could have their artistic quality approved or not according to their forms. This paradigm of ideal formal organizations was based on a specific repertoire, such as: Mozart and Haydn symphonies, Bach suites, Schumann lieder, etc. In other words, there is a basic methodology to write a sonata, for instance. There is nothing wrong with this pedagogy, but there is a tendency to universalize concepts and, as a result, creativity becomes restricted. For a long time, I was inclined to believe that the process of planning musical form had not much to do with intuition. Melodies were intuitive, but not form. Formulae such as the sonata, rondo, gavotte, and many others were the possible choices for the aspiring composer.

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[17] Godard *in* http://www.aber.ac.uk/media/Documents/S4B/sem04.html

Having said that, as one might imagine, Stockhausen's *Kontakte* was an impacting episode in my artistic development, specially his words on the potential of moment-form:

> In the genesis of moment forms I was trying to compose states and processes in which every moment is something personal and centered; something that can exist on its own, which as something individual always can be related to its surroundings and to the entire work.[18]

Although not fully explored in *Kontakte,* moment-form allows oneself to diverge from standard formal structures. Furthermore, Richard Toop says:

> The conceptual emphasis on this type of form is that it creates an emphasis in the listener's ear on the "now", [on the "present"]; there is a higher importance on the current combination of elements than on context of said combination within what happened in the piece previously and what will happen after. In order for this emphasis to be created, each compositional moment needs to be self sufficient in its construction, in that each of its musical elements depend on one another's immediate temporal context.[19]

The idea of working with isolated sections that could last, for instance, from two seconds up to twenty without having any necessary cognitive and temporal connection to each other, was a liberating experience. With Stockhausen I had realized, even if subconsciously, that intuition and logic should be part of a piece's formal scheme. For instance, according to each respective musical material, one can only judge the length of a section through intuition. This decision is a personal attribute, and has to deal with a different concept of truth in art, one that can be explained according to Martin Heidegger's writings:

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[18] Stockhausen *in* Kramer p.207

[19] Toop

> What art is should be inferable from the work. What the work of art is we can come to know only from the essence of art. Anyone can easily see that we are moving in a circle. Ordinary understanding demands that this circle be avoided because it violates logic. What art is can be gathered from a comparative examination of actual artworks. But how are we to be certain that we are indeed basing such an examination on artworks if we do not know beforehand what art is? And the essence of art can no more be arrived at by a derivation from higher concepts than a collection of characteristics of actual artworks. For such a derivation, too, already has in view the definitions that must suffice to establish that what we in advance take to be an artwork is one in fact. (…) Thus we are compelled to follow the circle. This is neither a makeshift nor a defect.[20]

Heidegger's statement resonates with my understanding of Stockhausen and Pessoa's artistic maneuvers. It also corresponds to Czernowin's previously mentioned statement: "every piece has to teach the listener how to listen to it (…)."[21]

All these ideas comply with the essence of the piece under discussion, which deals with form and momentary musical ideas in a non-linear and non-teleological manner. Technically speaking, each program[22] in the score refers to a moment, a snapshot of an intuitive conception. Some sections make reference to others, but some do not. And this disruption interests me. It reminds me of an analogy: the idea of several islands originating an archipelago. At the same time that all islands are identified as islands, each one has unique form, size, natural resources, geographical position, etc. Viewed from a close perspective, they have individual self-sustained ecosystems; viewed from apart, they constitute something else, yet with some common principles. No matter how different and independent they are, still, they interact in some manner.

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[20] Heidegger p.144

[21] Czernowin p.3

[22] Program number = pgm# in the score.

1.4 REGARDING PERCEPTION AND REFERENTIALITY

One of the main issues in my work was on how to deal with time and perception. I consider the task of determining an instant somewhat easier than finding out how long it should last. In other words, the decays are harder to decide than the attacks; they insinuate directionality. Besides, the issue is not even on the duration itself, but on what the chosen length will cognitively imply.

During the process of composition I asked myself many times how long should a certain F3 lasts (Figure 1). I have tried this specific measure on different pianos, in different halls, on different days. I could not find one instance that would convince me of an ideal choice.

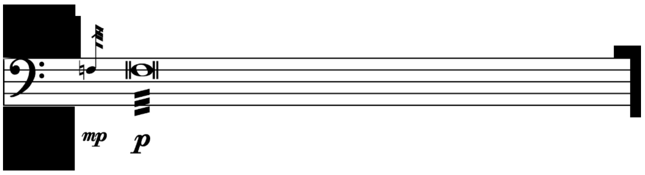

Figure 1 - Program#2

Nevertheless, what appeared to be a problem was seen as an opportunity to create a different but feasible interpretation. It is important to notice that my choices have not much to deal with chance or randomness; it is about intuition, which I consider something different. The concept of intuition, for me, has more to do with ones experience: sensorial, cognitive, affective, etc. In that way, whatever we do and decide have to do with our intellectual capacity. Even subconscious decisions are part of that. Intuition, the way I see it, is a buffer of experiences in our mind. And every materialization of an idea deals with these memories, or what D'Annunzio refers to as 'invisible': "When we begin to open our eyes, we have long since committed ourselves to the invisible."[23] As mentioned before, intuition has to do with experiences, with perception. As a result, intuition and perception will certainly lead one to discuss aspects of referentiality.

References in the work of art have always captivated me for their subjectivity. Most composers nowadays, and I include myself among those, share an aesthetic heritage from twentieth-century Germanic music that, in general, refuses referential associations. In other words, music that avoids association with the past, such as certain melody might recall us of a tonal scale, or an instrument, such as the cowbell, might remind us of countryside. On this matter, Stockhausen refers to as periodicity. He affirms the following:

> (…) I banned periodicity, because it was too easy to grasp and remember, and dominated all the other aspects: my music was very aperiodic; I tried, like the painters in the abstract or informal period, to avoid any recognizable shape, any melody that you could whistle or sing, because it would take over your attention and you would always be listening to find out what was happening to it during the course of the music. All recognizable sounds were avoided in electronic music: I used to say, don't imitate any traditional musical instrument, don't imitate a car sound or a bird, because then people start thinking of the bird and of the car rather than listening to the music. (…) One has to be very careful, introducing the banal into the unknown, because the known always tends to be the stronger and more inviting, like an old chair.[24]

Differently than Stockhausen, I am not against recognition, since I use what I consider to be highly recognizable ideas in my own music: piano, discernible pitches in ornamentations and cantabile intervalic passages, etc. I believe that pure abstract music was a post-1945 tendency that, theoretically, was never truly accomplished. The fact that Pierre Boulez, for instance, chose a historical instrument for his First Piano Sonata (1946) already shows that his statement that "(…)

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[23] D'Annunzio p.200. Original text: "E, quando noi cominciamo ad aprire gli occhi sul visibile, già eravamo da tempo aderenti all'invisibile"

[24] Stockhausen p.58-59

all the art of the past must be destroyed" did not and still does not make much sense.[25]

Nowadays, however, there is a tendency to [re]embrace 'figures' and 'shapes', but in a kaleidoscopical manner. Stockhausen affirms, in a contrasting manner to his previous citation, that:

> (…) the fifth symphony of Beethoven is always quoted as the example: there is just one figure which recurs all the time. As I say, always the same object in different lights. Whereas since 1950 it has been always new objects shown in the same light, and that light is, for example, a series of proportions.[26]

What was previously discussed on art and multiple truths resonates with what Stockhausen stated. In a certain way, we can affirm that perception and referentiality are complementary ideas.

In order to better describe my poetics, I would like now to make an analogy. I do not want to explain my music by making a straightforward comparison to another work, but Marc Chagall's *I and the Village* (1911) - like many other artists from different areas - has a few aspects that might clarify what I understand regarding referentiality (Figure 2).[27]

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[25] Boulez *in* http://www.edwebproject.org/boulez.html

[26] Stockhausen p.42

[27] www.chagallpaintings.org

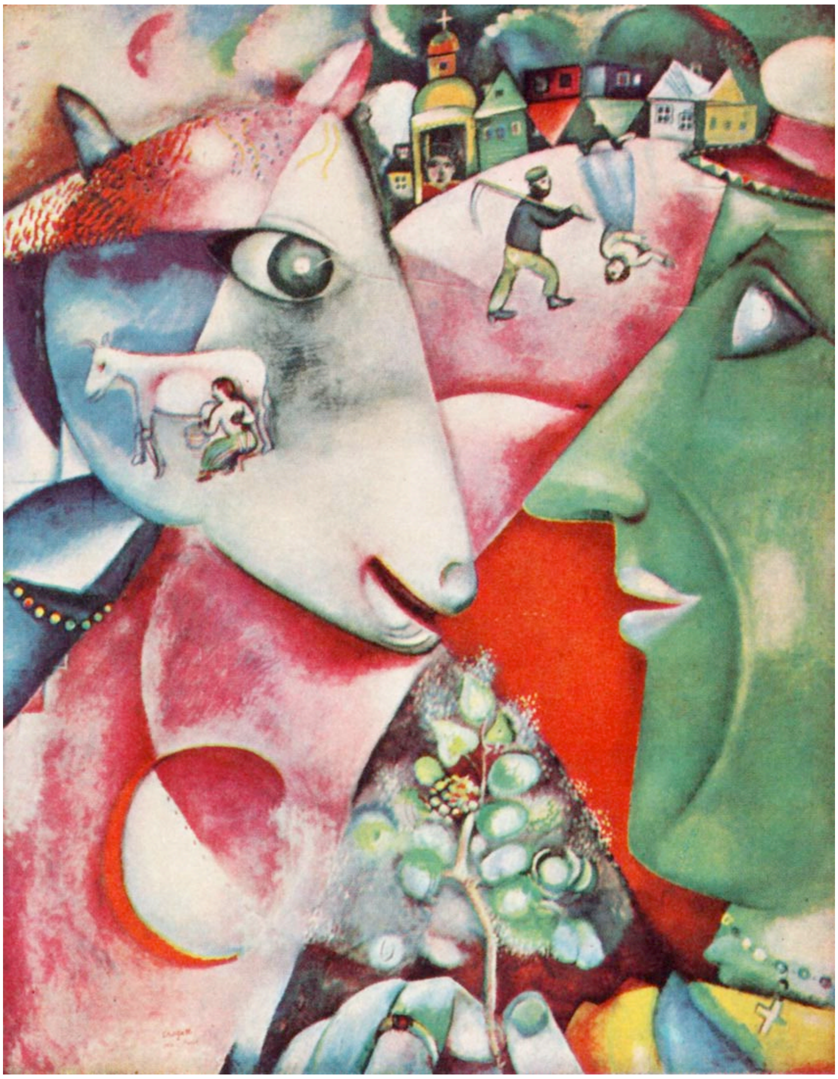

Figure 2 - Marc Chagall's *I and the village*

For starters, his painting and my piano piece are very different mediums: no thematic similarities, different temporal and spatial approaches, etc. However, they share one characteristic regarding the way both artists treat referentiality. In his painting one can observe a farmer, an upside down violin player, animals, houses, a church, geometric shapes, etc. Chagall works with representation, but this is an evidence that bears simplicity. The artist's unique inner truth is what transcends any pejorative side of referentiality in the way so despised by Stockhausen and specially by Boulez in the fifties. My generation works with opposed concepts, such as abstract and representation. As for myself, I seek to transcend these technicalities in order to develop my own artistic truth.

2. PIANO SCORE

Chapter two will investigate the techniques and sonic materials found in the piano part. In general, it deals with two gestures: 1) sharp attacks followed by the instrument's resonance; and 2) unnatural held piano sonorities, such as *crescendo* techniques commonly seen in wind and bowed string instruments. As we will see, some of the musical materials were borrowed from other territories, such as the guitar tremolo used in the beginning of the piece or the percussion sounds used with preparation. This chapter will be divided in three parts:

2.1 Musical material accomplished on the piano's keyboard;
2.2 Prepared-piano and extended techniques;
2.3 Dynamics and tape music influence.

2.1 MUSICAL MATERIAL ACCOMPLISHED ON THE PIANO'S KEYBOARD

In this section, we will analyze three techniques used only with the piano's keyboard: tremolo, ornamentation, and key glissandi.

Once a note is played on the piano the natural sonic tendency is to decay. This is a universal behavior of instruments with percussive nature, such as the guitar, piano, bass drum, marimba, etc. On the other hand, instruments with sound production based on constant uninterrupted energy have the advantage of creating gradual crescendos, and not by tremolo or trill. Since this is a sonority that I am interested in, I have decided to work with sustained sounds in this piano piece, such as the ones possible to achieve with wind and bowed string instruments.

At the very first measure, one can see an adaptation of the sustained crescendo sound for piano writing: the use of guitar-like tremolo technique (Figure 3). In general, I am using two different types of tremolo notation in this work: with inexact number of repetitions (Figure 3), and with precise number of attacks (Figure 4).

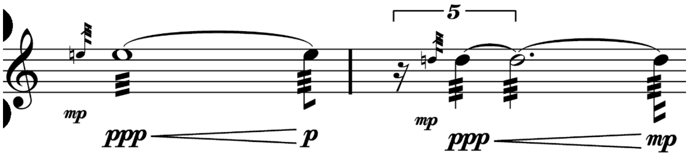

Figure 3 - Program#1

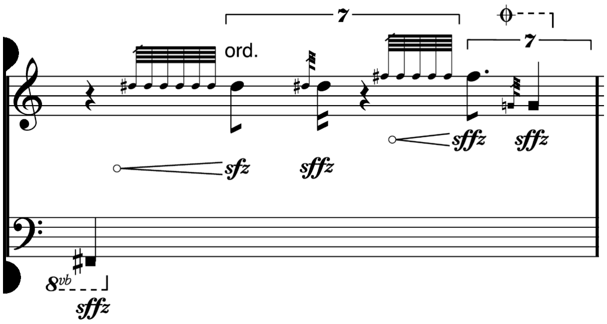

Figure 4 - Program#3

The main difference between the two types of notation is that the first one presents a tendency towards sustained sounds, similarly to a *cantabile* sonority for voice, while the second behaves like a *reverse envelope* technique borrowed from electronic music.

The second gesture used in this piece relates to the ornamentation structure in figure 5. It consists of 64th group notes meant to be played as fast as possible. Its main function is to contrast with other materials, since this work always deals with different timbres and gestures (as we will see in 2.2).

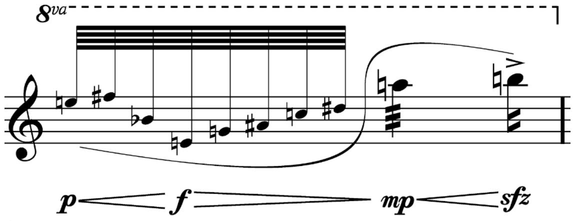

Figure 5 - Program#17

In general, ornamentations are in the high register, harmonics in the mid range, and damped notes in the lowest octave (see 2.2 for more information). Contrast is achieved not only in terms of timbre but also taking in consideration their register.

The third and last technique used exclusively with the piano's keyboard is the key glissandi. Figure 6 shows an example of this gesture that always aims for a *sforzando* quality.

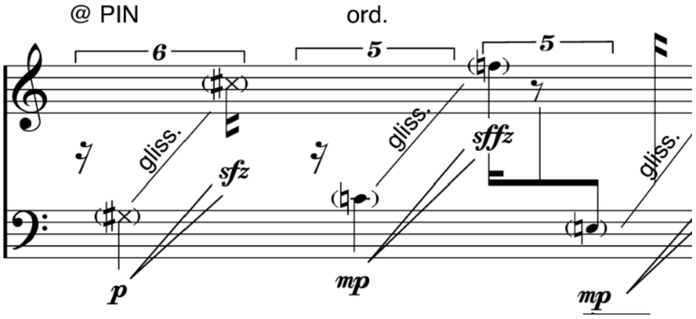

Figure 6 - Program 25

Each gliss has a notation that shows an approximate starting and ending note. Although a specific notation is required for the performance of this gesture, the player must be aware that the upward *sforzando* effect is more important than the exact execution of the pitches or rhythm. The idea is to create an ascending *sforzando* line.

All three techniques previously mentioned work in counterpoint with sounds produced with extended techniques. This will be our next topic.

2.2 PREPARED-PIANO AND EXTENDED TECHNIQUES

In this piece, there are four sonorities obtained with prepared-piano and extended techniques: harmonics, damped notes, *pizzicati*, and @pin. The next pages will discourse on these matters.

One of the reasons to expand the piano's timbral qualities was to be able to produce frequencies outside equal-temperament and work with microtonal beatings. This was obtained in two ways: acoustically and electronically (discussed in chapter three). Acoustically speaking, one can obtain microtones using harmonics from the piano strings. After researching on different pianos, I came up with a list of harmonics that would satisfy my needs and work on different piano models (Figure 7).

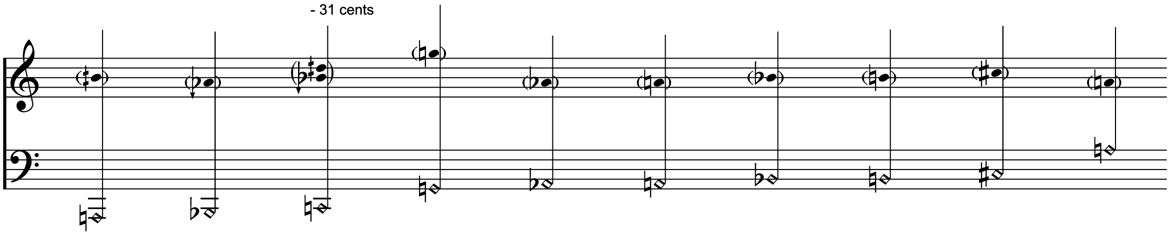

Figure 7 - List of harmonics used in the piece.

DOI: 10.13140/RG.2.2.16226.04807

From the performer stand point of view, these harmonics present different levels of playing difficulty, i.e. some players can reach them while seated, others had to stand up, and in a few cases, the harmonic would rest underneath the piano metal bar, requiring extra time for preparation. In general, however, all harmonics are possible. Some require more time for preparation than others, and that affected my aesthetic decisions, forcing me to adapt what I wanted to what was possible to be played by one pianist alone.[28] It is also interesting to notice that, in order to reach each harmonic in time, the pianist has to prepare the location of each harmonic on the string, either by using stickers, chalk, or permanent marker.

The choices of pitches had to do with two reasons: register and beatings. In general, pitch collection is a secondary matter in my music. Not that I ignore it, but all choices of pitch were taken having in mind their potential to achieve other musical aspects. For instance, in program #7 and #8 I wanted a mid-range pitch that would descend from B quarter-tone to A natural (Figure 8). Both notes did not matter as long as the desired effect was achieved. In other words, this passage is not about these two pitches, but on how we can hear descending microtones with different timbres: harmonics, *pizzicati*, and *ordinario.*[29] Register, however, does matter. A mid-range octave was chosen for clarity: lower harmonics could sound muddy while higher could lack resonance.

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[28] At one point I was considering to use an assistant to press the harmonics while the pianist played at the keyboard. This could drastically change the piece, since polyphony of harmonics would then be possible. I will discuss more on this matter later on

[29] Note that *fermati* were placed between harmonics to allow better preparation time

[redacted]

[redacted]

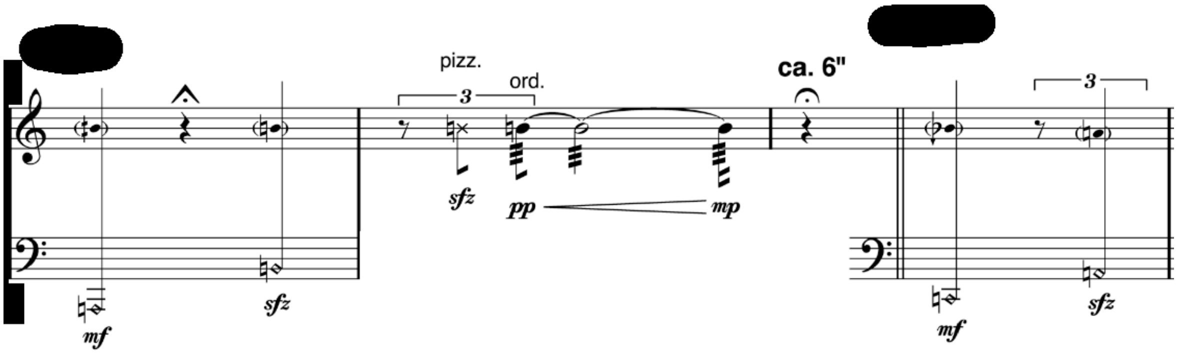

Figure 8 - Program#7 and #8

In general, changes in playing techniques, such as *pizzicati*, harmonics, *ordinario*, damped, etc, reflect the choices made for chosen musical atmospheres. The way I see it is that different techniques trigger different qualities, similar to switching channels on a television. You might get football, cartoons, movies, and then again sports, etc. Having said that, my music does not change from one idea to another in a gradual manner as seen in tonal music modulation. This smoothness was, in fact, avoided. Abrupt changes were sought within each atmosphere, since they are crucial elements for the phrasal nature of some passages (Figure 9).

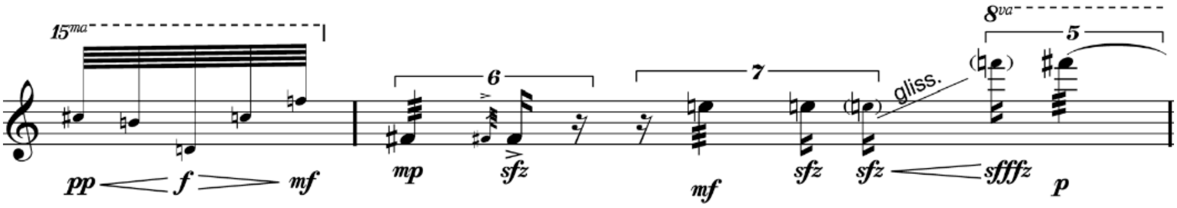

Figure 9 - Program#30

Figure 9 shows this ‘changing channel’ technique in my music, which several instances can be seen within a phrase: ornamentation, tremolo, attack, tremolo, attack, gliss, tremolo. This abruptness is also achieved by the chosen dynamics, as we will see in section 2.3.

The damped note technique presents an interesting result. If one compares the two score versions, one will note that these sonorities were achieved in different manners. In the first version, damped notes were all achieved by using fingers from one hand directly on the string. As a consequence, this took a lot of time for the pianist to jump from the keyboard to the strings and back to the keyboard (sometimes repeatedly). Besides being also distracting for the pianist, not to mention to the audience as well, I have decided to prepare the piano and spare the player of this gymnastic. This would also give me the agility to write in a different manner, since I could then write faster changes between techniques.

The piano preparation for this technique uses rubber in order to mimic the timbre of the flesh. An acceptable solution was to use large pencil erasers placed between the strings and the metal bar from the piano's structure. The only disadvantage was that this area was somewhat far from the string's extremity. As a result, the sonority was darker than the original approach. Nevertheless, the main idea was still preserved, which was to excite the piano's resonance through sharp attacks. Figure 10 shows an excerpt of program #4 with the damped technique:

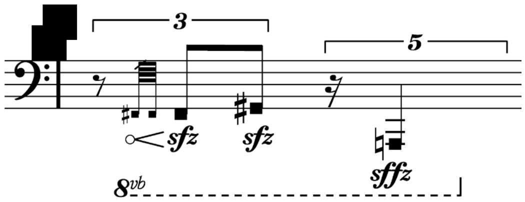

Figure 10 - Program#4

However, a few other damped notes were used without preparation, i.e. damped with the fingers. These five notes had to be free of any preparation in order to avoid conflicts of techniques (Figure 11).

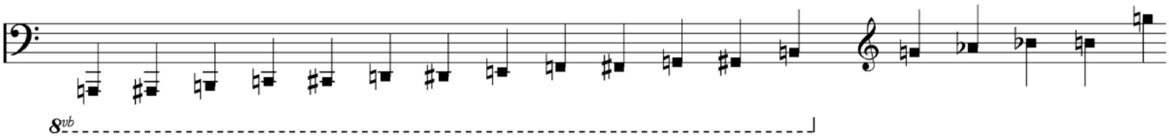

Figure 11 - List of damped notes used in the piece.

The third extended technique used in this piece is the *pizzicato*. The use of this sonority confirms my inclination towards multiple timbres. *Pizzicati* require similar attention to writing and playing issues also found with harmonics, such as preparation and extra time for playability. Figure 12 shows an example of the *pizzicati* technique and the seven notes that require preparation (Figure 13).[30]

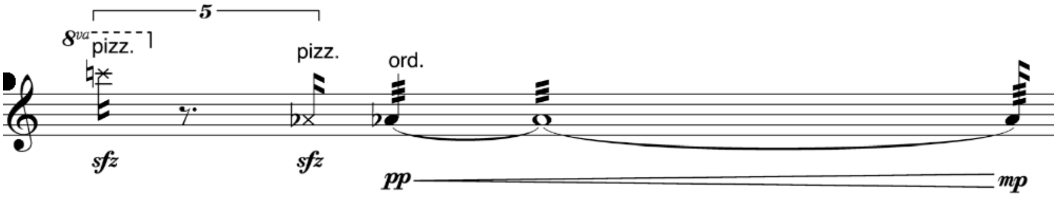

Figure 12 - Program#13

[redacted]

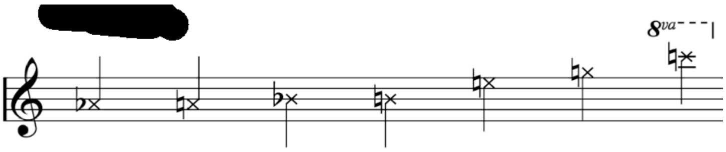

Figure 13 - List of *pizzicati* used in the piece.

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[30] Note that up to this point, Ab^4, Bb^4, B^4, and G^5 already show conflict of techniques: damped and *pizzicati*.

Finally, we will look at the fourth technique: @ pin. Figure 14 shows an instance of this gesture/technique used along with damped notes.

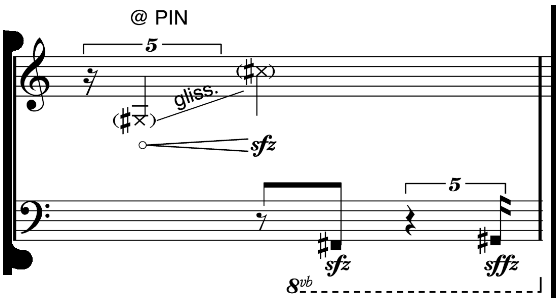

Figure 14 - Program#11

It consists of a *glissando* with the nail directly on the strings. The placement, however, is quite unorthodox: between the piano's pin and *agraffe*, as shown in Figure 15.

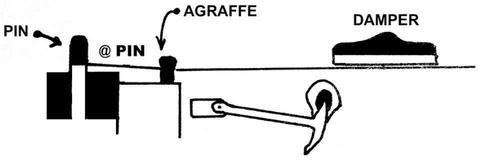

Figure 15

The sonorities resemble a glissando found in many instruments, but with a unique characteristic: an ascending microtonal gliss with extremely high frequency, and no resonance. As a result of this fragility, the pianist must make sure that the effect will be audible. This technique presents a dynamic range from, approximately, ***pp*** to ***mp***. And this is exactly our next subject for analysis: dynamics.

2.3 DYNAMICS AND TAPE MUSIC INFLUENCE

Finally, I will discuss the most important element in the piano part: dynamics. In general, this piece requires special dynamic and expressive attention regarding all gestures. However, there is one which the dynamic content is its main musical feature. Figure 16 shows a musical phrase based on this idea: repeated notes and drastic change in dynamics.

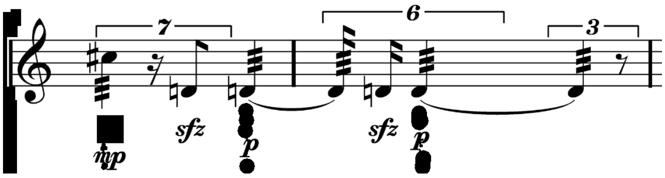

Figure 16 - Program#28

As a consequence of this abruptness in the dynamic domain, this musical gesture naturally generates a rhythmic structure. Therefore, it would be wise to see this last sonic material of dynamic and rhythmic natures.

Unlike the other sounds in this work, this gesture was invented after several tape music studies with real piano samples (in contrast to experimentation on a real instrument). I have used a multitrack recording software to create musical phrases impossible for human performance.[31] The case that involved sudden changes in dynamics interested me the most. Consequentially, I did a transcription and adaptation of the tape experimentations for human pianists (Figure 17).

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[31] with Apple Logic Pro.

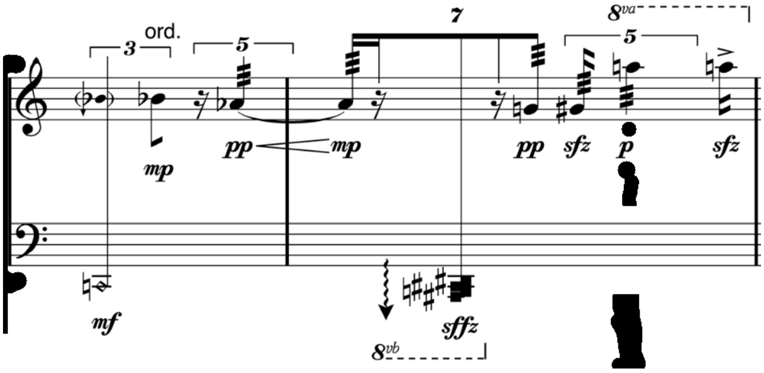
ord.
3
5
7
8va
5
mp
pp
mp
pp
sfz
p
sfz
mf
sffz
8vb

Figure 17 - Program#19

This last example conjugates several techniques, showing a more complex case of abruptness: harmonic, ordinario, tremolo, arpeggiated damped notes, tremolo, and attack. Be mindful of the radical changes in dynamic as well: ***mf***, ***mp***, ***pp***, ***mp***, ***sffz***, ***pp***, ***sfz***, ***p***, and ***sfz***.

3. LIVE-ELECTRONICS

This piece was originally composed for piano and stereophonic live-electronics. It was designed to undergo several spectral manipulations via MaxMSP, such as ring modulation, harmonizer, filtering, etc. After the premier of the first version, I have realized that the live-electronic apparatus could modify parameters of different natures than the ones I already did. Throughout the process of revision, I have understood that modifications of temporal and spatial essences were proper adjustments for a new version. As consequence, I have expanded the stereophonic structure to a quadriphonic one.

This third chapter deals with the electronic program and equipment needed for a proper live-electronic performance. It is divided in eight sub-sections:

3.1 Schematics and list of equipment
3.2 Stage placement
3.3 Amplification
3.4 Delay and harmonizer
3.5 Ring modulation
3.6 FFT Filter and Distortion
3.7 Spatialization
3.8 Programs parameters

3.1 SCHEMATICS AND LIST OF EQUIPMENT

The following list presents the type of equipment needed for the live-electronic performance, as well as a suggestion of acceptable equipments' model and brand (Table 1). Figure 18 shows how the equipment should be arranged.

Type	**Quantity**	**Suggested Model/Brand**
Condenser microphones cardioid pattern	2 units	AKG C414
Audio Interface 2x4	1 unit	Motu Ultralite mk3
Computer	1 unit	Macbook Pro
Software	1 unit	MaxMSP with ambisonics and gigaverb
Mixer 4-bus	1 unit	Soundcraft Spirit SX
Loudspeakers	4 unit	JBL Eon 315

Table 1

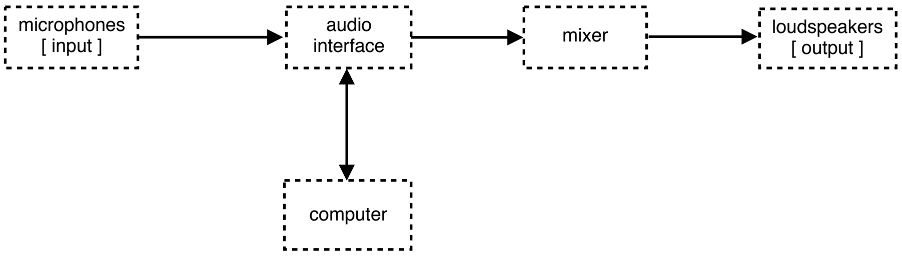

Figure 18

3.2 STAGE PLACEMENT

Other than the list of equipment in section 3.1, an acceptable performance should consider the dimensions of the hall, the stage placement, as well as the need to have technicians for sound control.

In general, because this is a quadriphonic piece, the hall should be large enough so that the loudspeakers are placed far enough from the audience in order to avoid a biased perception through closeness. On the other hand, one should avoid large halls for the sake of a better acoustic response from the piano. In addition, an adequate performance should make use of two technicians, one to control the microphones and loudspeakers' levels, and another to change the computer's parameters according to each program indication in the score.[32] Finally, figure 19 shows how the equipment should be displayed in the concert hall.

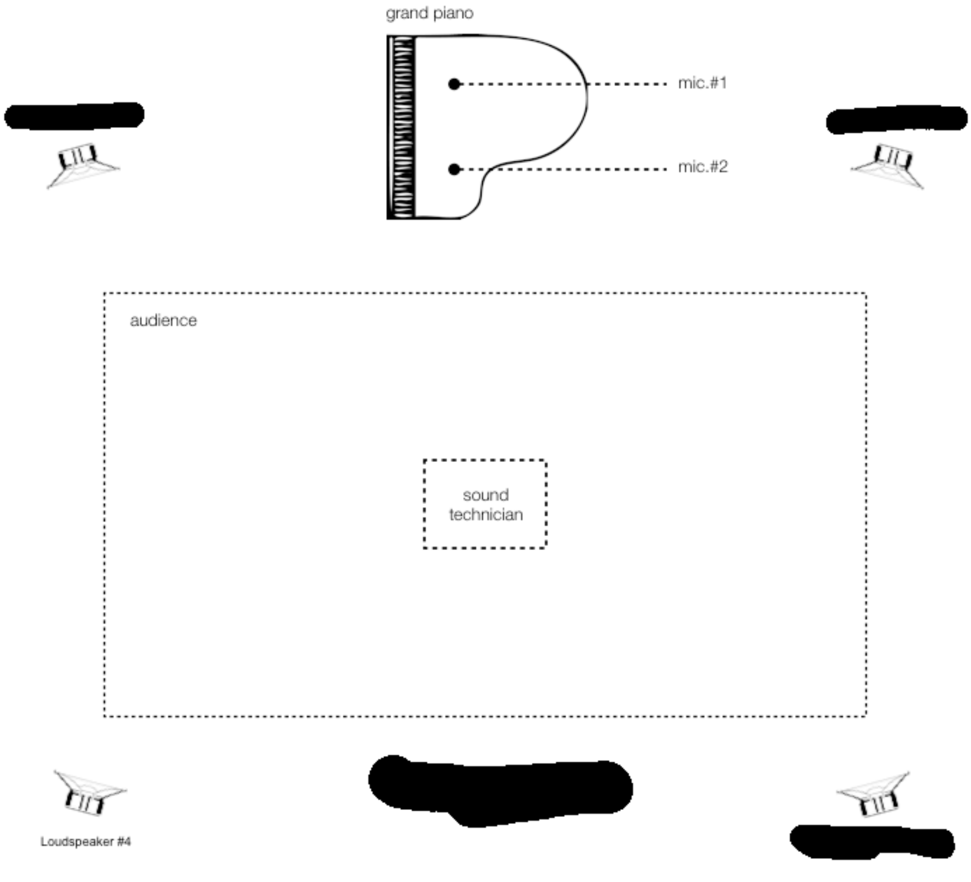
grand piano
[redacted]
mic.#1
[redacted]
mic.#2
audience
sound technician
[redacted]
[redacted]
Loudspeaker #4

Figure 19 - Stage placement

---

[32] Regarding the two presentations given up to the present, I was there in order to manipulate the program changes, while Brazilian composer Vinícius Giusti helped me with the levels control.

3.3 AMPLIFICATION

Amplification with reverb was used for two purposes: to better mix the piano's acoustic sound with the processed one, and to reveal quiet sonorities such as the harmonics' microtonal beatings, resonance, etc.[33] The very beginning of the piece shows a crucial spot for amplification (Figure 20).

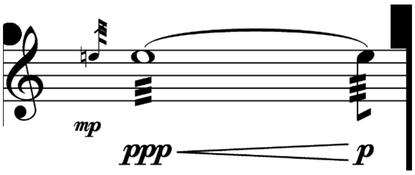

Figure 20 - Program#1

Figure 21 shows a section that presents enough natural dynamics in order to be heard, but the aimed effects - beatings and resonance - are set aside if no amplification is used. The ideal perception of this passage is to highlight the microtonal beating between both B^4.

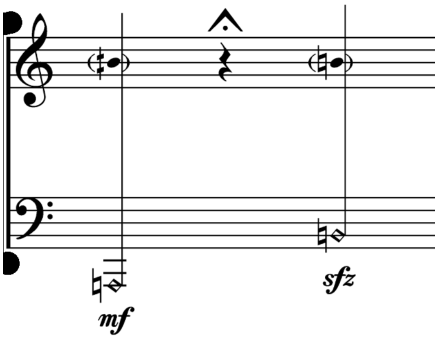

Figure 21 - Program#7.

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[33] Gigaverb~: a MaxMSP external object for reverb.

3.4 DELAY AND HARMONIZER

Two different concepts were achieved in MaxMSP by using the same tools (objects). Having in mind Stockhausen's *How Time Passes'* concept on a unified scale of pitch, rhythm, and time, I have used *tapin* and *tapout* objects to obtain two musical effects: delay and harmonizer (Figure 22). In other words, the chosen value deals with either frequency or delay time depending on its amount, i.e. below 20 Hz one will listen to it as a harmonizer, and above that as a delay. This is due to the human psycho-acoustic behavior: we hear pitch above, approximately, 20 Hz, and below that we discern rhythm instead of pitch. In addition, this sub-patch allows the signal to feedback and generate even richer sonorities through audio signal multiplication.

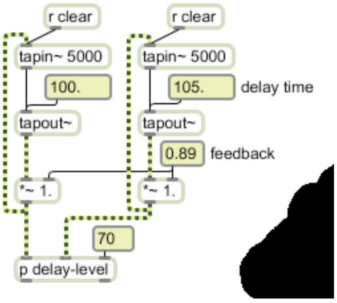

Figure 22 - Delay and harmonizer sub-patch.

3.5 RING MODULATION

In a similar way to 3.4, the ring modulation sub-patch also allows two sonic phenomenons within one apparatus: tremolo and ring modulation. Regardless of the possibilities, only ring modulation was utilized in this piece (Figure 23).

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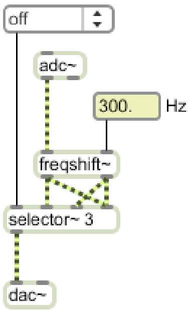

Figure 23 - Ring modulation sub-patch.

Through the use of *freqshift~*, one could create sidebands in MaxMSP by a given modulating frequency: one positive and another negative. For instance, given an input of 500Hz (an instrument, for instance), and a modulating frequency of 300Hz (in the yellow box above), one could create two sidebands: 200Hz and 800Hz (output of selector~). This is true in an ideal situation where the input is a pure frequency. In a performance situation with acoustic sound sources and microphones, the input data is surprisingly more complex, i.e. every harmonic of a sound will also generate sidebands, not to mention non-musical intended frequencies registered by the microphones.

Figure 24 shows a passage in the piano part where ring modulation is applied. In general, whenever the input's signal is stronger, the better to perceive the electronic effect.

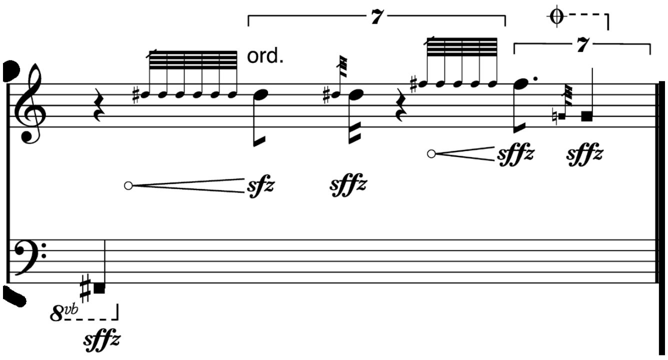
7
ord.
7
sfz
sffz
sffz
sffz
8vb
sffz

Figure 24 - Program#3

3.6 FFT FILTER AND DISTORTION

FFT filtering, and real and imaginary numbers distortion are used throughout the entire piece within the amplification/reverb audio signal chain. The filtering values are entered into the multi-slider visual interface in Figure 25.

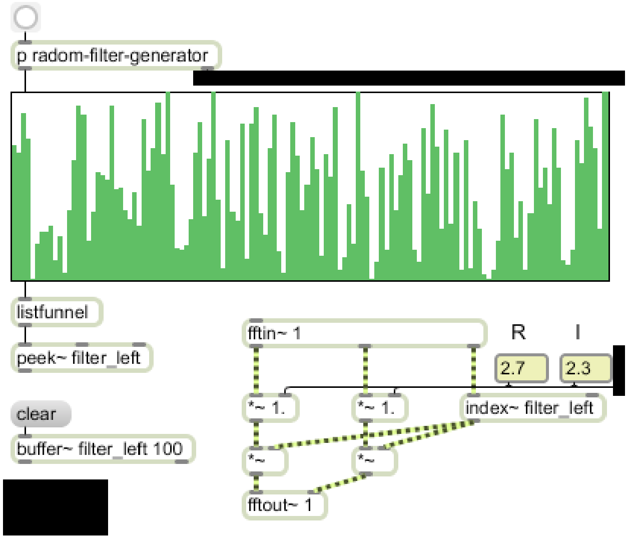
p radom-filter-generator
listfunnel
peek~ filter_left
clear
buffer~ filter_left 100
fftin~ 1
R
I
2.7
2.3
*~ 1.
*~ 1.
index~ filter_left
*~
*~
fftout~ 1

Figure 25 - FFT Filter and real/imaginary distortion sub-patch.

Each bar relates to a frequency bin, with a range that corresponds to the chosen sampling rate. In our case, the sampling rate is equal to 44.100Hz and the amount of bins equal to 1024. As a consequence, each bin has a range of 43 Hz (44.100/1024). In other words, every bin will control the amplitude of a frequency range of 43Hz. The multi-slider's horizontal disposition corresponds to an ascending frequency scale, i.e. the first bin varies from 0 to 43Hz, the second from 44 to 87Hz, etc. Since we are dealing with data, each slider presents a minimum value of zero and maximum of one, which represents the possibility to fully cut the amplitude (zero) or maintain the original sound (one). As a consequence, decimal numbers between zero and one will decrease the amplitude of the respective bin according to the chosen amount: 0.3 means to reduce the original sound's amplitude by 70%.

It is important to remember the human's non-linear frequency perception. A difference of 43Hz in a low register has a different impact if compared to the same amount in a higher register. One can better understand this phenomenon when dealing with numbers: between 27 and 54Hz we have an interval of an octave (27Hz interval). Between 300 and 600Hz we also have an octave, yet the difference is of 300Hz. Having said that, changes in the lowest part of the multi-slider will have a stronger impact if compared to the highest region.

Finally, real and imaginary numbers were distorted in an empirical way. Generally, a value of one will maintain the signal in its original proportion, while <1 will decrease it, and >1 will increase it. Figure 26 shows a passage where the piano undergoes a gradual process of spectral distortion through FFT filtering, and real and imaginary manipulation.[34]

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[34] The main patch was designed to allow gradual temporal transition of values by using *pattrstorage* and *autopattr* objects.

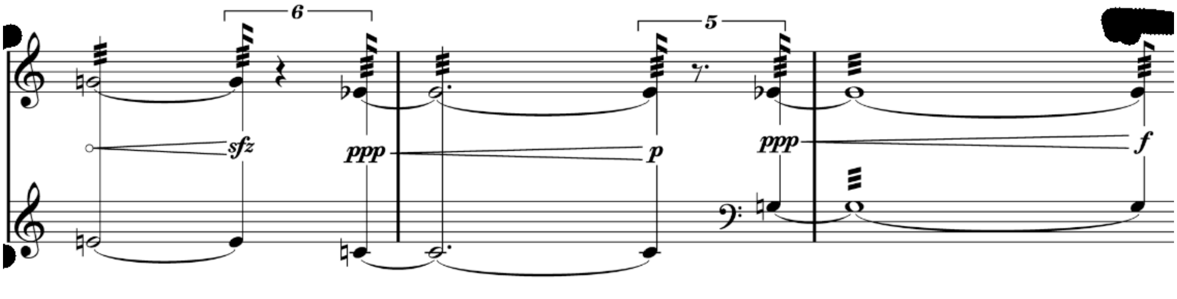

Figure 26 - Program#5

3.7 SPATIALIZATION

As previously mentioned, the first version of this piece was stereophonic and had no control over spatialization other than the default stereo setting of each MaxMSP object. In this version, however, spatialization was seen as a powerful implement to achieve the desired atmosphere. Figure 27 displays a section in the piece where four channel spatialization is employed.

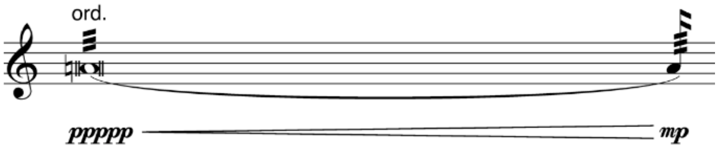

Figure 27 - Program#9

The sub-patch responsible for spatialization is essentially based on ambisonics external objects for MaxMSP (Figure 28). The main idea was to distribute the stereo input (two microphones) to four loudspeakers.

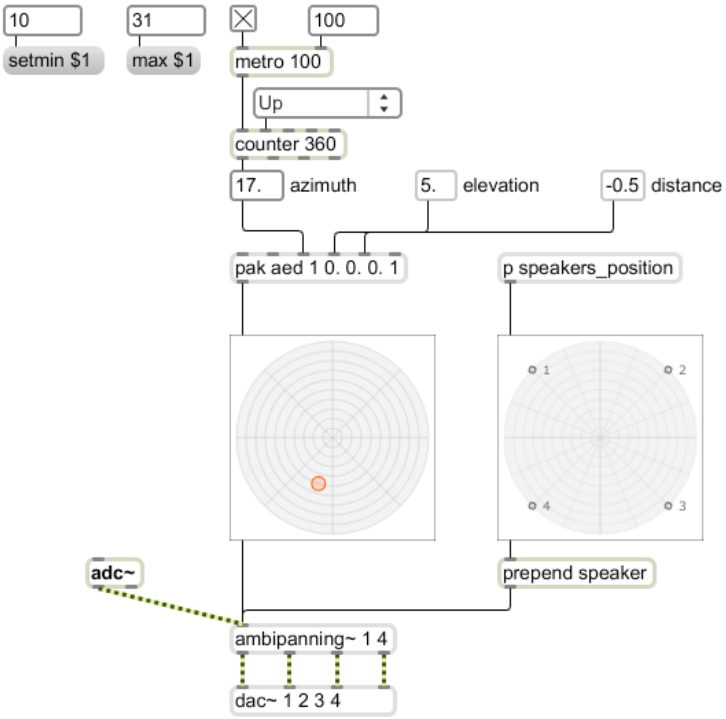
10
setmin $1
31
max $1
100
metro 100
Up
counter 360
17.
azimuth
5.
elevation
-0.5
distance
pak aed 1 0. 0. 0. 1
p speakers_position
1
2
3
4
adc~
prepend speaker
ambipanning~ 1 4
dac~ 1 2 3 4

Figure 28 - Spatialization sub-patch.

Other than spatial distribution, I have also employed ambisonics' other features, such as 'elevation' and 'distance', tools that help emulates a tridimensional perception of loudspeakers. Figure 29 shows the very beginning of the piece were amplification increases from zero up to an audible level, and both elevation and distance values give the impression that the sound comes from afar, and slowly approaches towards the listener.

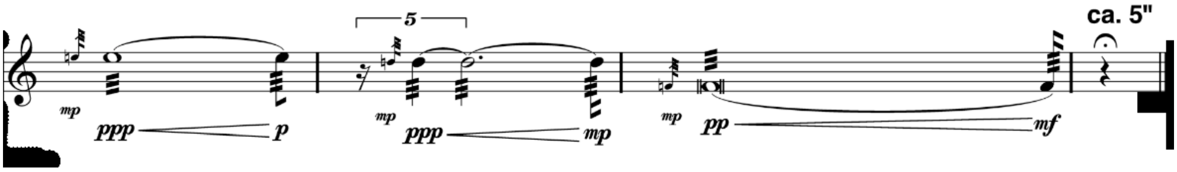
ca. 5"
5
mp
ppp
p
mp
ppp
mp
mp
pp
mf

Figure 29 - Program#1

3.8 PROGRAMS PARAMETERS

The following tables describe the parameters used for each program and for each of the following technique: fft filter, ring modulation, delay, harmonizer, real and imaginary distortion, and program transition time.

	pgm#1	*pgm#2*	*pgm#3*	*pgm#4*	*pgm#5*	*pgm#6*	*pgm#7*	*pgm#8*	*pgm#9*	*pgm#10*	*pgm#11*	*pgm#12*
Filter level	0	85	85	85	85	85	85	85	85	85	85	85
Ring level	0	0	0	0	80	0	0	0	0	70	70	0
Delay level	0	0	85	0	0	0	0	0	0	50	50	0
Modulation (Hz)	423	423	423	423	423	423	423	423	300	300	300	300
Delay time (ms)	50/60	50/60	50/60	50/60	5/5	5/5	5/5	5/5	5/6	5/6	5/6	5/6
Feedback	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.7	0.7	0.7	0.7
FFT filter	0	full	random	full	random	full	full	band	band	band	full	random
Real	1	1	2.7	1	1	1	1.5	2.1	1	1	1	1
Imaginary	1	1	2.3	1	1	1	1.7	2.0	1	1	1	1
Line (ms)	32.000	35.000	13.000	32.000	30.000	24.000	21.000	15.000	21.000	27.000	8.000	19.000

	pgm#13	*pgm#14*	*pgm#15*	*pgm#16*	*pgm#17*	*pgm#18*	*pgm#19*	*pgm#20*	*pgm#21*	*pgm#22*	*pgm#23*	*pgm#24*
Filter level	85	85	85	85	85	85	85	85	85	85	85	85
Ring level	0	0	0	0	70	30	0	0	80	80	10	10
Delay level	0	0	0	0	60	20	0	0	0	70	0	75
Modulation (Hz)	411	411	411	411	411	411	357	357	357	357	369	369
Delay time (ms)	5/6	70/80	70/80	70/80	70/80	70/80	5/7	5/7	5/7	5/7	100/110	100/110
Feedback	0.7	0.1	0.1	0.8	0.8	0.1	0.1	0.1	0.7	0.7	0.5	0.5
FFT filter	random	band	full	full	random	random	full	full	random	full	full	band
Real	1	1.3	1	1	1	1	1	2	2	1	1	1.7
Imaginary	1	1.5	1	1	1	1	1	2.5	2.5	1	1	1.4
Line (ms)	11.000	2.000	18.000	35.000	9.000	10.000	22.000	16.000	9.000	35.000	13.000	6.000

	pgm#25	*pgm#26*	*pgm#27*	*pgm#28*	*pgm#29*	*pgm#30*	*pgm#31*	*pgm#32*	*pgm#33*	*pgm#34*	*pgm#35*
Filter level	85	85	85	85	85	85	85	85	85	85	85
Ring level	80	70	60	60	60	10	70	0	0	70	0
Delay level	0	0	50	50	50	0	0	70	70	70	70
Modulation (Hz)	369	360	360	350	350	350	350	300	300	320	320
Delay time (ms)	100/110	5/8	5/8	5/8	5/8	5/8	100/105	100/105	100/105	100/105	100/105
Feedback	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
FFT filter	band	random	band	random	full	band	band	random	band	random	random
Real	1.7	1.9	1.9	1.5	3	3	1	1	2.7	2.7	2.7
Imaginary	1.4	1.3	1.3	1	3	3	1	1	2.3	2.3	2.3
Line (ms)	4.000	10.000	12.000	6.000	9.000	15.000	26.000	14.000	8.000	41.000	20.000

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CONCLUSION

Up to the present, *…no desalinho triste de minhas emoções confusas…* is my fourth piano piece. *Meu sonho conduz minha inatenção* (2008) was my first significant and meaningful solo piano work, a piece that dealt mainly with the instrument's resonance. My second work, *Ad te… per ludum* (2009), is a miniature that incorporates the pianist's voice and prepared-piano techniques. Both experiences led me to write *Desassossego latente* (2010), a work for prepared-piano and pianist's voice, premiered by Luciane Cardassi. Finally, *…no desalinho triste de minhas emoções confusas…* incorporates some of the above features, and implements new qualities, such as the use of live-electronics.

Having said that, I believe that my relationship with the piano is quite similar to the instrument I play: classical guitar. Both instruments are difficult to write for, since composers have to deal with their strong historical implications, standard repertoires, and the inflexibility towards producing sustained sounds. In general, most sounds and techniques for both instruments are quite straightforward, since their substances exist in conjunction with attacks. In other words, they are excellent instruments for kinetic music, and clear sonic statements.

As a result, it becomes extremely challenging to write the type of music I do using a piano. That is why I worked in this piece with so many extended techniques, unorthodox fingering patterns, and live-electronics. This piano piece is, literally speaking, a 'strict fugue' from its origins. In addition, the influence of Pessoa and Stockhausen also helped me to move away from the historical weight of the piano's idiosyncrasy. It helped me to dissociate from the concept of writing a 'piano piece', and to move towards an 'independent work' with pure sonorities. All these strategies allowed me to work with an archaic medium and accomplish something truly personal, i.e. honest, contemporary, and authentic.

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FELIPE DE ALMEIDA RIBEIRO

« … no desalinho triste de minhas emoções confusas … »

for piano and live-electronics

SCORE

para piano e processamento em tempo real

PARTITURA

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INSTRUCTIONS FOR THE PIANIST

1. One must execute all tremolos as fast as possible with both hands (whenever possible). The pianist is welcome to incorporate, as part of the musical material, all irregularities in repetition as well as all mechanical failures of the instrument. When required, one should work at the limit of audibility, but always with an audible result. Finally, one should aim for a *cantabile* sonority, similar to a timpani tremolo.

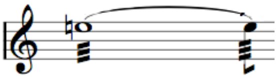

Figure 1. Two hands tremolo.

In some parts, the pianist must perform the tremolo technique directly on the strings, inside the piano with fingers or with the palm of the hand. This technique is indicated with the Portuguese word “dentro”, meaning inside.

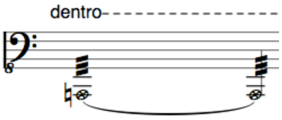

Figure 2. Tremolo directly on strings.

2. There are three types of fermata in this piece with different durations: short, medium, and long (respectively).

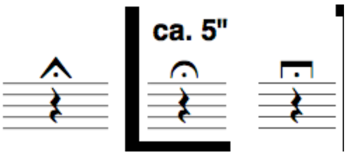

Figure 3. Fermata.

The short fermata is used to break the pulse, i.e. it works similarly to a dotted rhythmic figure. The medium fermata comes with a duration in seconds above it. The long one lasts until the total decay of sound.

3. The pizzicato technique is executed directly on the piano strings with finger nails. It is notated with an “x” notehead.

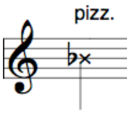

Figure 4. Pizzicato.

4. Harmonics are played with a technique that combines a key with a finger pressed string.

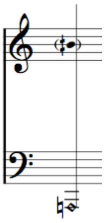

Figure 5. Harmonics.

The lower note (diamond notehead) is the key to be pressed, while the upper note (in parenthesis) indicates the final pitch to be heard (attention to reach the exact microtone). It is up to the pianist to locate each harmonic along the string (fundamental note). It is advised to use colored stickers in order to map all different harmonics for the performance.

5. The damping technique combines a depressed key together with damping the respective string (w/ finger) at the same time. The final sonority is similar to a percussion instrument, with a clear pitch distinction followed by a strong resonance (instrument’s body).

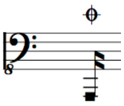

Figure 6. Damp technique.

6. The ornamentation must be played as fast as possible, independently of its real rhythmic value, and always with the notated dynamics. They are always written with 64th notes and are visually smaller than regular notes.

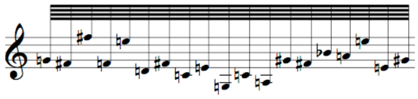

Figure 7. Ornamentation.

7. “Silenciosamente” means silently, a technique used to select a few notes (strings) with the sostenuto pedal in order to get resonance. The notation uses diamond noteheads, always showing the range of a chromatic cluster. Note that each cluster should be silently depressed, followed by the depression of the sostenuto pedal.

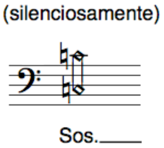

Figure 8. Sostenuto pedal.

8. The *glissandi* technique is always applied directly on the keyboard. One must perform each *gliss.* as one gesture alone, always giving more emphasis on the ascending effect than the pitch collection itself.

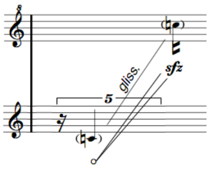

Figure 9. Glissandi.

9. All dynamics have a *subito* characteristic, unless indicated by *cresc.* and *decresc.* signs. The pianist must differentiate as much as possible the dynamic difference in loudness. That is the crucial idea behind this musical material.

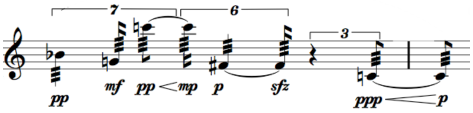

Figure 10. Dynamics.

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INSTRUÇÕES PARA O PIANISTA

1. Executar os trêmulos o mais rápido possível e, sempre que possível, com as duas mãos. Espera-se que o pianista incorpore a irregularidade de repetição e falhas do mecanismo do instrumento como parte da sonoridade a ser atingida. Quando requerido, trabalhar no limiar da audição, mas sempre optando por uma sonoridade com presença acústica perceptível. Em geral, espera-se uma sonoridade *cantabile*, como a de um trêmulo de tímpano.

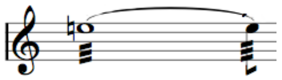


Figura 1. Trêmulo com duas mãos.

Em algumas partes, o pianista deve executar o trêmulo diretamente nas cordas, dentro do piano com os dedos ou com a palma da mão. Esta técnica é indicada com a palavra “dentro” seguida por uma linha tracejada.

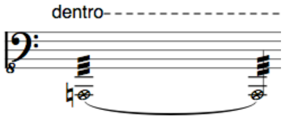


Figura 2. Trêmulo diretamente nas cordas.

2. Existem três tipos de fermata nesta peça: curta, média e de longa duração (respectivamente abaixo).

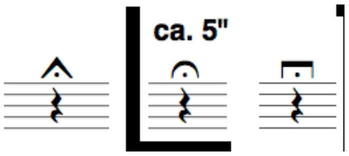


Figura 3. Fermatas.

A de curta duração prolonga brevemente a figura rítmica a que está conectada, apenas para quebrar a sensação de pulso. A fermata média é sempre indicada com a duração em segundos. A longa dura até o decaimento total do som.

3. A técnica de pizzicato é aplicada diretamente nas cordas do piano com a mão (unha), simulando um dedilhado de violão. É indicada com uma cabeça de nota em forma de “x”.

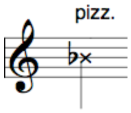


Figura 4. Pizzicato.

4. Os harmônicos demandam uma técnica de execução que combina tocar uma tecla e ao mesmo tempo pressionar o harmônico da corda correspondente. É indicado com a seguinte notação:

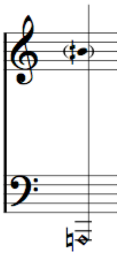


Figura 5. Harmônicos.

A cabeça de nota inferior (losango) refere-se à tecla a ser pressionada, enquanto que a superior (em parênteses) indica a sonoridade final a ser ouvida (atenção para se obter os microtons desejados). Cabe ao pianista localizar cada harmônico ao longo de sua respectiva corda, ou seja, da nota fundamental. Sugere-se o uso de etiquetas coloridas para marcar e diferenciar cada harmônico e assim facilitar a sua localização durante a performance.

5. A seguinte técnica consiste em abafar a corda com o(s) dedo(s) enquanto pressiona-se a tecla. A sonoridade final consiste em um som abafado e de rápido decaimento, mas com clara distinção da freqüência (nota) e principalmente da ressonância do instrumento. Notação: cabeça de nota quadrada com símbolo de abafado acima.

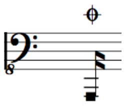


Figura 6. Nota abafada.

6. Os ornamentos são sempre executados o mais rápido possível, independente do real valor rítmico atribuído, e sempre respeitando a dinâmica requerida. São sempre agrupados em semifusas e visualmente menores do que as outras notas.

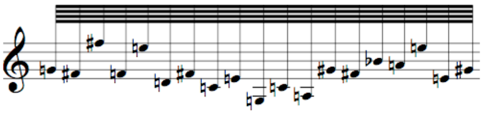


Figura 7. Ornamentação.

7. "Silenciosamente": técnica para selecionar certas cordas para ressoarem. Utiliza-se o pedal sostenuto e a seguinte notação:

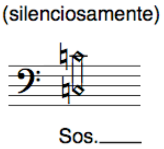


Figura 8. Pedal sostenuto.

A seleção de notas é sempre um *cluster* cromático, ou seja, as notas escritas apontam apenas a nota mais grave e a mais aguda deste grupo de notas. É importante notar que estes *clusters* não são para serem ouvidos ao serem pressionados. Notação: cabeça de nota em losango seguido do texto "silenciosamente" e do pedal sostenuto.

8. A técnica de *glissando* é sempre utilizada diretamente nas teclas do instrumento. Usa-se na notação uma nota inicial e uma final. Executar sempre como um gesto só, dando mais ênfase no efeito do que nas notas selecionadas.

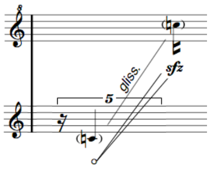


Figura 9. Glissando.

9. Todas as dinâmicas são de caráter súbito, a não ser que indicadas por sinais de cresc. e decresc. Por se tratar de uma peça que explora a diversidade timbrística do piano, o instrumentista deve buscar diferenciar as dinâmicas o máximo possível.

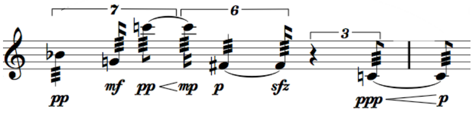


Figura 10. Dinâmicas.

LIST OF EQUIPMENT

- Grand piano
- Condenser microphones (2)
- Computer with Max MSP
- Audio interface 2x2
- Stereo Mixer
- Loudspeakers (2), stereo configuration

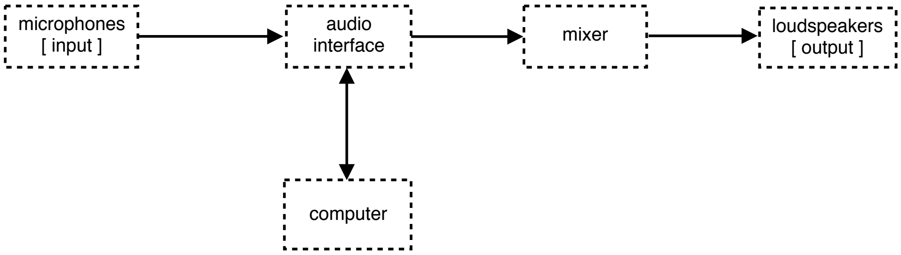

microphones
[input]
audio
interface
mixer
loudspeakers
[output]
computer

Figure 11. Live-electronics workflow

STAGE PLACEMENT

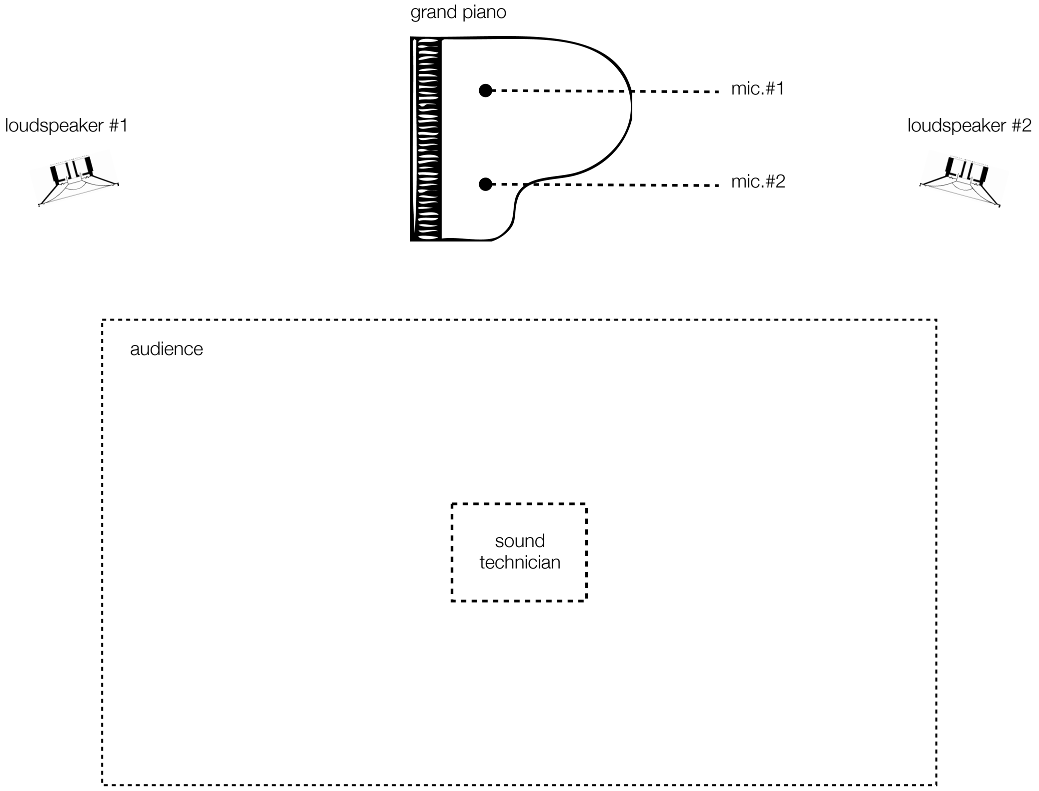

grand piano
mic.#1
mic.#2
loudspeaker #1
loudspeaker #2
audience
sound
technician

Figure 12. Placement

DOI: 10.13140/RG.2.2.16226.04807

PATCH DESCRIPTION [Max/MSP][35]

Sub-patches and techniques: 128 bins filtering [FFT]
Real and imaginary numbers distortion [FFT]
Ring Modulation [freqshift~]
Delay with feedback [tapin~, tapout~]
Reverb [gigaverb~]

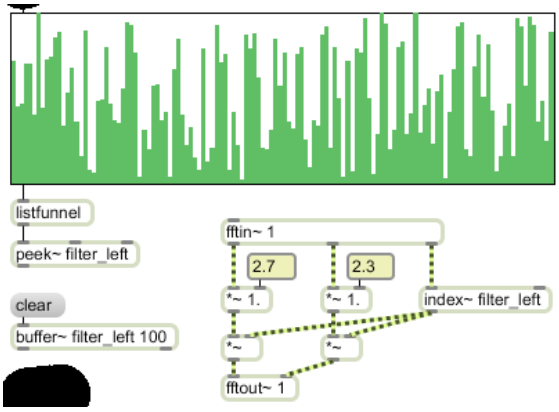

listfunnel
peek~ filter_left
clear
buffer~ filter_left 100
fftin~ 1
2.7
2.3
*~ 1.
*~ 1.
index~ filter_left
*~
*~
fftout~ 1

Figure 13. FFT filtering and real/imaginary numbers distortion

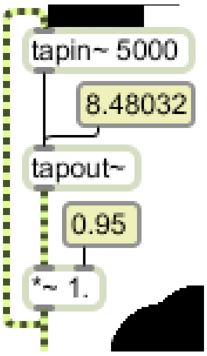

tapin~ 5000
8.48032
tapout~
0.95
*~ 1.

Figure 15. Delay with feedback

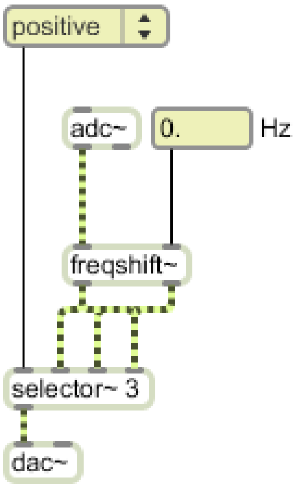

positive
adc~
0.
Hz
freqshift~
selector~ 3
dac~

Figure 14. Ring modulation

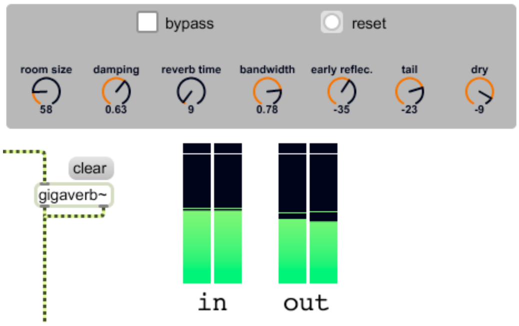

bypass
reset
room size
58
damping
0.63
reverb time
9
bandwidth
0.78
early reflec.
-35
tail
-23
dry
-9
clear
gigaverb~
in
out

Figure 16. Gigaverb

---

[35] All values are for illustrational purposes only.

DOI: 10.13140/RG.2.2.16226.04807

LISTA DE EQUIPAMENTO

- Piano de cauda
- Microfones condensadores (2)
- Computador com Max MSP
- Interface de audio 2x2
- Mesa de som estéreo
- Caixas de som (2), configuração em estéreo.

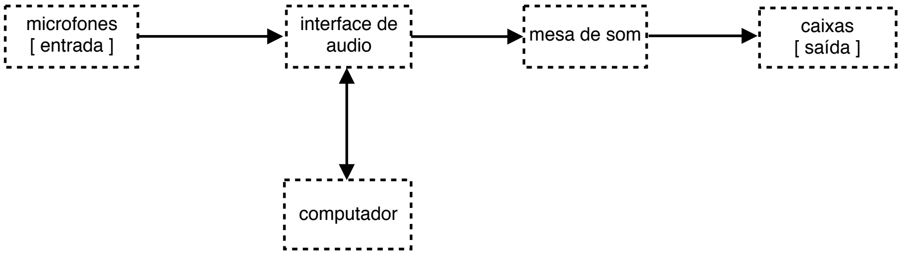

microfones
[entrada]
interface de
audio
mesa de som
caixas
[saída]
computador

Figura 11. Esquema de processamento em tempo real.

POSICIONAMENTO EM PALCO

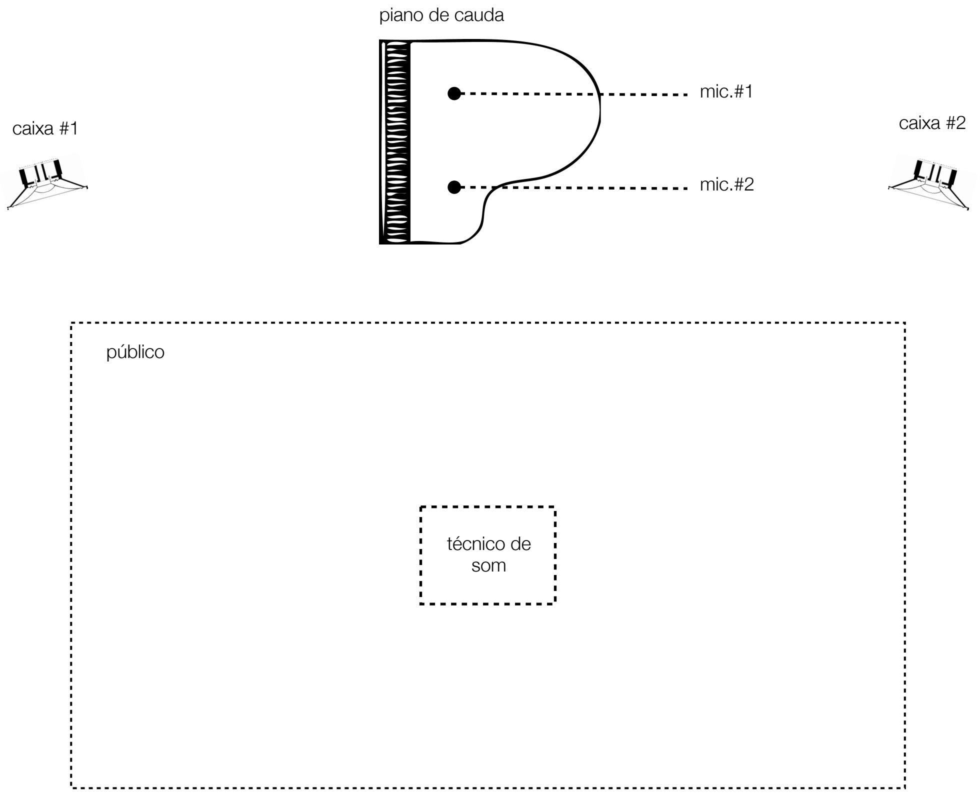

piano de cauda
mic.#1
mic.#2
caixa #1
caixa #2
público
técnico de
som

Figura 12. Posicionamento

DOI: 10.13140/RG.2.2.16226.04807

DESCRIÇÃO DO PATCH [Max/MSP][36]

Sub-patches e técnicas:

- Filtragem com 128 bandas [FFT]
- Distorção de números reais e imaginários [FFT]
- Modulação por anel [freqshift~]
- Delay com re-alimentação [tapin~, tapout~]
- Reverberação [gigaverb~]

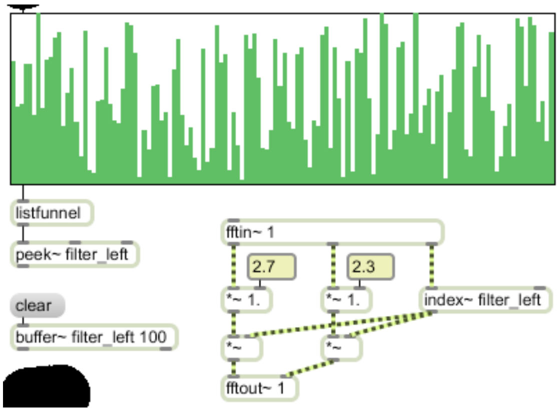

listfunnel
peek~ filter_left
clear
buffer~ filter_left 100
fftin~ 1
2.7
2.3
*~ 1.
*~ 1.
index~ filter_left
*~
*~
fftout~ 1

Figura 13. Filtragem e distorção de números reais e imaginários via FFT.

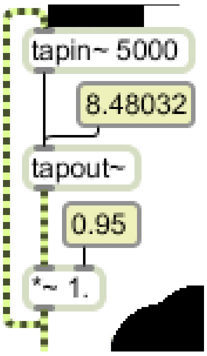

tapin~ 5000
8.48032
tapout~
0.95
*~ 1.

Figura 15. Delay com re-alimentação

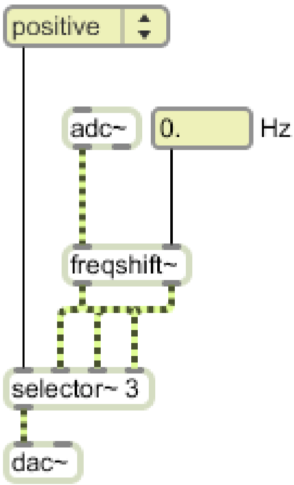

positive
adc~
0.
Hz
freqshift~
selector~ 3
dac~

Figura 14. Modulação por anel

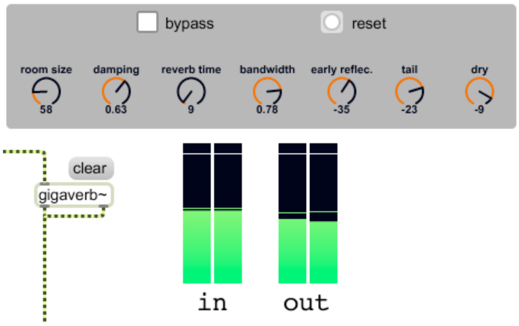

bypass
reset
room size
58
damping
0.63
reverb time
9
bandwidth
0.78
early reflec.
-35
tail
-23
dry
-9
clear
gigaverb~
in
out

Figura 16. Gigaverb

---

[36] Todos os valores são apenas para efeito ilustrativo.

PARAMETERS[37]

	pgm#1	*pgm#2*	*pgm#3*	*pgm#4*	*pgm#5*	*pgm#6*	*pgm#7*	*pgm#8*	*pgm#9*	*pgm#10*	*pgm#11*	*pgm#12*
Filter level	0	85	85	85	85	85	85	85	85	85	85	85
Ring level	0	0	0	0	80	0	0	0	0	70	70	0
Delay level	0	0	85	0	0	0	0	0	0	50	50	0
Modulation (Hz)	423	423	423	423	423	423	423	423	300	300	300	300
Delay time (ms)	50/60	50/60	50/60	50/60	5/5	5/5	5/5	5/5	5/6	5/6	5/6	5/6
Feedback	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.7	0.7	0.7	0.7
FFT filter	0	full	random	full	random	full	full	band	band	band	full	random
Real	1	1	2.7	1	1	1	1.5	2.1	1	1	1	1
Imaginary	1	1	2.3	1	1	1	1.7	2.0	1	1	1	1
Line (ms)	32.000	35.000	13.000	32.000	30.000	24.000	21.000	15.000	21.000	27.000	8.000	19.000

	pgm#13	*pgm#14*	*pgm#15*	*pgm#16*	*pgm#17*	*pgm#18*	*pgm#19*	*pgm#20*	*pgm#21*	*pgm#22*	*pgm#23*	*pgm#24*
Filter level	85	85	85	85	85	85	85	85	85	85	85	85
Ring level	0	0	0	0	70	30	0	0	80	80	10	10
Delay level	0	0	0	0	60	20	0	0	0	70	0	75
Modulation (Hz)	411	411	411	411	411	411	357	357	357	357	369	369
Delay time (ms)	5/6	70/80	70/80	70/80	70/80	70/80	5/7	5/7	5/7	5/7	100/110	100/110
Feedback	0.7	0.1	0.1	0.8	0.8	0.1	0.1	0.1	0.7	0.7	0.5	0.5
FFT filter	random	band	full	full	random	random	full	full	random	full	full	band
Real	1	1.3	1	1	1	1	1	2	2	1	1	1.7
Imaginary	1	1.5	1	1	1	1	1	2.5	2.5	1	1	1.4
Line (ms)	11.000	2.000	18.000	35.000	9.000	10.000	22.000	16.000	9.000	35.000	13.000	6.000

	pgm#25	*pgm#26*	*pgm#27*	*pgm#28*	*pgm#29*	*pgm#30*	*pgm#31*	*pgm#32*	*pgm#33*	*pgm#34*	*pgm#35*
Filter level	85	85	85	85	85	85	85	85	85	85	85
Ring level	80	70	60	60	60	10	70	0	0	70	0
Delay level	0	0	50	50	50	0	0	70	70	70	70
Modulation (Hz)	369	360	360	350	350	350	350	300	300	320	320
Delay time (ms)	100/110	5/8	5/8	5/8	5/8	5/8	100/105	100/105	100/105	100/105	100/105
Feedback	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
FFT filter	band	random	band	random	full	band	band	random	band	random	random
Real	1.7	1.9	1.9	1.5	3	3	1	1	2.7	2.7	2.7
Imaginary	1.4	1.3	1.3	1	3	3	1	1	2.3	2.3	2.3
Line (ms)	4.000	10.000	12.000	6.000	9.000	15.000	26.000	14.000	8.000	41.000	20.000

---

[37] All values transitions are gradually made with [line].

PARÂMETROS[38]

	pgm#1	*pgm#2*	*pgm#3*	*pgm#4*	*pgm#5*	*pgm#6*	*pgm#7*	*pgm#8*	*pgm#9*	*pgm#10*	*pgm#11*	*pgm#12*
Nível do filtro	0	85	85	85	85	85	85	85	85	85	85	85
Nível da mod. anel	0	0	0	0	80	0	0	0	0	70	70	0
Nível do delay	0	0	85	0	0	0	0	0	0	50	50	0
Modulação (Hz)	423	423	423	423	423	423	423	423	300	300	300	300
Tempo delay (ms)	50/60	50/60	50/60	50/60	5/5	5/5	5/5	5/5	5/6	5/6	5/6	5/6
Re-alimentação	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.7	0.7	0.7	0.7
Filtro FFT	0	full	random	full	random	full	full	band	band	band	full	random
Real	1	1	2.7	1	1	1	1.5	2.1	1	1	1	1
Imaginário	1	1	2.3	1	1	1	1.7	2.0	1	1	1	1
Line (ms)	32.000	35.000	13.000	32.000	30.000	24.000	21.000	15.000	21.000	27.000	8.000	19.000

	pgm#13	*pgm#14*	*pgm#15*	*pgm#16*	*pgm#17*	*pgm#18*	*pgm#19*	*pgm#20*	*pgm#21*	*pgm#22*	*pgm#23*	*pgm#24*
Nível do filtro	85	85	85	85	85	85	85	85	85	85	85	85
Nível da mod. anel	0	0	0	0	70	30	0	0	80	80	10	10
Nível do delay	0	0	0	0	60	20	0	0	0	70	0	75
Modulação (Hz)	411	411	411	411	411	411	357	357	357	357	369	369
Tempo delay (ms)	5/6	70/80	70/80	70/80	70/80	70/80	5/7	5/7	5/7	5/7	100/110	100/110
Re-alimentação	0.7	0.1	0.1	0.8	0.8	0.1	0.1	0.1	0.7	0.7	0.5	0.5
Filtro FFT	random	band	full	full	random	random	full	full	random	full	full	band
Real	1	1.3	1	1	1	1	1	2	2	1	1	1.7
Imaginário	1	1.5	1	1	1	1	1	2.5	2.5	1	1	1.4
Line (ms)	11.000	2.000	18.000	35.000	9.000	10.000	22.000	16.000	9.000	35.000	13.000	6.000

	pgm#25	*pgm#26*	*pgm#27*	*pgm#28*	*pgm#29*	*pgm#30*	*pgm#31*	*pgm#32*	*pgm#33*	*pgm#34*	*pgm#35*
Nível do filtro	85	85	85	85	85	85	85	85	85	85	85
Nível da mod. anel	80	70	60	60	60	10	70	0	0	70	0
Nível do delay	0	0	50	50	50	0	0	70	70	70	70
Modulação (Hz)	369	360	360	350	350	350	350	300	300	320	320
Tempo delay (ms)	100/110	5/8	5/8	5/8	5/8	5/8	100/105	100/105	100/105	100/105	100/105
Re-alimentação	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Filtro FFT	band	random	band	random	full	band	band	random	band	random	random
Real	1.7	1.9	1.9	1.5	3	3	1	1	2.7	2.7	2.7
Imaginário	1.4	1.3	1.3	1	3	3	1	1	2.3	2.3	2.3
Line (ms)	4.000	10.000	12.000	6.000	9.000	15.000	26.000	14.000	8.000	41.000	20.000

---

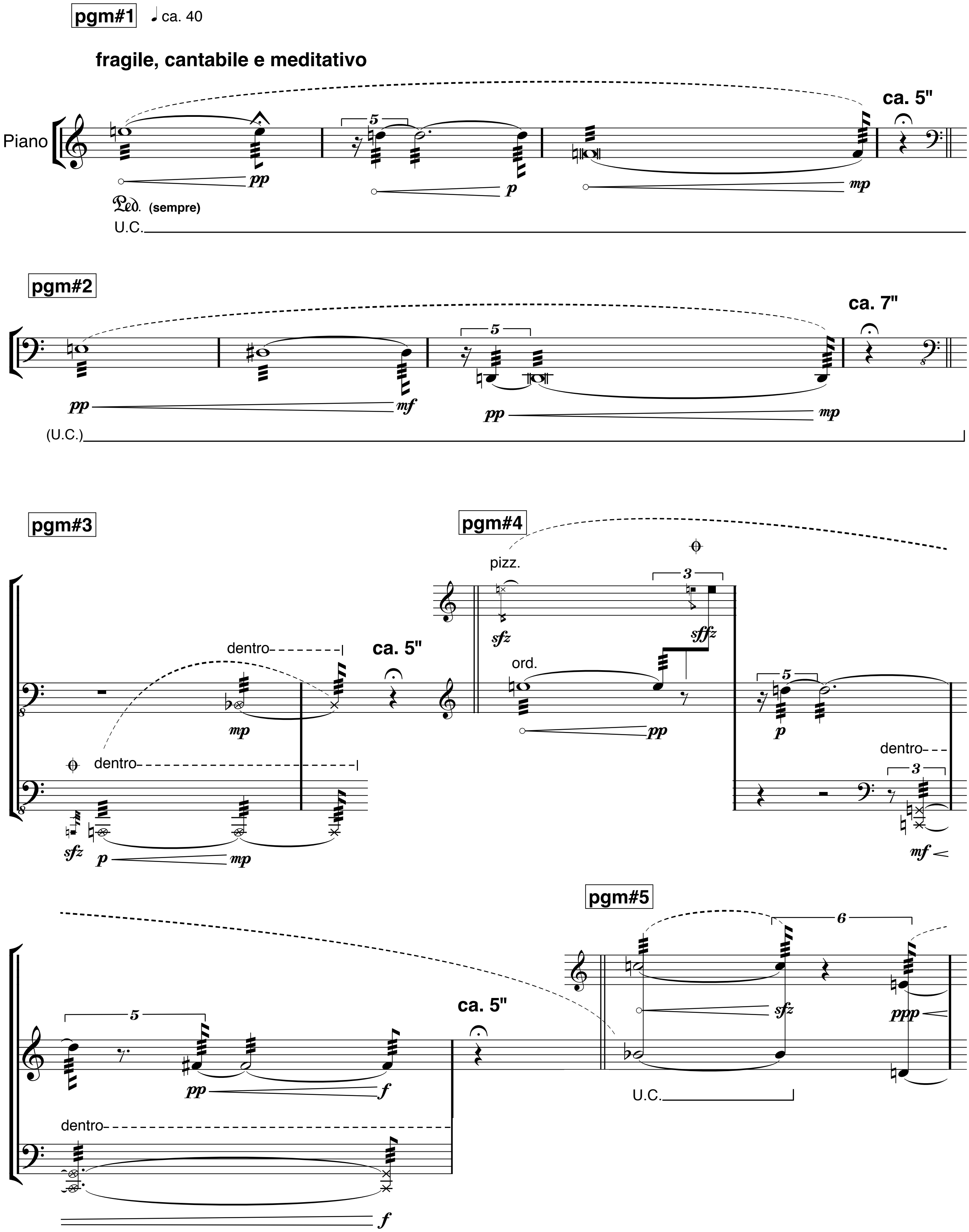
[38] Todas as transições entre parâmetros são gradualmente realizadas com [line].

DOI: 10.13140/RG.2.2.16226.04807

« ...no desalinho triste de minhas emoções confusas... » *

for piano and live-electronics
para piano e processamento em tempo real

Felipe de Almeida Ribeiro


pgm#1
♩ ca. 40
fragile, cantabile e meditativo
Piano
5
pp
p
mp
ca. 5"
Ped. (sempre)
U.C.
pgm#2
5
pp
mf
mp
ca. 7"
(U.C.)
pgm#3
pgm#4
pizz.
3
sfz
sffz
dentro
ca. 5"
ord.
mp
pp
5
p
dentro
3
sfz
p
mf
pgm#5
6
5
pp
f
ca. 5"
sfz
ppp
U.C.
dentro
f

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* Fernando Pessoa

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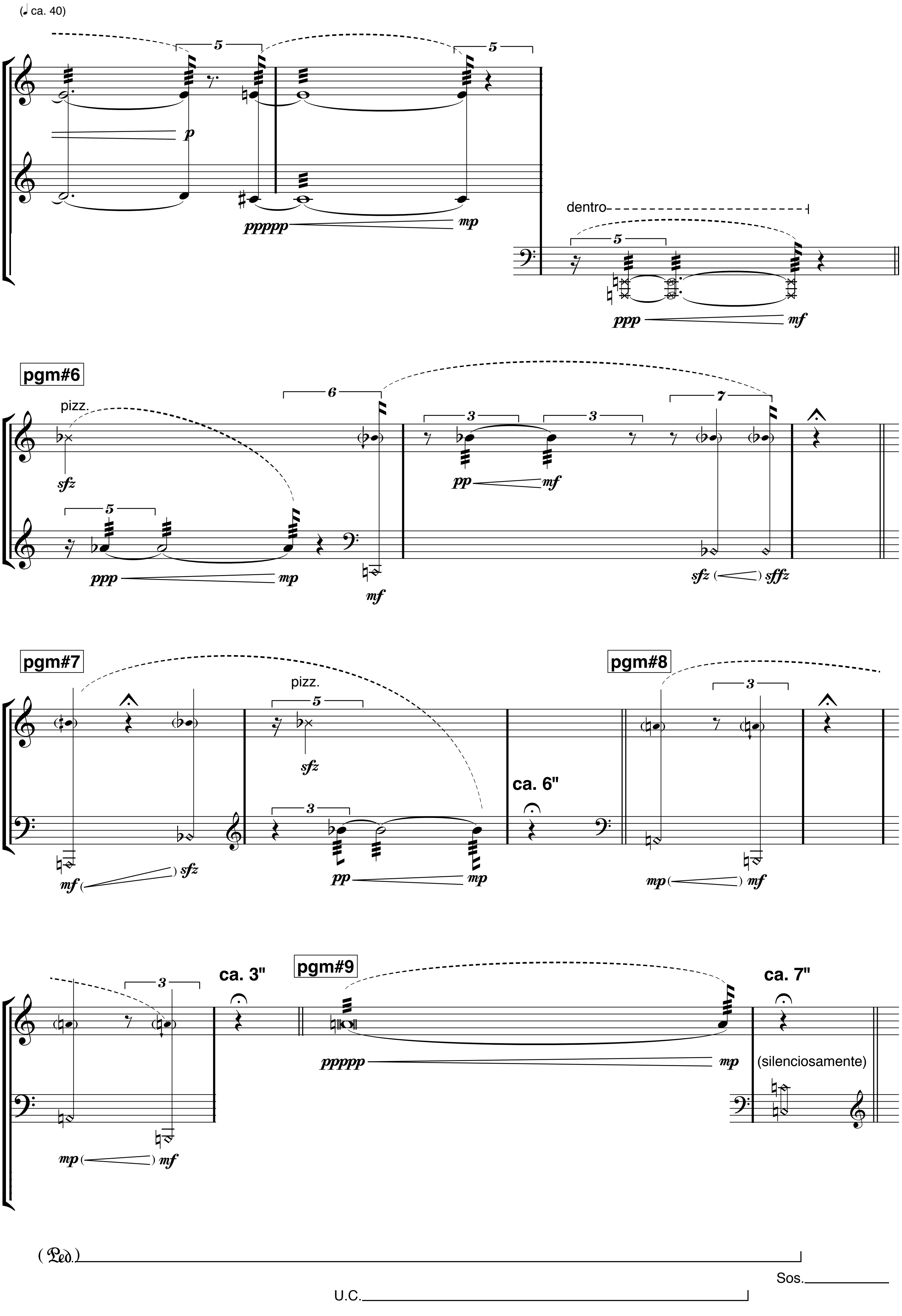
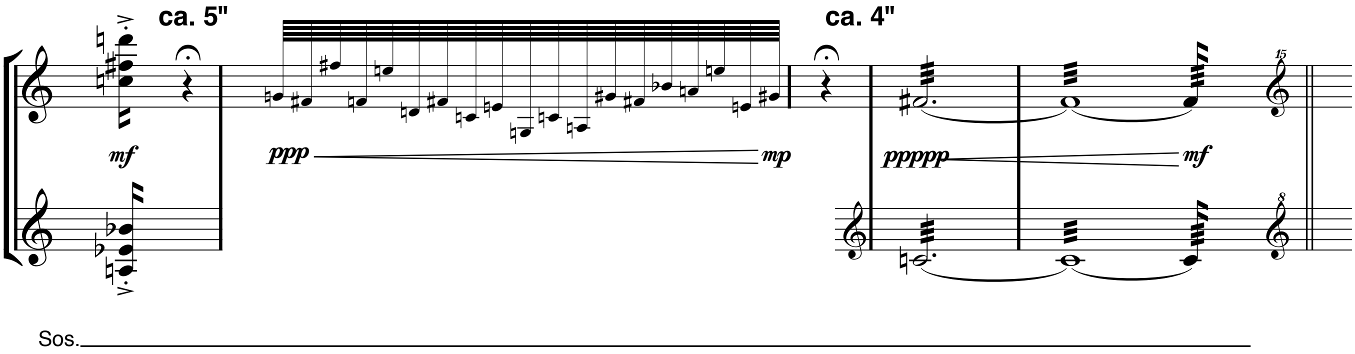
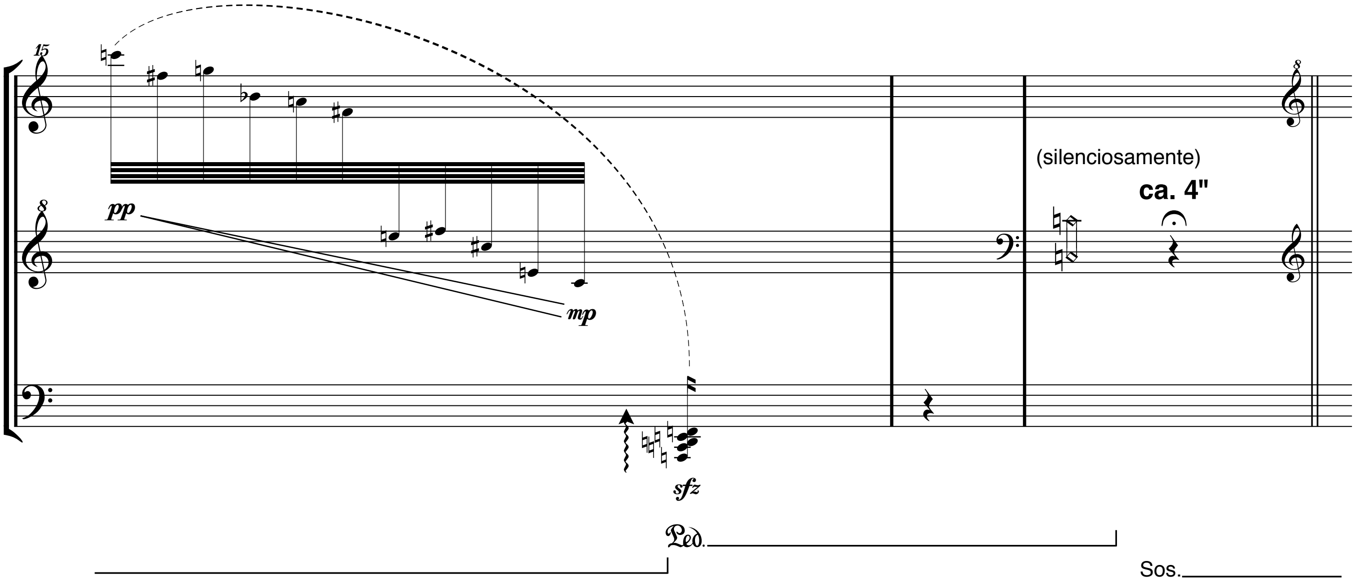

(♩ ca. 40)
5
5
p
ppppp
mp
dentro
5
ppp
mf
pgm#6
pizz.
sfz
6
3
3
7
pp
mf
5
ppp
mp
mf
sfz
sffz
pgm#7
pizz.
5
3
sfz
mf
sfz
pp
mp
ca. 6"
pgm#8
3
mp
mf
3
mp
mf
ca. 3"
pgm#9
ppppp
mp
ca. 7"
(silenciosamente)
(Ped.)
Sos.
U.C.

DOI: 10.13140/RG.2.2.16226.04807

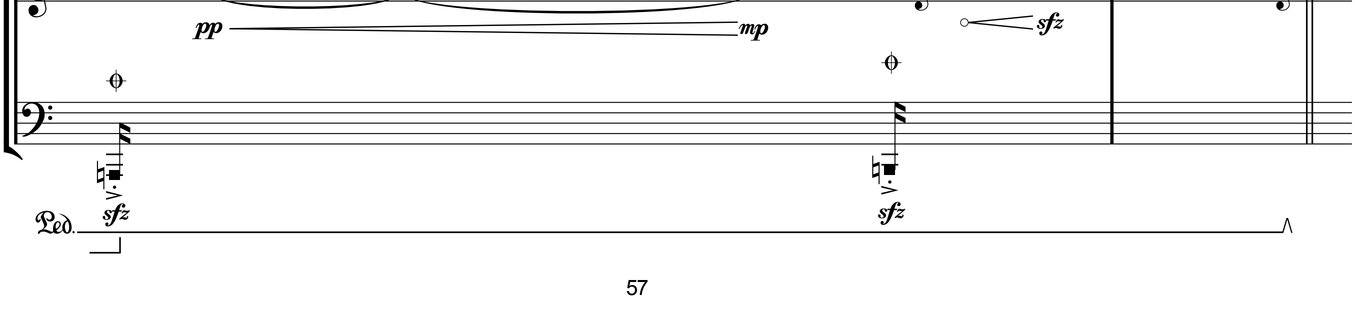
pgm#10 ♩ ca. 60


ca. 5"
ca. 4"
mf
ppp
mp
ppppp
mf
15
8
Sos.

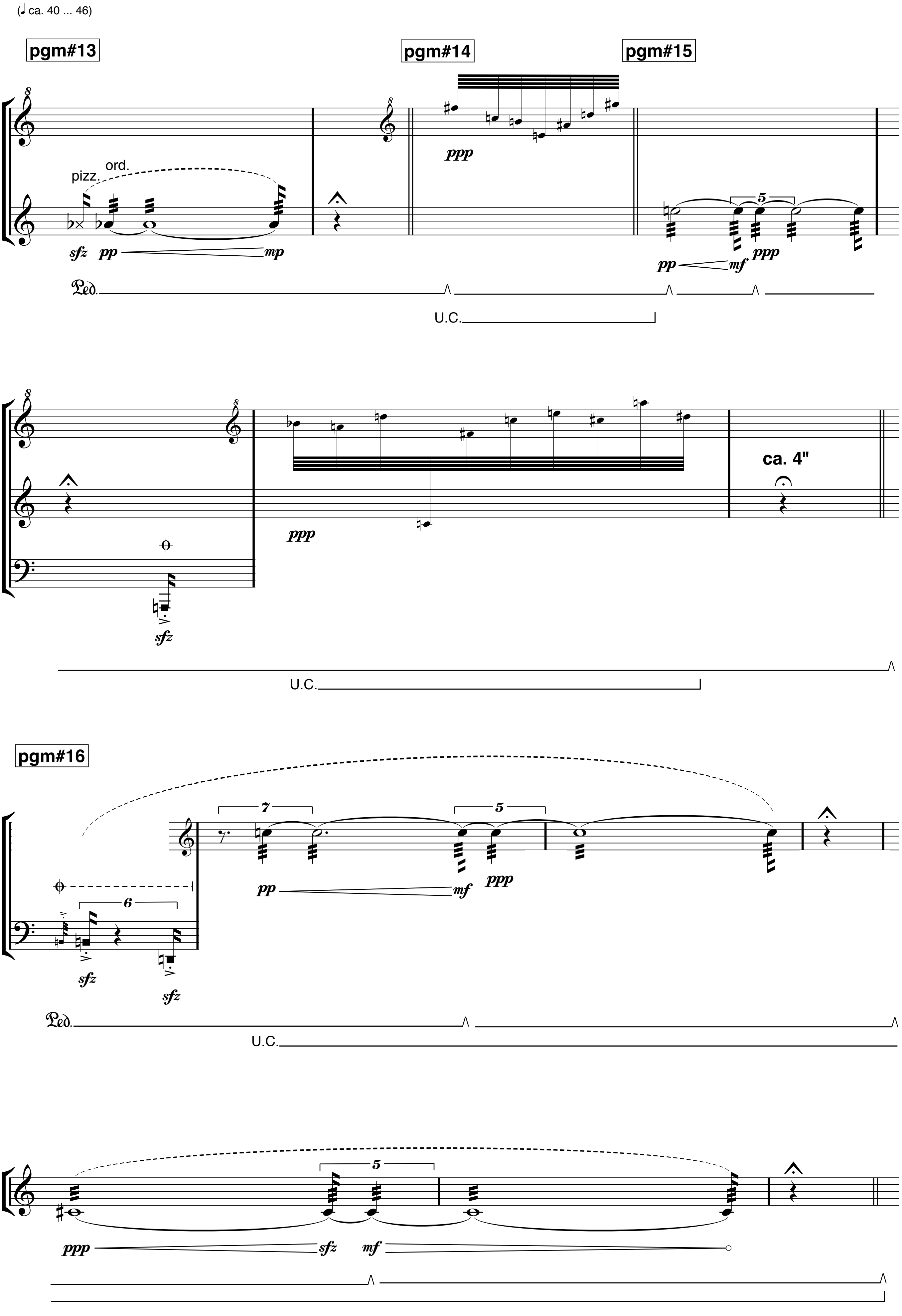
pgm#11


15
8
pp
mp
sfz
(silenciosamente)
ca. 4"
8
Ped.
Sos.

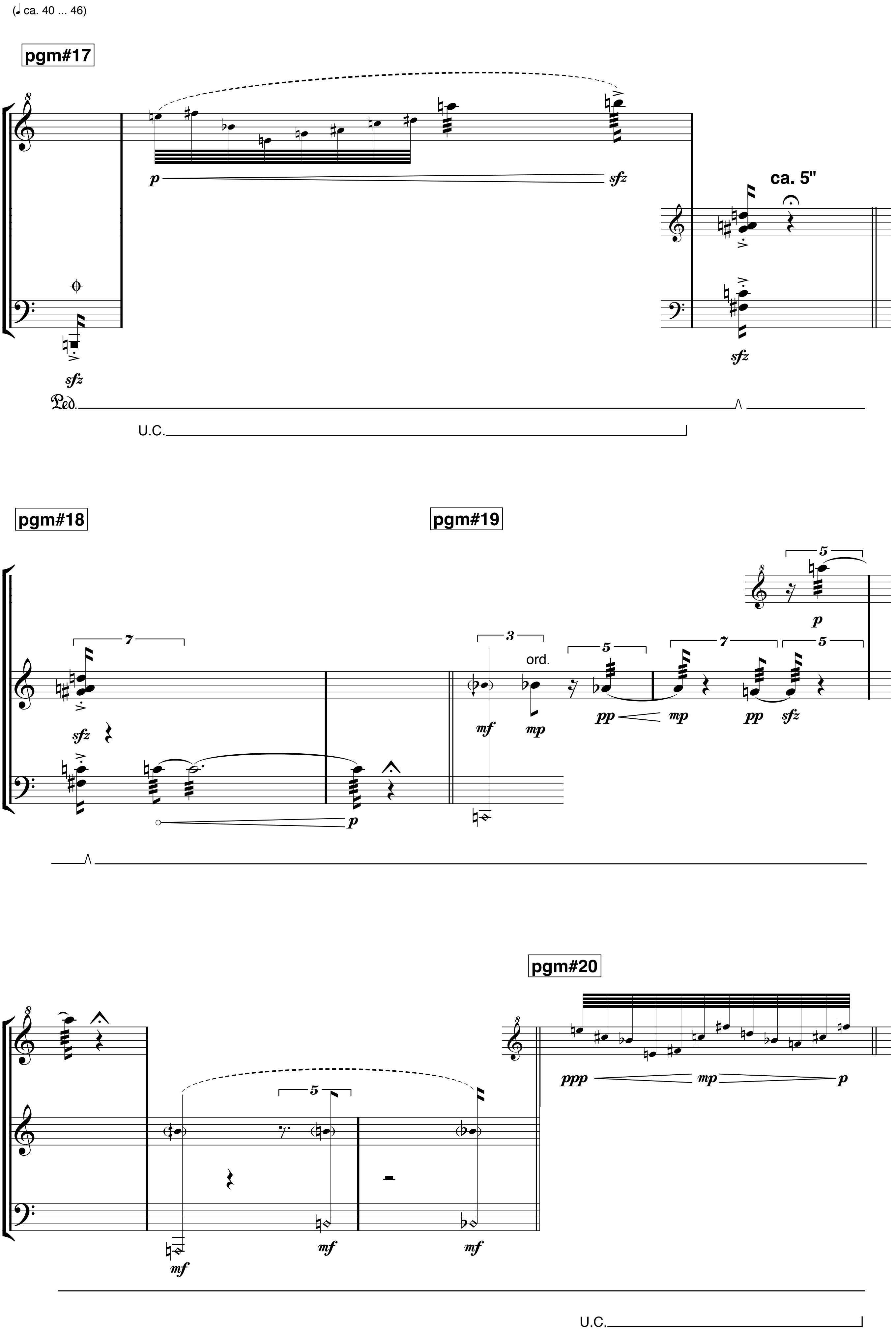
pgm#12 ♩ ca. 40 ... 46


3
6
ca. 5"
pp
mp
8
sfz
sfz
sfz
Ped.

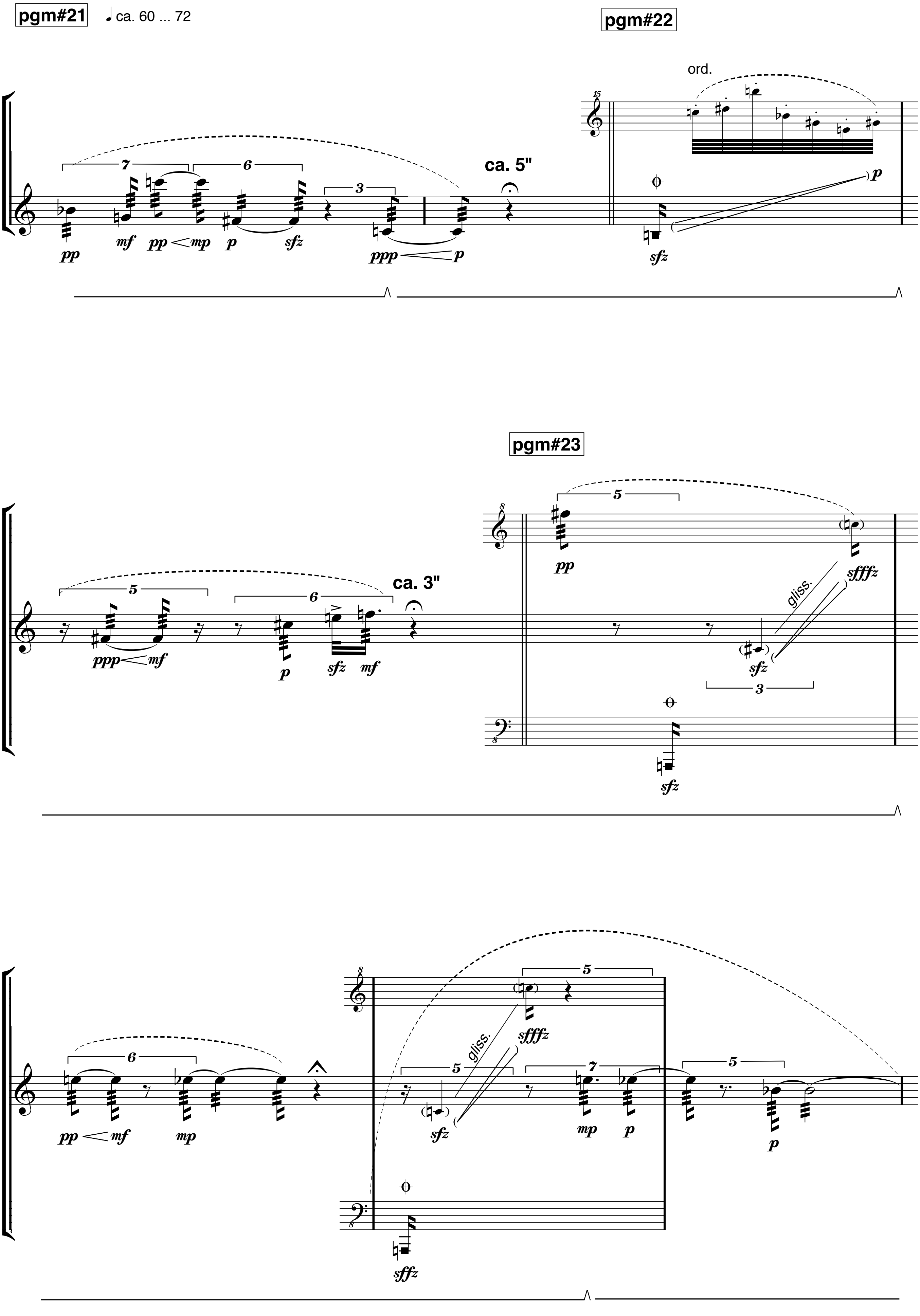
DOI: 10.13140/RG.2.2.16226.04807


(♩ ca. 40 ... 46)
pgm#13
pgm#14
pgm#15
pizz.
ord.
sfz
pp
mp
ppp
5
pp
mf
ppp
Ped.
U.C.
ppp
sfz
ca. 4"
U.C.
pgm#16
7
5
6
pp
mf
ppp
sfz
sfz
Ped.
U.C.
5
ppp
sfz
mf

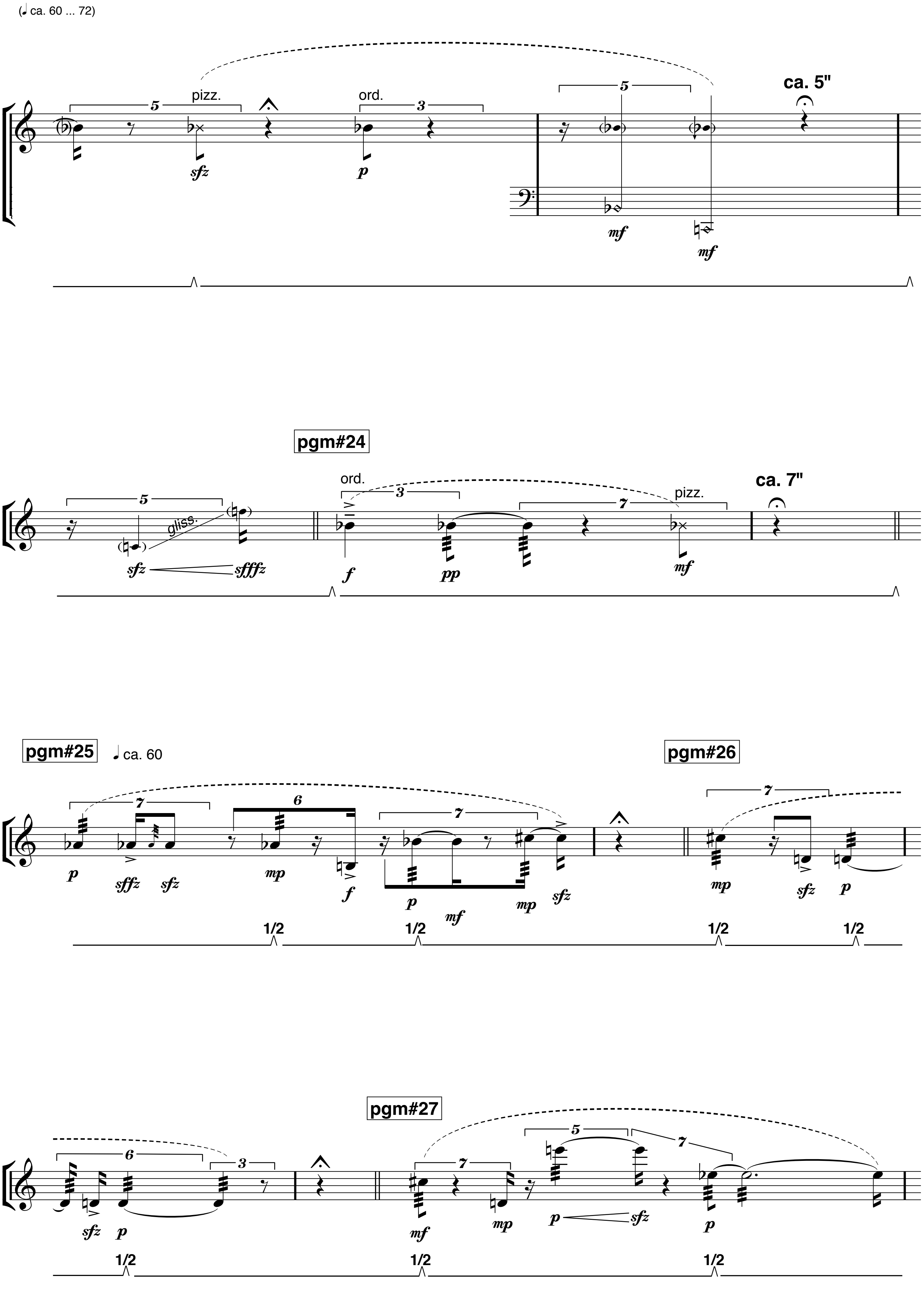
DOI: 10.13140/RG.2.2.16226.04807


(♩ ca. 40 ... 46)
pgm#17
p
sfz
ca. 5"
sfz
sfz
Ped.
U.C.
pgm#18
pgm#19
7
sfz
p
3
ord.
5
7
5
5
mf
mp
pp
mp
pp
sfz
p
pgm#20
5
ppp
mp
p
mf
mf
mf
U.C.

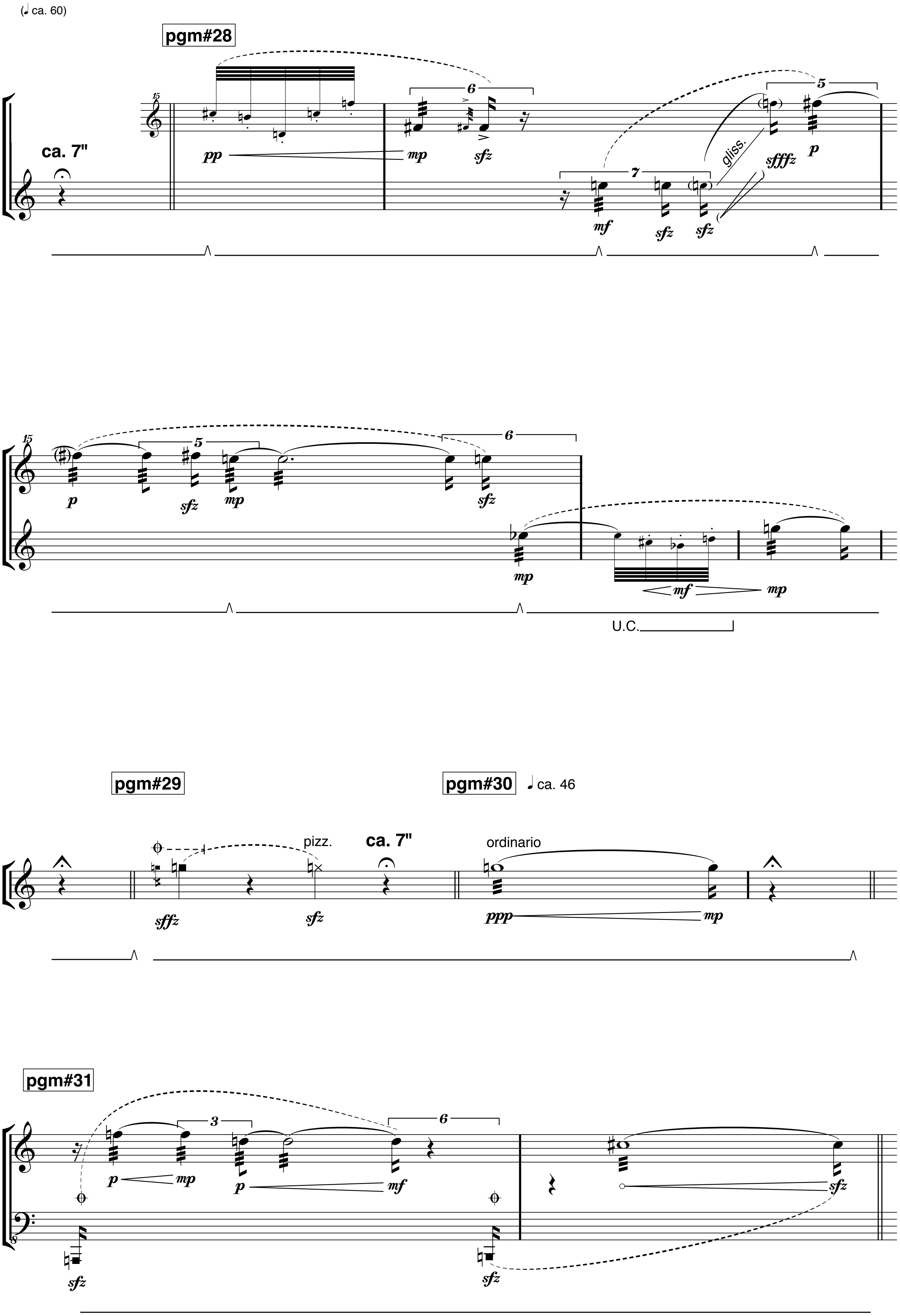
DOI: 10.13140/RG.2.2.16226.04807


pgm#21
♩ ca. 60 ... 72
pgm#22
ord.
7
6
3
ca. 5"
pp
mf
pp < mp
p
sfz
ppp < p
sfz
p
pgm#23
5
6
ca. 3"
ppp < mf
p
sfz
mf
pp
gliss.
sfffz
sfz
3
sfz
6
pp < mf
mp
5
7
gliss.
sfffz
sfz
mp
p
p
sffz

DOI: 10.13140/RG.2.2.16226.04807


(♩ ca. 60 ... 72)
5
pizz.
ord.
3
5
ca. 5"
sfz
p
mf
mf
pgm#24
5
gliss.
ord.
3
7
pizz.
ca. 7"
sfz
sfffz
f
pp
mf
pgm#25
♩ ca. 60
pgm#26
7
6
7
7
p
sffz
sfz
mp
f
p
mf
mp
sfz
mp
sfz
p
1/2
1/2
1/2
1/2
pgm#27
6
3
7
5
7
sfz
p
mf
mp
p
sfz
p
1/2
1/2
1/2

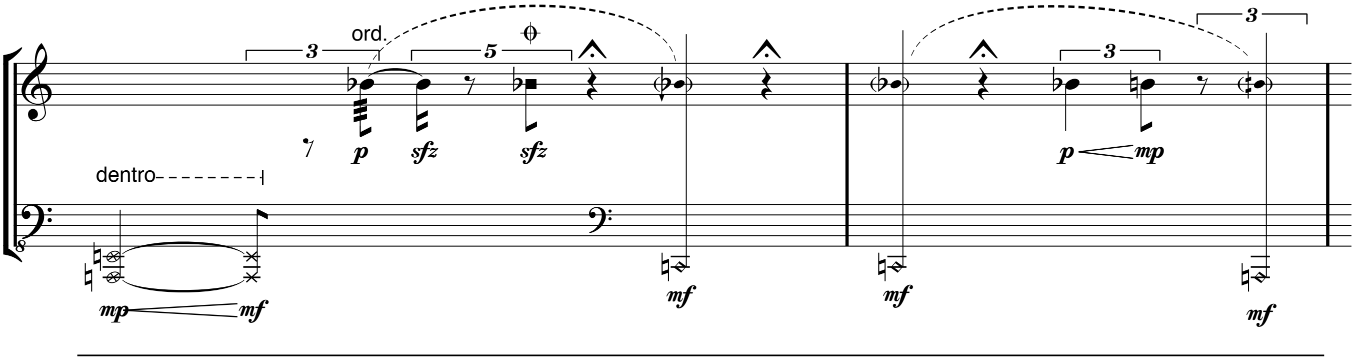
DOI: 10.13140/RG.2.2.16226.04807


(♩ ca. 60)
pgm#28
ca. 7"
pp
mp
sfz
6
7
5
mf
sfz
sfz
gliss.
sfffz
p
15
5
6
sfz
mp
sfz
mp
mf
mp
U.C.
pgm#29
pgm#30
♩ ca. 46
pizz.
ca. 7"
ordinario
sffz
sfz
ppp
mp
pgm#31
3
6
p
mp
p
mf
sfz
sfz
sfz

DOI: 10.13140/RG.2.2.16226.04807

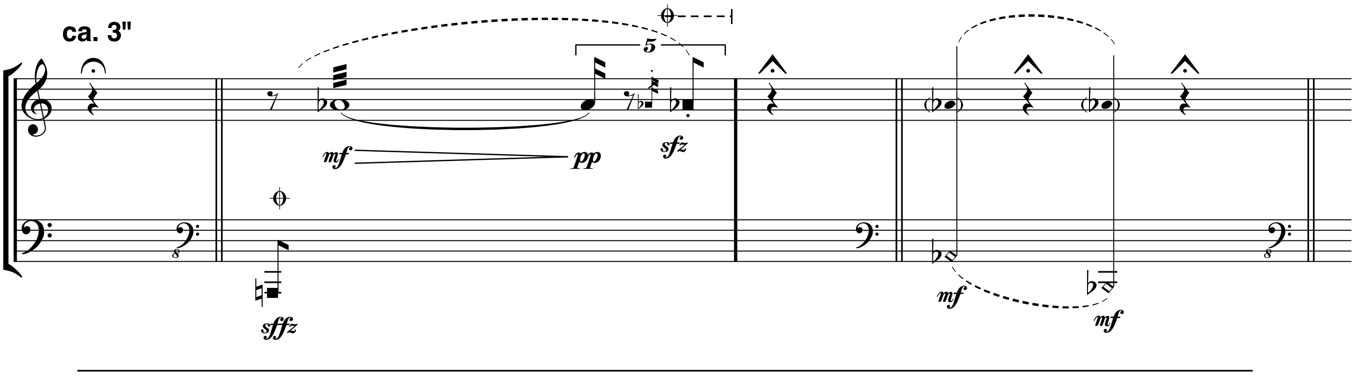
(♩ ca. 46)

pgm#32

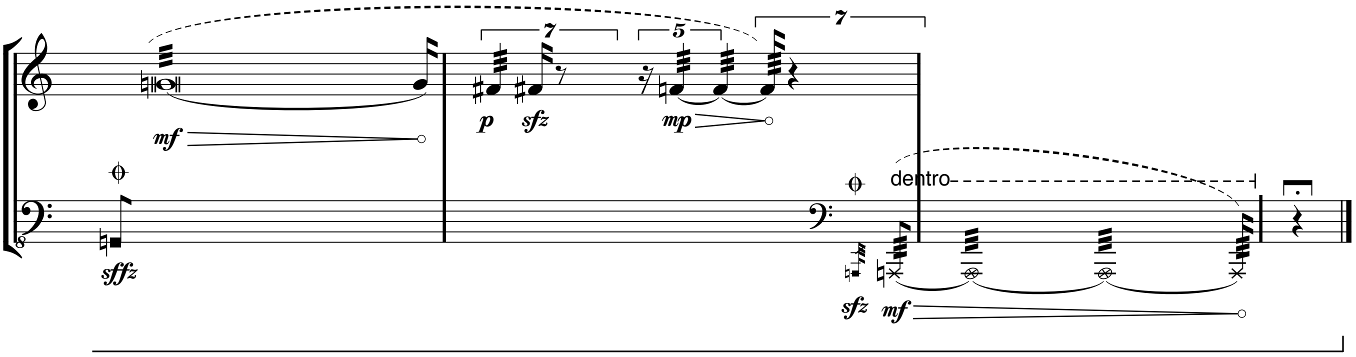

ord.
3
5
3
3
dentro
p
sfz
sfz
p
mp
mp
mf
mf
mf
mf

pgm#33

pgm#34


ca. 3"
5
mf
pp
sfz
sffz
mf
mf

pgm#35


7
5
7
dentro
mf
p
sfz
mp
sffz
sfz
mf

DOI: 10.13140/RG.2.2.16226.04807

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FELIPE DE ALMEIDA RIBEIRO

« … no desalinho triste de minhas emoções confusas ... »

for piano and live-electronics

SCORE

para piano e processamento em tempo real

PARTITURA

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DOI: 10.13140/RG.2.2.16226.04807

INSTRUCTIONS FOR THE PIANIST

1. There are two types of tremolo notation in this piece: with precise number of attacks and with inexact number of repetitions (Figure 1 and 2). One must execute all tremolos as fast as possible, and, whenever possible, with both hands. The pianist is welcome to incorporate, as part of the musical material, all irregularities in repetition as well as all mechanical failures of the instrument. When required, one should work at the limit of audibility, but always with an audible result.

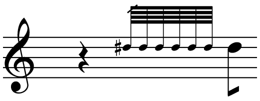

Figure 1 - precise tremolo

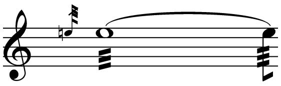

Figure 2 - inexact tremolo

2. There are three types of fermata with different durations: short, medium, and long (Figure 3). Short fermata delays the pulse, i.e. it works similarly to a dotted rhythmic figure. The medium fermata comes with a duration in seconds above it. The long one lasts until a drastic decay of sound.

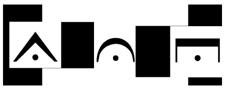

Figure 3

3. The pizzicato technique is executed directly on the piano strings with finger nails. It is notated with an "x" note-head (Figure 4, 12).

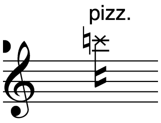

Figure 4

4. Harmonics (Figure 5, 12) are played with a technique that combines a key with a finger pressed string. The lower note (diamond note-head) is the key to be pressed, while the upper note (in parenthesis) indicates the final pitch to be heard (attention to reach the exact microtone). It is up to the pianist to locate each harmonic along the string (fundamental note). It is advised to use colored stickers in order to map all different harmonics for the performance.

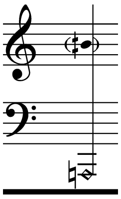

Figure 5

5. A series of notes need to be prepared with pieces of rubber that fit between the piano strings and the metal bar slightly above them (Figure 6, 12). The idea is to damp the strings in a way that the fundamental pitch decays while the piano's resonance remains. The final sonority is similar to a percussion instrument, with a clear pitch distinction followed by a strong resonance (instrument's body).

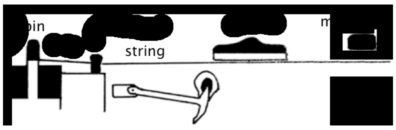

Figure 6

A few other notes are meant to be damped with the finger, i.e. without preparation, near one extremity of each respective string. The damped technique without preparation combines a depressed key with the respective damped string with finger (Figure 7, 12).

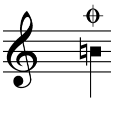

Figure 7

6. The ornamentation must be played as fast as possible, independently of its real rhythmic value, and always with the notated dynamics. They are always written with 64th notes and are visually smaller than regular notes (Figure 8).

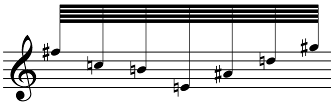

Figure 8

7. The glissandi technique is always applied directly on the keyboard (Figure 9). One must perform each gliss. as one gesture alone, always giving more emphasis on the ascending effect than the pitch collection itself.

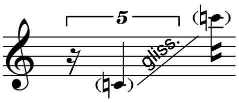

Figure 9

8. All dynamics have a subito characteristic, unless indicated by cresc. and decresc. signs. The pianist must differentiate as much as possible the dynamic difference in loudness. That is the crucial idea behind this musical material (Figure 10).

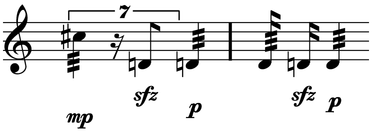

Figure 10

9. The following technique, denominated @PIN, is always used as a glissandi directly on the strings next to their respective pins (Figure 11).

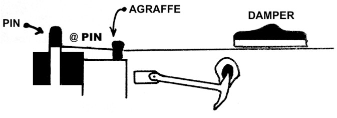

Figure 11

10. Every instance of the sustain pedal must be treated as half-pedal, i.e. the pedal changes must suppress the fundamental notes, but not the main resonance.

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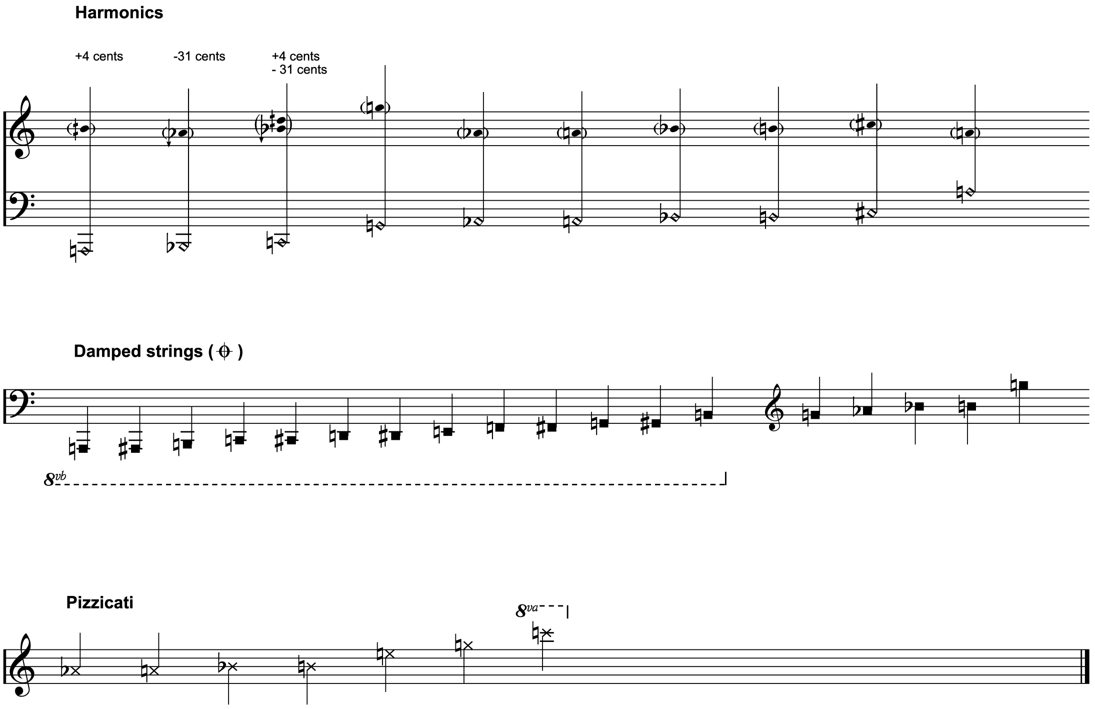
MAP OF PIANO PREPARATION

1. HARMONICS: use a sticker on the string to indicate where to play each harmonic (in parenthesis).
2. DAMPED: place a rubber between each string and the piano's metal bar.
3. PIZZICATI: prepare each string with a sticker.



Harmonics

Damped strings (⊕)

Pizzicati

Figure 12

Title's translation:

"...in the sad disarray of my confused emotions..." (Fernando Pessoa)

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LIST OF EQUIPMENT

- Grand piano
- Condenser microphones cardioid pattern (2)
- Computer with Max MSP
- Audio interface 2x2
- Stereo Mixer
- Loudspeakers (4), quadriphonic configuration

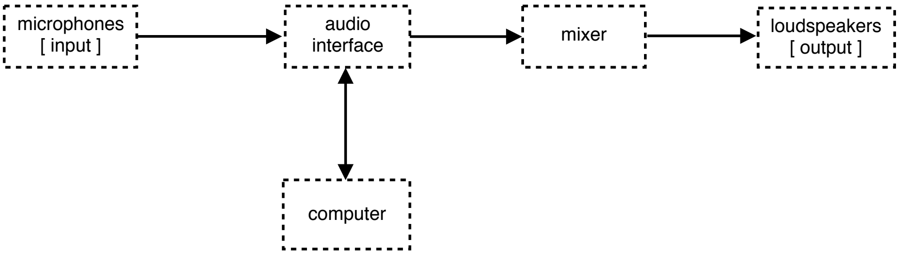
microphones
[input]
audio
interface
mixer
loudspeakers
[output]
computer

Figure 11. Live-electronics workflow

STAGE PLACEMENT

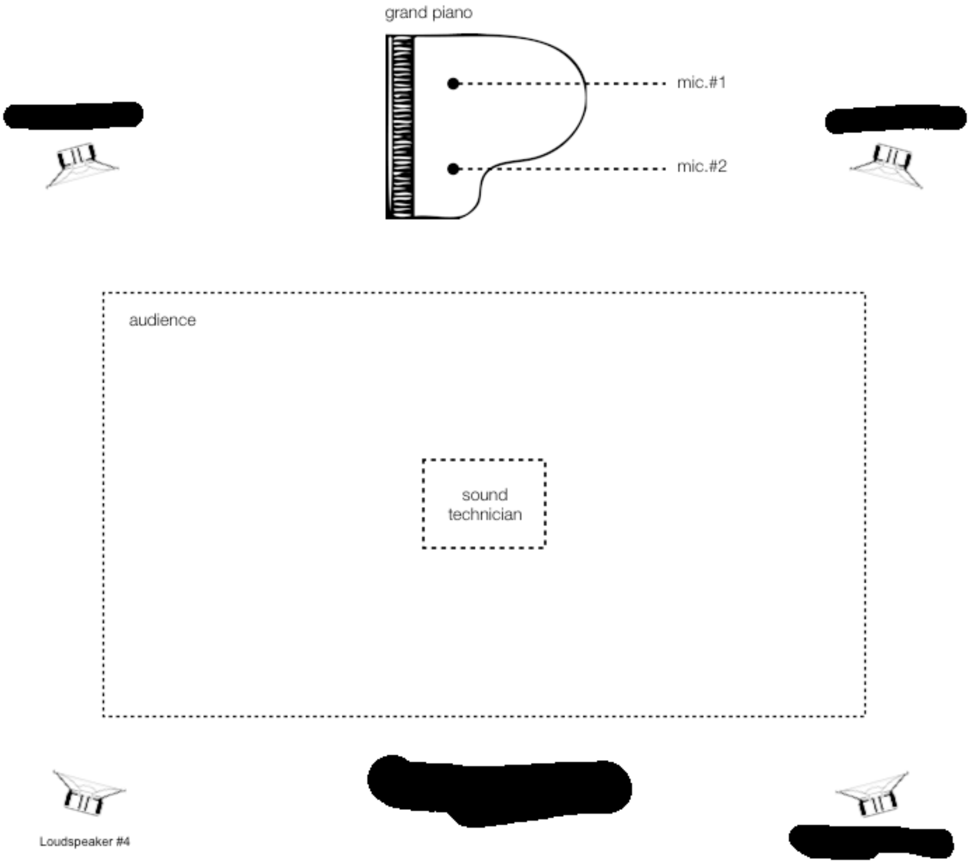
grand piano
[redacted]
mic.#1
[redacted]
mic.#2
audience
sound
technician
Loudspeaker #4
[redacted]
[redacted]

Figure 12. Placement

PATCH DESCRIPTION [Max/MSP][39]

Sub-patches and techniques: 1024 bins filtering [FFT]
Real and imaginary numbers distortion [FFT]
Ring Modulation [freqshift~]
Delay with feedback [tapin~, tapout~]
Reverb [gigaverb~]

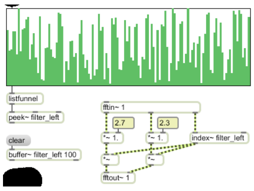
listfunnel
peek~ filter_left
clear
buffer~ filter_left 100
fftin~ 1
2.7
2.3
*~ 1.
*~ 1.
index~ filter_left
*~
*~
fftout~ 1

Figure 13. FFT filtering and real/imaginary numbers distortion

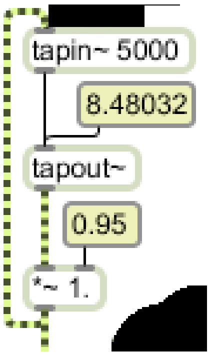
tapin~ 5000
8.48032
tapout~
0.95
*~ 1.

Figure 15. Delay with feedback

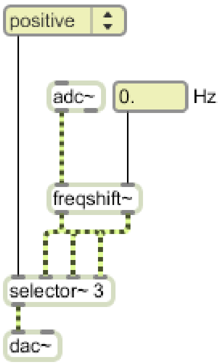
positive
adc~
0.
Hz
freqshift~
selector~ 3
dac~

Figure 14. Ring modulation

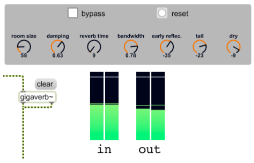
bypass
reset
room size
58
damping
0.63
reverb time
9
bandwidth
0.78
early reflec.
-35
tail
-23
dry
-9
clear
gigaverb~
in
out

Figure 16. Gigaverb

---

[39] All values are for illustrational purposes only.

PARAMETERS[40]

	pgm#1	*pgm#2*	*pgm#3*	*pgm#4*	*pgm#5*	*pgm#6*	*pgm#7*	*pgm#8*	*pgm#9*	*pgm#10*	*pgm#11*	*pgm#12*
Filter level	0	85	85	85	85	85	85	85	85	85	85	85
Ring level	0	0	0	0	80	0	0	0	0	70	70	0
Delay level	0	0	85	0	0	0	0	0	0	50	50	0
Modulation (Hz)	423	423	423	423	423	423	423	423	300	300	300	300
Delay time (ms)	50/60	50/60	50/60	50/60	5/5	5/5	5/5	5/5	5/6	5/6	5/6	5/6
Feedback	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.7	0.7	0.7	0.7
FFT filter	0	full	random	full	random	full	full	band	band	band	full	random
Gizmo #1												
Gizmo #2												
Ambisonics L												
Ambisonics R												
Line (ms)												

	pgm#13	*pgm#14*	*pgm#15*	*pgm#16*	*pgm#17*	*pgm#18*	*pgm#19*	*pgm#20*	*pgm#21*	*pgm#22*	*pgm#23*	*pgm#24*
Filter level	85	85	85	85	85	85	85	85	85	85	85	85
Ring level	0	0	0	0	70	30	0	0	80	80	10	10
Delay level	0	0	0	0	60	20	0	0	0	70	0	75
Modulation (Hz)	411	411	411	411	411	411	357	357	357	357	369	369
Delay time (ms)	5/6	70/80	70/80	70/80	70/80	70/80	5/7	5/7	5/7	5/7	100/110	100/110
Feedback	0.7	0.1	0.1	0.8	0.8	0.1	0.1	0.1	0.7	0.7	0.5	0.5
FFT filter	random	band	full	full	random	random	full	full	random	full	full	band
Gizmo #1												
Gizmo #2												
Ambisonics L												
Ambisonics R												
Line (ms)												

---

[40] All values transitions are gradually made with [line].

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	pgm#25	*pgm#26*	*pgm#27*	*pgm#28*	*pgm#29*	*pgm#30*	*pgm#31*	*pgm#32*	*pgm#33*	*pgm#34*	*pgm#35*	*pgm#36*	*pgm#37*
Filter level	85	85	85	85	85	85	85	85	85	85	85		
Ring level	80	70	60	60	60	10	70	0	0	70	0		
Delay level	0	0	50	50	50	0	0	70	70	70	70		
Modulation (Hz)	369	360	360	350	350	350	350	300	300	320	320		
Delay time (ms)	100/110	5/8	5/8	5/8	5/8	5/8	100/105	100/105	100/105	100/105	100/105		
Feedback	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5		
FFT filter	band	random	band	random	full	band	band	random	band	random	random		
Gizmo #1													
Gizmo #2													
Ambisonics L													
Ambisonics R													
Line (ms)													

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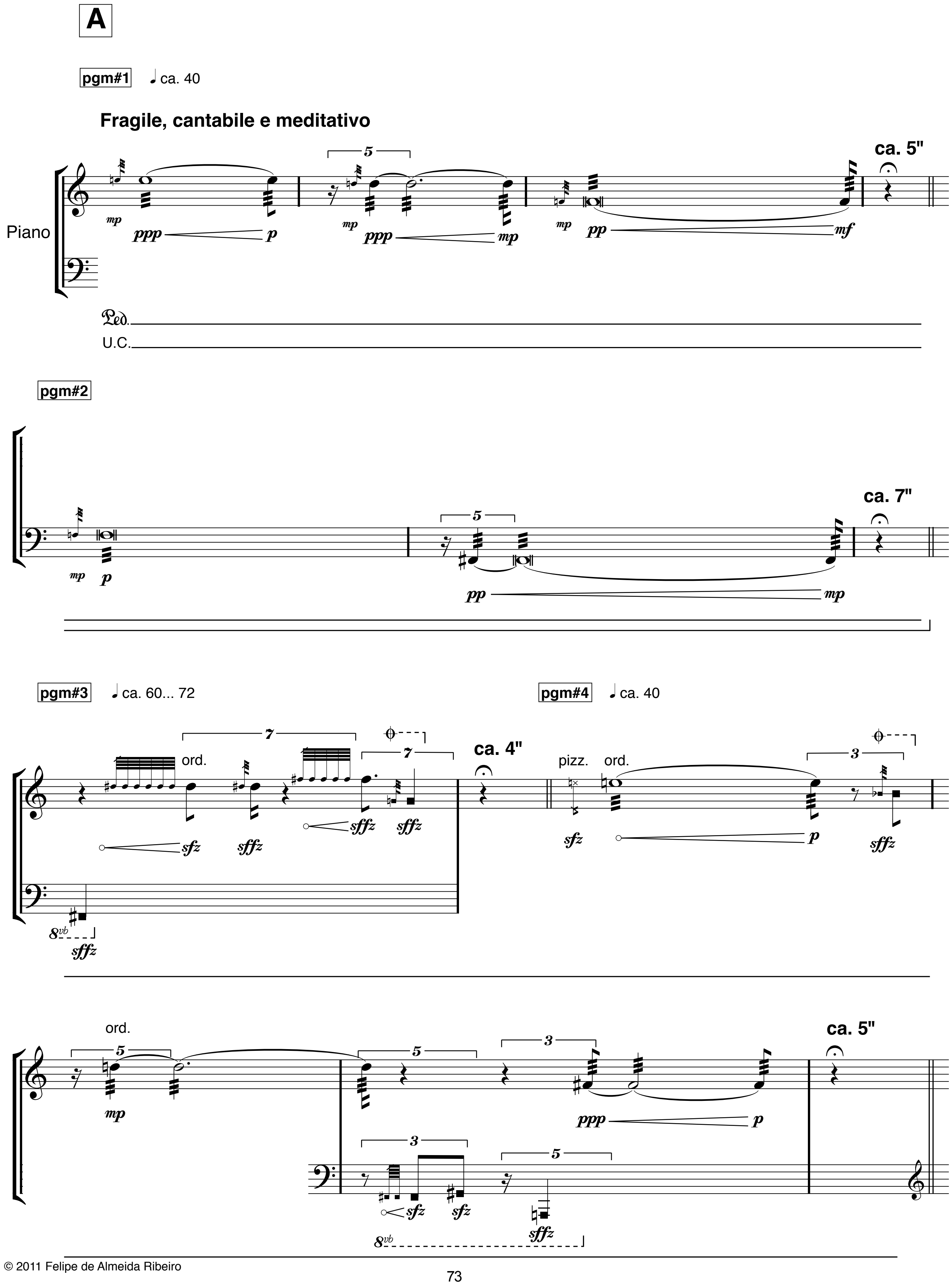
« ...no desalinho triste de minhas emoções confusas... »

for piano and live-electronics
para piano e processamento em tempo real

Felipe de Almeida Ribeiro


A
pgm#1
♩ ca. 40
Fragile, cantabile e meditativo
Piano
5
ca. 5"
mp
ppp
p
mp
ppp
mp
mp
pp
mf
Ped.
U.C.
pgm#2
5
ca. 7"
mp
p
pp
mp
pgm#3
♩ ca. 60... 72
ord.
7
7
ca. 4"
sfz
sffz
sffz
sffz
8vb
sffz
pgm#4
♩ ca. 40
pizz.
ord.
3
sfz
p
sffz
ord.
5
5
3
ca. 5"
mp
ppp
p
3
5
sfz
sfz
sffz
8vb

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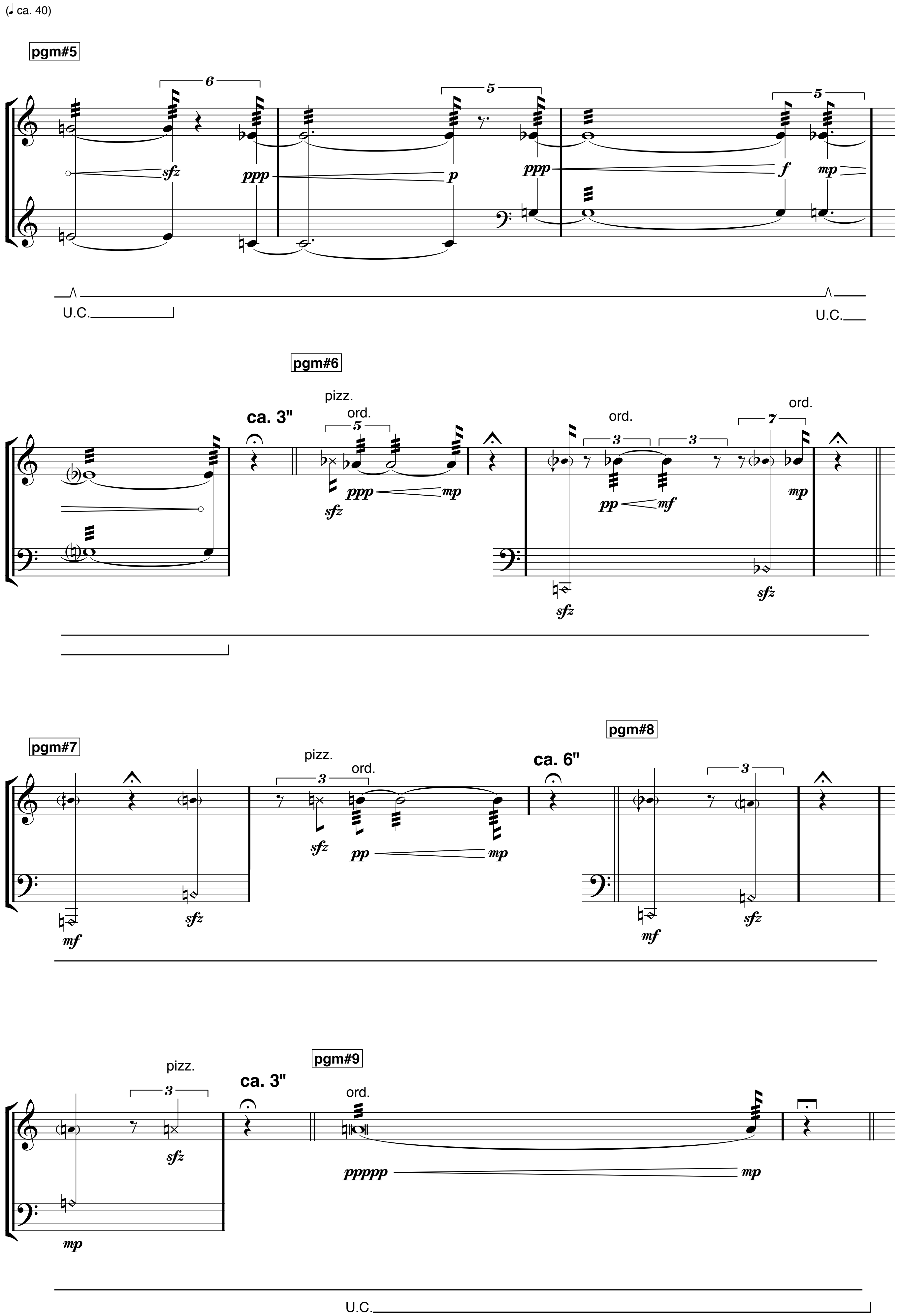
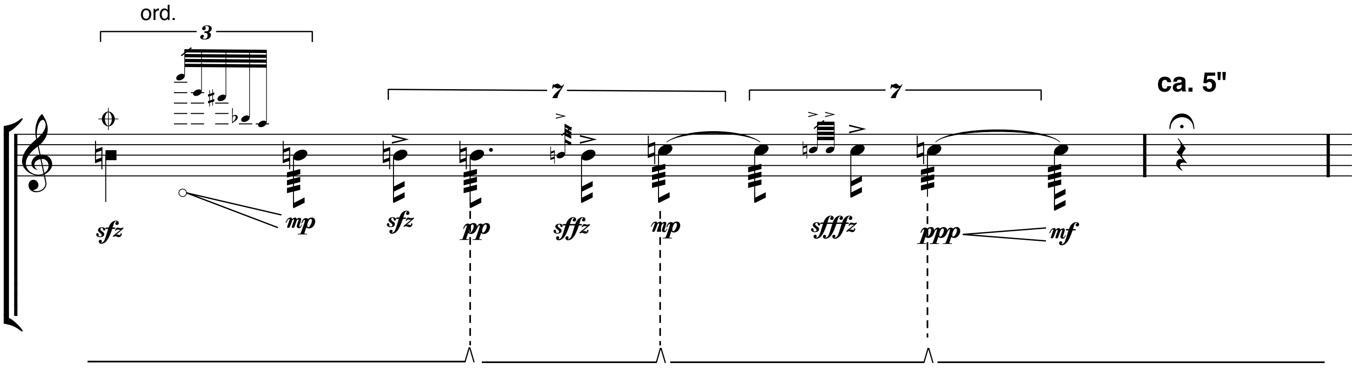

(♩ ca. 40)
pgm#5
6
5
5
sfz
ppp
p
ppp
f
mp
U.C.
U.C.
pgm#6
pizz.
ord.
ca. 3"
5
sfz
ppp
mp
ord.
3
3
ord.
7
pp
mf
mp
sfz
sfz
pgm#7
pizz.
ord.
3
pgm#8
ca. 6"
3
sfz
pp
mp
mf
sfz
mf
sfz
pizz.
3
ca. 3"
pgm#9
ord.
sfz
ppppp
mp
mp
U.C.

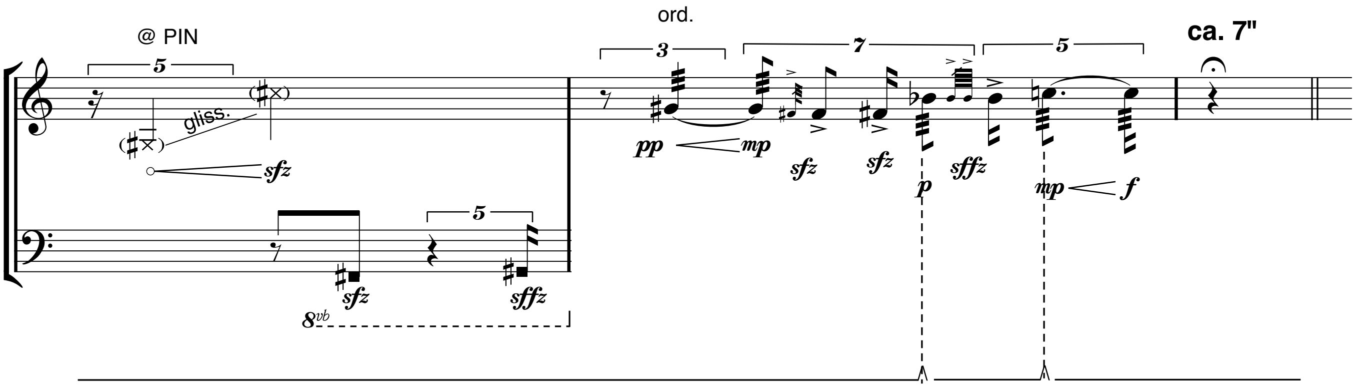
DOI: 10.13140/RG.2.2.16226.04807

B

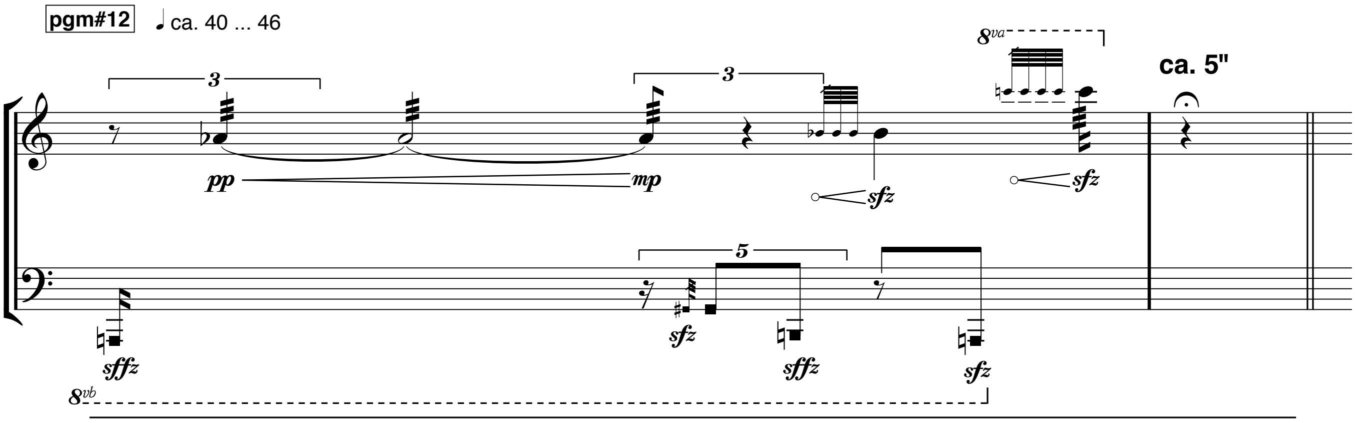
pgm#10 ♩ ca. 72... 86


ord.
3
7
7
ca. 5"
sfz
mp
sfz
pp
sffz
mp
sfffz
ppp
mf

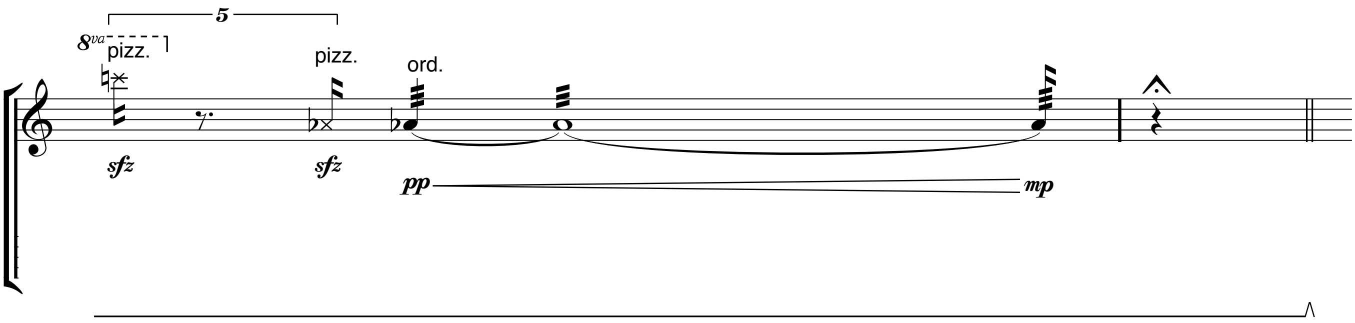
pgm#11 ♩ ca. 46


@ PIN
5
gliss.
sfz
sfz
sffz
8vb
ord.
3
7
5
ca. 7"
pp
mp
sfz
sfz
p
sffz
mp
f

pgm#12 ♩ ca. 40 ... 46

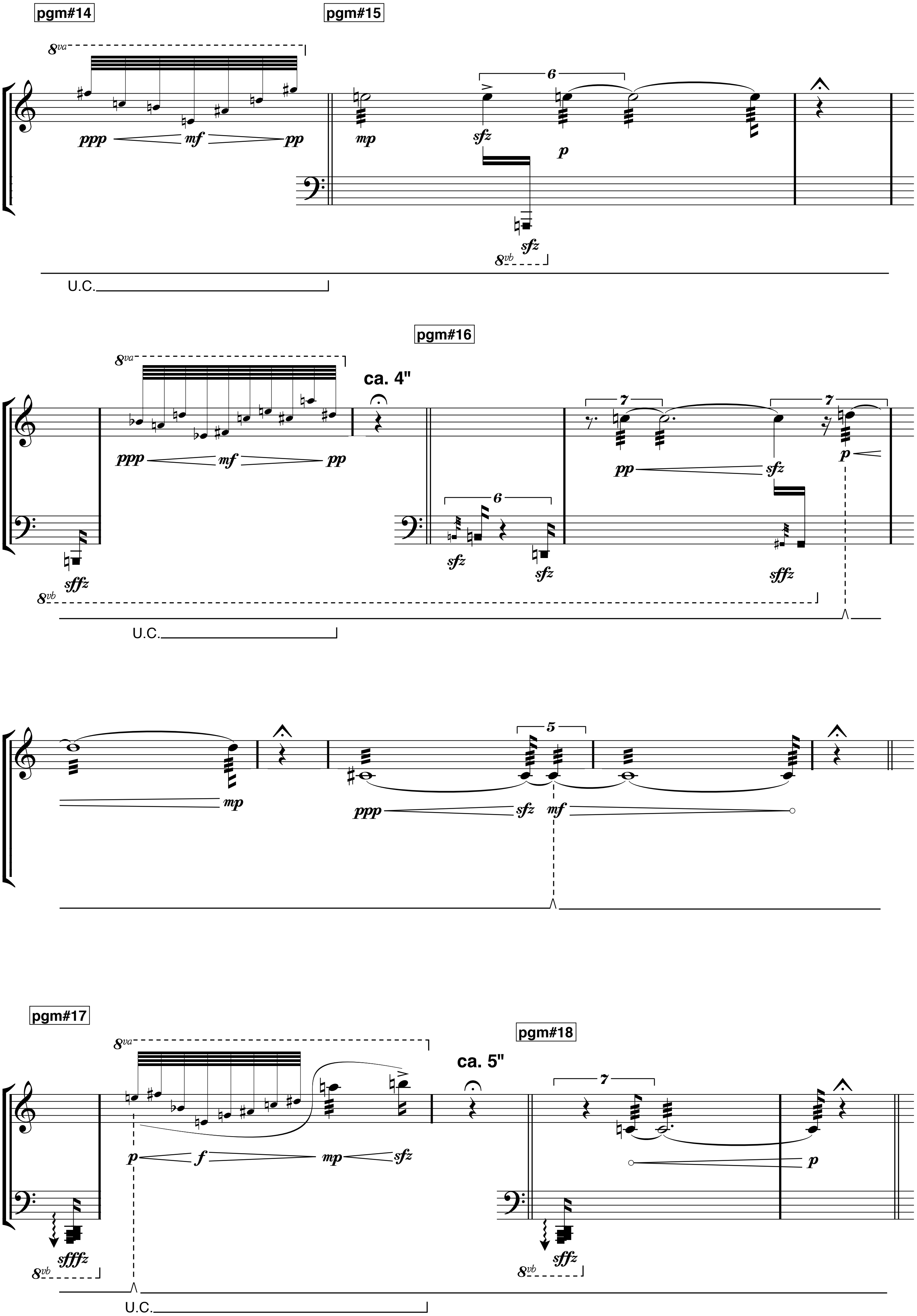

3
3
8va
ca. 5"
pp
mp
sfz
sfz
sffz
5
sfz
sffz
sfz
8vb

pgm#13


5
8va
pizz.
pizz.
ord.
sfz
sfz
pp
mp

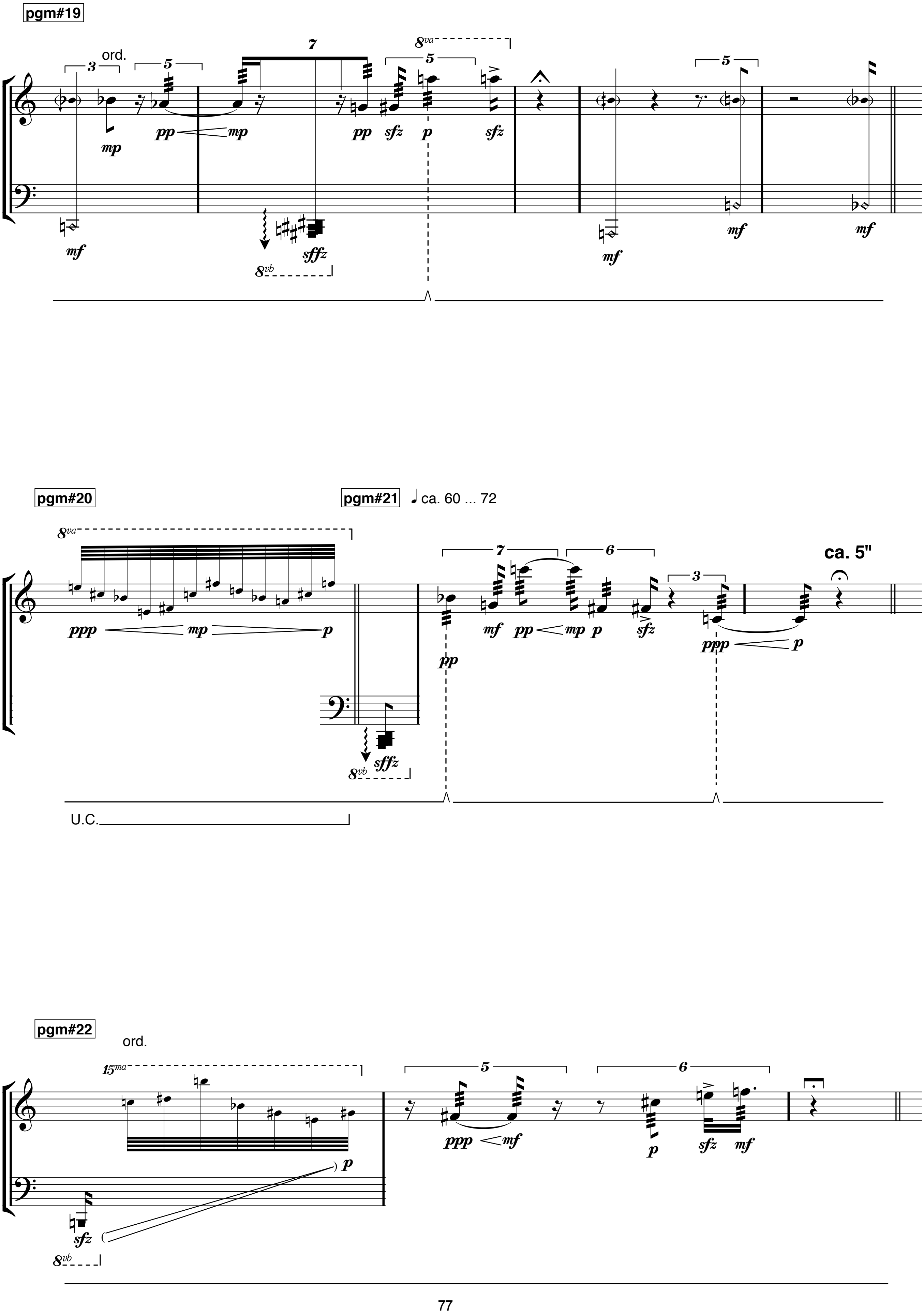
DOI: 10.13140/RG.2.2.16226.04807

(♩ ca. 40 ... 46)


pgm#14
8va
ppp
mf
pp
pgm#15
6
mp
sfz
p
sfz
8vb
U.C.
pgm#16
8va
ppp
mf
pp
ca. 4"
7
7
pp
sfz
p
6
sfz
sfz
sffz
sffz
8vb
U.C.
5
mp
ppp
sfz
mf
pgm#17
8va
p
f
mp
sfz
sfffz
8vb
pgm#18
ca. 5"
7
p
sffz
8vb
U.C.

DOI: 10.13140/RG.2.2.16226.04807

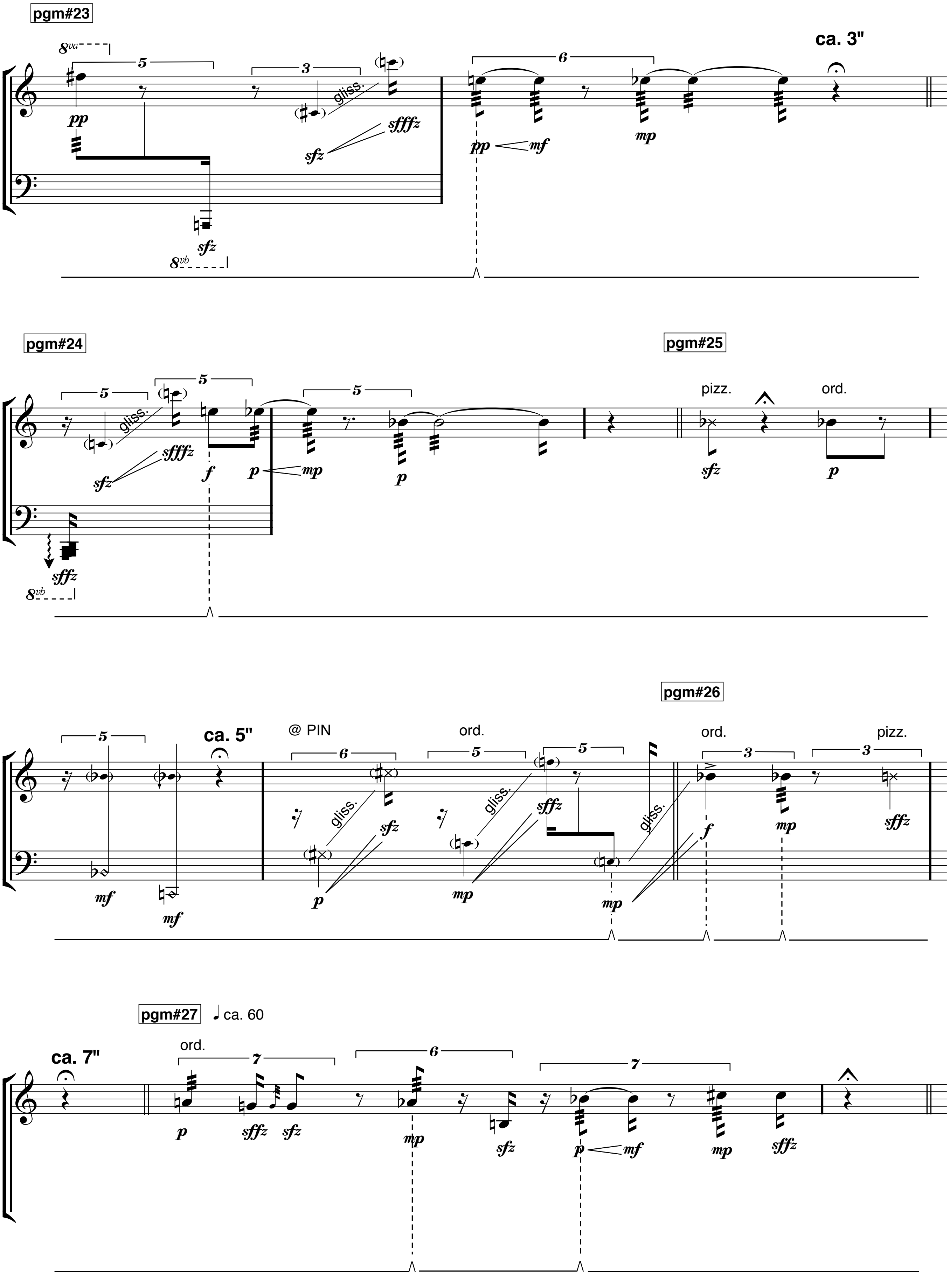
(♩ ca. 40 ... 46)


pgm#19
ord.
3
5
7
8va
5
mp
pp
mp
pp
sfz
p
sfz
mf
sffz
8vb
5
mf
mf
mf
pgm#20
pgm#21
♩ ca. 60 ... 72
8va
ppp
mp
p
sffz
8vb
7
6
3
ca. 5"
pp
mf
pp
mp
p
sfz
ppp
p
U.C.
pgm#22
ord.
15ma
sfz
8vb
p
5
6
ppp
mf
p
sfz
mf

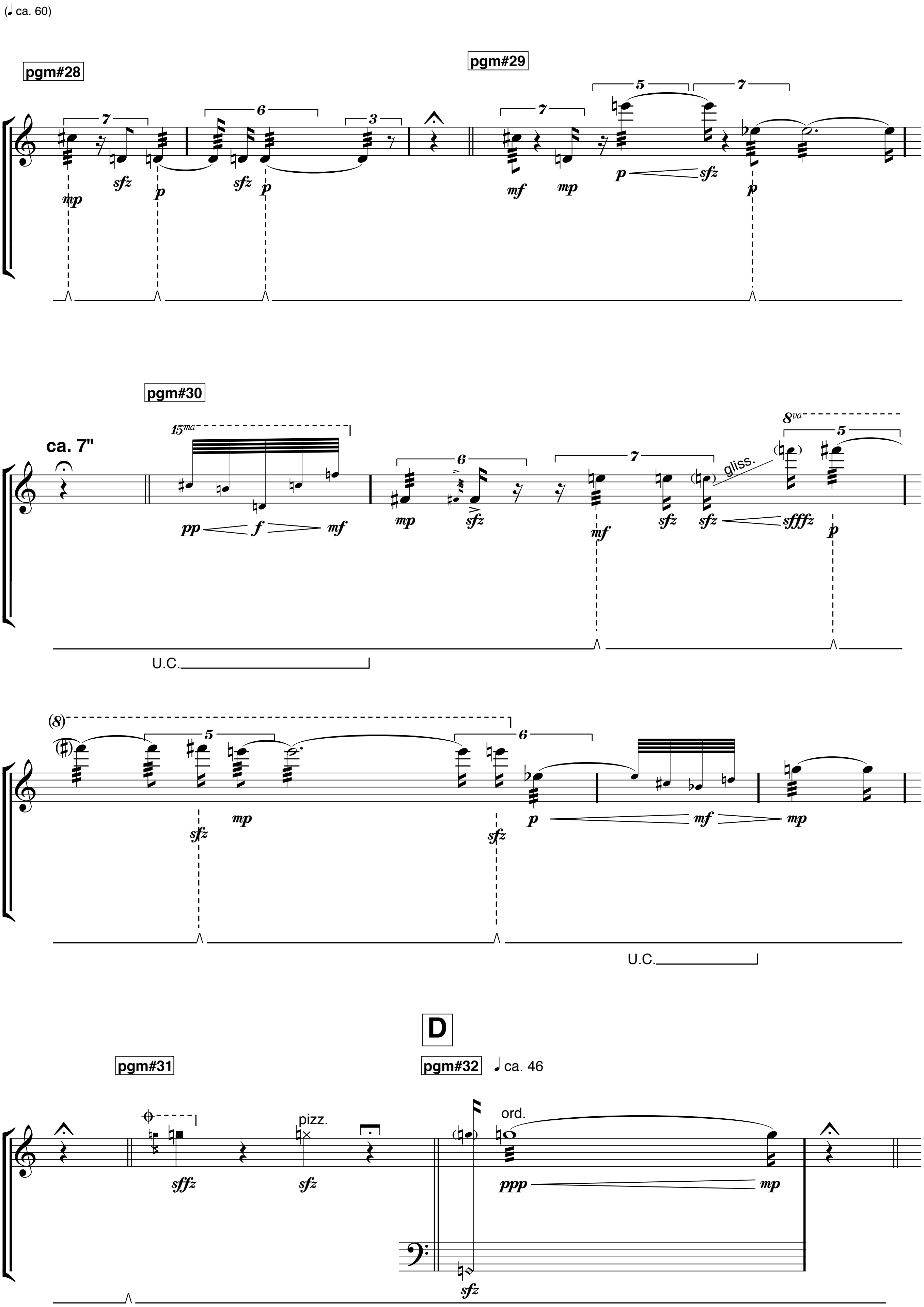
DOI: 10.13140/RG.2.2.16226.04807

(♩ ca. 60 ... 72)

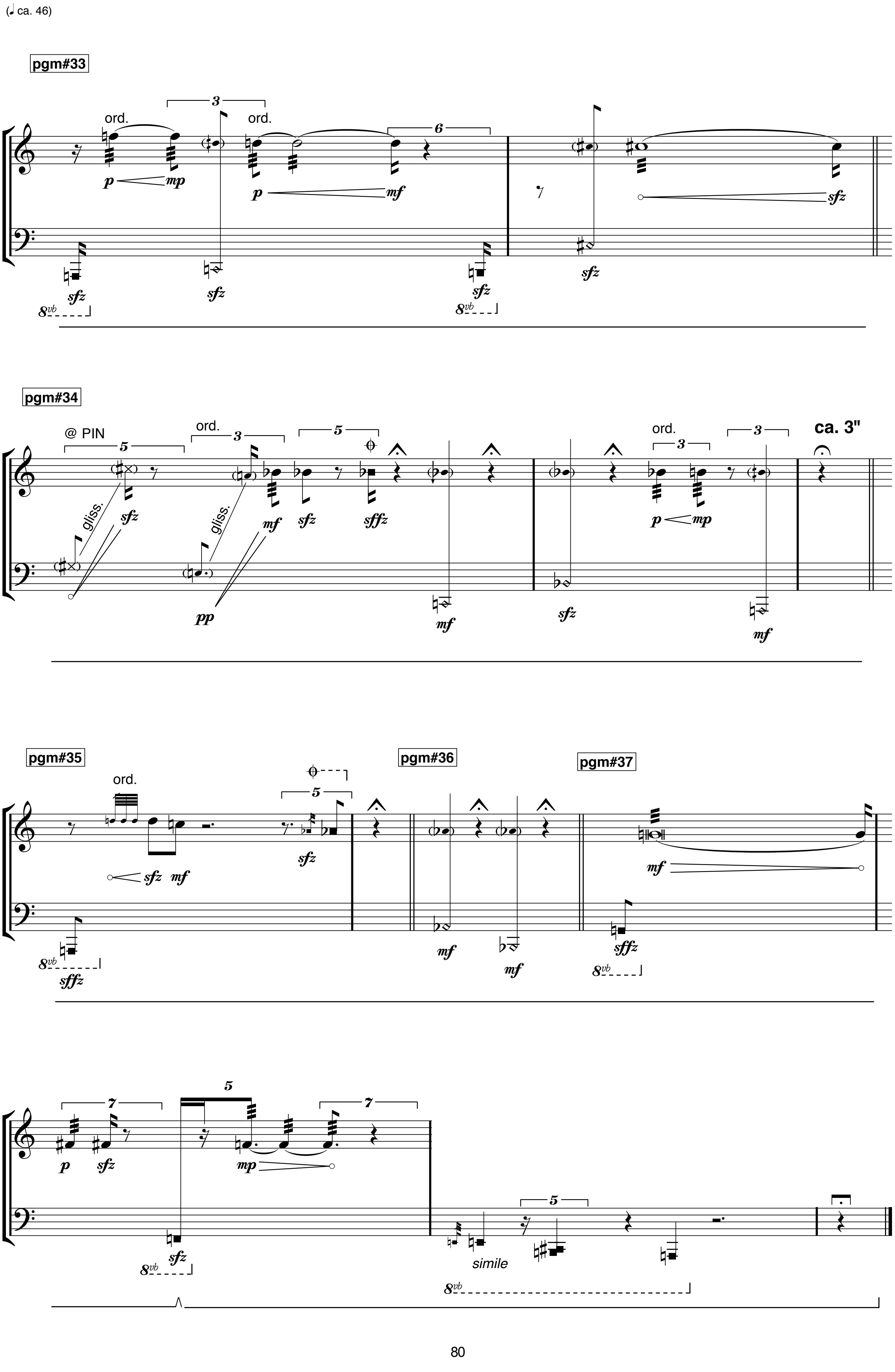
C


pgm#23
8va
5
3
gliss.
pp
sfz
sfffz
6
ca. 3"
pp
mf
mp
8vb
pgm#24
pgm#25
5
5
5
gliss.
sfz
sfffz
f
p
mp
p
sffz
8vb
pizz.
ord.
sfz
p
pgm#26
5
ca. 5"
mf
mf
@ PIN
6
gliss.
p
sfz
ord.
5
gliss.
mp
sffz
5
gliss.
mp
ord.
3
f
mp
pizz.
3
sffz
pgm#27
♩ ca. 60
ca. 7"
ord.
7
p
sffz
sfz
6
mp
sfz
7
p
mf
mp
sffz

DOI: 10.13140/RG.2.2.16226.04807


(♩ ca. 60)
pgm#28
pgm#29
7
6
3
5
7
mp
sfz
p
sfz
p
mf
mp
p
sfz
p
pgm#30
ca. 7"
15ma
pp
f
mf
6
7
8va
5
gliss.
mp
sfz
mf
sfz
sfz
sffz
p
U.C.
(8)
5
6
sfz
mp
sfz
p
mf
mp
U.C.
D
pgm#31
pgm#32
♩ ca. 46
pizz.
ord.
sffz
sfz
ppp
mp
sfz

DOI: 10.13140/RG.2.2.16226.04807


(♩ ca. 46)
pgm#33
ord.
3
ord.
6
p
mp
p
mf
sfz
sfz
sfz
sfz
sfz
8vb
8vb
pgm#34
@ PIN
5
ord.
3
5
ord.
3
3
ca. 3"
gliss.
gliss.
sfz
mf
sfz
sffz
p
mp
pp
mf
sfz
mf
pgm#35
ord.
5
pgm#36
pgm#37
sfz
mf
sfz
mf
mf
mf
sffz
sffz
8vb
8vb
7
5
7
p
sfz
mp
sfz
8vb
5
simile
8vb

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