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UNIVERSITY OF CALIFORNIA SAN DIEGO

Sonic Explorations and Visual Incentives – The influence of cyclic behavior on Structure

A dissertation submitted in partial satisfaction of the
requirements for the degree Doctor of Philosophy

in

Music

by

Ioannis Mitsialis

Committee in charge:

Professor Roger Reynolds, Chair
Professor Georgios Anagnostopoulos
Professor Anthony Burr
Professor Miller Puckette
Professor Clinton Tolley

2021

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University of California San Diego

2021

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2. Mitsialis_Monodromic.wav
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4. Mitsialis_The_Angel_Standing_in_the_Sun_Concert_Program.pdf
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VITA

EDUCATION

- 2016-2021: University of California San Diego (UCSD): PhD in Music with Prof. Roger Reynolds.
- 2013-2016: Individual composition and analysis studies with Anargyros Deniozos.
- 2010-2013: Hochschule für Musik und Theater “Felix Mendelssohn Bartholdy” Leipzig, Germany: Meisterklassenexamen in composition with Prof. Dr. Claus-Steffen Mahnkopf. Organ studies with Prof. Matthias Maierhofer.
- 2008-2010: Hochschule für Musik und Theater Hamburg, Germany: Master degree in composition with Prof. Peter Michael Hamel. Organ studies with Prof. Andreas Rondthaler.
- 2001-2008: Individual piano studies with Irina Kuznietsova and Caterina Michopoulou.
- 2005-2006: Studies at Royal Conservatory of the Hague, The Netherlands: composition with Prof. Clarence Barlow and Prof. Diderik Wagenaar.
- 1997-2003: Ionian University, Faculty of Music, Corfu, Greece: Bachelor of Music. Composition with Prof. Iosif Papadatos and Prof. Michalis Lapidakis.
- 1996-2003: National Conservatory of Athens: certificates in fugue, counterpoint (class of Giorgos Minas) and harmony (class of Stella Makrigianni).

WORK EXPERIENCE

- 2016-2021: Associate Instructor and Teaching assistant reader at UCSD.
- 2021, 2020: Associate Instructor in summer sessions I + II at UCSD in self-created undergraduate courses: “MUS 5 Telling stories through music” and “MUS 80 Music and the extramusical”. MUS 5 was approved for the Summer Graduate Teaching Scholars Program (SGTS), which involves competitively selected graduate students of UCSD who are interested in teaching and provides them with the opportunity to participate in a faculty-mentored teaching program of professional development.

- 2017: Invited organist in numerous Catholic churches in Aachen, Nordrhein- Westfalen, Germany.
- 2015-2016: Assistant Director of music at the German Evangelical Church of Christ, Athens, Greece.
- 2011-2016: Teacher of music theory at the National Conservatory of Athens (a branch of Ymittos, Athens).
- 2002-2016: Organist at the following churches in Athens:
a. German Evangelical Church of Christ, Kolonaki District.
b. German Roman Catholic Church “St Michael”, Kifissia District.
c. Anglican Church “St Paul”, Athens City.
- 2011-2015: Teacher of music theory at the National Conservatory of Athens (a branch of Nea Philadelphia, Athens).
- 2011-2012: Music teacher at the 3rd elementary school of Amfissa and the elementary school of Galaxidi, Greece.
- 2010-2011: Organist (cantor) at the church of “St. Moritz”, Taucha, Sachsen, Germany.
- 2009-2010: Organist (cantor) at the church of “St. Johannis”, Appen, Schleswig-Holstein, Germany. Invited organist in numerous churches in Hamburg and Neumünster, Germany.
- 2008: Music teacher at the 70th elementary school of Athens.
- 2006-2008: Teacher of music theory and piano at the conservatory Athena (Athens).

ARTISTIC ACTIVITIES

- February 2021: Stanford University: virtual presentation on his creative work in the context of student exchange between UCSD and Stanford University.
- July 2020: ACTOR virtual conference on timbre organized by the University of McGill, Montréal at UCSD. Presentation: “Aspects of stratification and masking in my ensemble piece Timbral junctions (2019)”.
- April-June 2020: Project to evaluate research issues in 11 graduate students’ compositions created in a two quarter UCSD seminar series (at the request of ACTOR administration).

- March 2020: Commission from Palimpsest ensemble and conductor Steven Schick. Chamber piano concerto based on J.M.W. Turner's painting "The Angel Standing in the Sun", performed on 4th November 2021 at UCSD.
- October 2019: Commission from Graz-based Schallfeld ensemble. Quintet "Jupiter" performed on 15th February 2020 at UCSD.
- June 2018: June in Buffalo, USA: composition summer festival. Composition workshops with Hans Thomalla and Hilda Paredes. Performance of "Saturn the Son of Uranus" by ensemble Mise-En conducted by Moon Young Ha.
- July-August 2017: Banff Centre for the Arts, Canada: piano-composer collaborative program. Composition and performance of "Machinelle".
- June 2017: Etchings festival in Auvillar, France: composition workshops with Philippe Leroux and Raphael Cendo. Performance of "The Lift" by ECCE ensemble conducted by Jean-Philippe Wurtz.
- May 2017: University of California, Santa Barbara: public lecture on my creative work at the invitation of UCSB Prof. Clarence Barlow.
- 2013-2016: Music analysis seminars with Anargyros Deniozos at the Institute for Research on Music and Acoustics IEMA-IRMA, Athens.
- May 2015: German Evangelical Church of Christ, Athens: organization of contemporary music concert with works of John Cage, Morton Feldman, Anargyros Deniozos and Ioannis Mitsialis.
- 2010: Hochschule für Musik und Theater "Felix Mendelssohn Bartholdy" Leipzig: composition seminar/workshop with Steven Kazuo Takasugi, Associate in Music Harvard University.
- October 2010: Contemporary Music Festival Donaueschingen-Trossingen, Germany: public lecture on my "Gestures" for string quartet (2005) under the supervision of Günter Steinke.
- 2009-2010: Hochschule für Musik und Theater Hamburg: composition seminar workshops with Giorgos Aperghis, Edith Canat De Chizy, Nikolaus Brass.

- 2009: Hochschule für Musik und Theater Rostock: contemporary music festival “BRÜCKEN” and composition workshop with Adriana Hölszky.
- May 2008: Bach Festival-First Greek Evangelical Church of Athens: lecture on the life and work of Johann Sebastian Bach.
- May 2003: Goethe Institut Athens: composition seminars with Hans-Jürgen von Bose and Gunther Schuller.
- 1997-1999: The Athens Concert Hall “Megaron Mousikis”: organ masterclasses with Nicolas Kynaston, Bjorn Andor Drage, Jane Parker Smith and Daniel Roth.

Participation as an organist, chorister, choral conductor and baritone in numerous concerts and recordings in Hamburg, Leipzig, The Hague, Athens and Corfu as an ensemble and choral conductor in performances of his own pieces.

SCHOLARSHIPS/FELLOWSHIPS

- June 2020: “AHEPA Educational Foundation Scholarship” of San Diego.
- March 2020: “Friends of the International Center Fellowship” of UCSD.
- 2011-2012: Scholar of the “Oscar und Vera Ritter Foundation” of Hamburg.
- 2008-2011: Scholar of the State Scholarships Foundation of Greece.

DISTINCTIONS

- 2009: Composition award Annemarie und Hermann Rauhe 2009 for “Interaktionen” for piano trio. Commission for the KIM Trio. Premiered on November 11th 2009, in the Forum of the Hamburg University of Music and Theater.

SELECTED LIST OF WORKS¹ (CHRONOLOGICAL)

- | | |
|---|--|
| <p><i>Gestures</i> for string quartet, 9’
The Hague, September 2005</p> | <p>Hamburger Klangwerktagen,
Hamburg, 26th November 2009
Trio Sonar + Martin von Franzius</p> |
|---|--|

¹ The complete list of my works and writings can be accessed in my personal website:
www.ioannismitsialis.com

<i>Trio</i> for clarinet in Bb, cello and piano, 10' The Hague, April 2006	Rolf Liebermann Studio, NDR Hamburg, 22 nd February 2009 Conductor: Ioannis Mitsialis
<i>Symmetry-Development</i> for piano and ensemble, 10' Athens, October 2007	Athens Concert Hall, 25 th January 2008 Conductor: Theodore Antoniou Greek Ensemble of Contemporary Music
<i>Ununterbrochene Entwicklung/Uninterrupted Development</i> for solo viola, 11' Hamburg, November 2008	Saariaho Festival, Academy of Music and Theatre Hamburg (HfMT), 4 th July 2009 Viola: Barbara Lüneburg
<i>Interaktionen/Interactions</i> for piano trio, 24' Hamburg, July 2009	Annemarie und Hermann Rauhe Prize 2009. Commission for the KIM Trio HfMT, 11 th November 2009
<i>Knast/Jail</i> for string trio, 26' Hamburg, May 2010	HfMT, 9 th July 2010 Trio Sonar multiple performances in Basel, Switzerland between 2016-2017 by Ensemble ö!
<i>Massiv/Massive</i> for symphony orchestra, 11' Athens, July 2011	Academy of Music and Theater "Felix Mendelssohn Bartholdy" (HMT) Leipzig, 29 th September 2012 HMT student symphony orchestra Conductor: Christian Ludwig
<i>Redeschwung/Speech Rush</i> for trumpet obbligato and chamber orchestra, 38' Athens, August 2012	HMT Leipzig, 30 th November 2012 Trumpet: Paul Hübner HMT student chamber orchestra Conductor: Reinhard Schmiedel
<i>Chordal permutations and a note descending</i> for trombone and string quartet, 9' Athens, June 2014	German Evangelical Church of Christ Athens, 24 th May 2015 Trombone: Andreas-Rolandos Theodorou
<i>Five Glimpses of a Strange Dream</i> for ensemble, 15' San Diego, May 2017	UCSD, San Diego, 2 nd November 2017 UCSD student ensemble Conductor: Steven Schick

The Lift for ensemble, 9'
San Diego, June 2017

Etchings Festival,
Chapelle Sainte Catherine du Port
Auvillar, France, 2nd July 2017
ECCE ensemble
Conductor: Jean-Philippe Wurtz

Machinelle for 2 pianos and percussion, 4'
Banff, July 2017

Banff Centre for the Arts, Canada
4th August 2017
Performers of Banff Pianist-Composer
Collaborative residency

*From the Chymical Wedding of Christian
Rosenkreuz*
for baritone, trumpet in C, trombone and
bass clarinet, 8'
San Diego, December 2017

UCSD, San Diego, 26th February 2018
Loadbang ensemble

Saturn the Son of Uranus for ensemble, 7'
San Diego, April 2018

June in Buffalo Festival,
University at Buffalo, NY, 6th June 2018
Ensemble Mise-En
Conductor: Moon Young Ha

Timbral Junctions for ensemble, 7'
San Diego, December 2019

UCSD, San Diego, 2nd March 2020
Ensemble ACTOR, McGill University,
Montréal-centered international
consortium

Jupiter for ensemble, 8'
San Diego, January 2020

UCSD, San Diego, 15th February 2020
Commission of Schallfeld ensemble
Conductor: Leonhard Garms

Monodromic for solo piano, 24'
San Diego, April 2021

UCSD, San Diego, 22nd November 2021
Piano: Kyle Adam Blair

The Angel Standing in the Sun
chamber piano concerto, 12'
San Diego, September 2021

UCSD, San Diego, 4th November 2021
Commission of Palimpsest ensemble
Piano: Mari Kawamura
Conductor: Steven Schick

Fractures and Permutations for violin and
live electronics, 7'
San Diego, September 2021

UCSD, San Diego, 22nd November 2021
Violin: Ilana Waniuk
Electronics: Ioannis Mitsialis

SELECTED WRITINGS

Chapters from qualifying exams' paper at UCSD:

- Anton Webern: *Concert for 9 Instruments* op. 24
- Igor Stravinsky: *Symphonies of Wind Instruments* (1920)
- La Monte Young: *The Well-Tuned Piano* (1964)
- Jean-Claude Risset: *Sud* (1985)

San Diego, May 28,
2019

Kaija Saariaho's *Orion* for orchestra (2002), a collaborative analysis²

San Diego, March 21,
2019

Morton Feldman, *Bass Clarinet and Percussion* (1981), an analysis

Athens, November 3,
2015

Karlheinz Stockhausen, *Harmonien*, 5th hour from *Klang* (2006), for Bass Clarinet or Flute or Trumpet, an analysis

Leipzig, February 6,
2013

² Included in Saariaho's work collection in the Sacher foundation, Basel, Switzerland at her request.

ABSTRACT OF THE DISSERTATION

Sonic Explorations and Visual Incentives – The influence of cyclic behavior on Structure

by

Ioannis Mitsialis

Doctor of Philosophy in Music

University of California San Diego, 2021

Professor Roger Reynolds, Chair

In my recent composition work I make use of a variety of extra-musical references, which are all derived from the visual domain, whether imaginary or real. A major area of interest that I investigate in my current music is the influence that these visual references can have in the domain of structure and musical form. A further point that deserves consideration is how these can influence mood and message in the resulting music in a way

that this connection becomes meaningful and clear. I am also particularly interested in sources that have cyclic behavior as a central element, and in developing optimal strategies through which this behavior can be transferred to the musical domain.

These points of consideration were investigated in depth during the last phase of my creative practice studies at UC San Diego and had as their outcome the three pieces that constitute my PhD dissertation in music composition. One of these pieces represents my first use of the electronic medium. In it I explore a variety of manipulations of the instrumental (violin) sound combined with the idea of spatialization. In the dissertation essay that accompanies my musical compositions, I elaborate on the above-mentioned points with an analytical approach. I also draw comparative conclusions on the degree of their success, in regards to my creative intentions and prospects of the future.

DISSERTATION ESSAY

I. Introduction

When I first arrived at UCSD in September 2016, I had already at hand a significant number of compositions for a variety of instrumental combinations. These pieces had received high quality performances in Europe. I had also completed composition and music theory studies in Germany and Greece. These experiences provided me with necessary technical skills in composition and with an actual connection to the rehearsal/concert space.

At that time, I entered UC San Diego with a PhD proposal which was focusing on instrumental music composition and was addressing a principal interest from my side: to investigate and compose music in which *simultaneous* transformational processes are applied upon the initial material of the composition. The processes that I was referring to were intended to transform “sound objects” gradually, revealing their different aspects without making them lose their perceptual identity. Concerning the material, I had expressed a major interest to investigate the *vertical dimension* of sound, referring to the pitch aggregates (or chords), which had been for a long time the prime material of *every* composition of mine. These aggregates, framed within careful orchestrational choices could constitute the above-mentioned “sound objects”. Vertical combinations of pitches that I had already developed and used regularly, along with their properties and qualities — such as their distribution in pitch space — were at that time of high importance for my compositional thought and to a certain extent they still are. To the degree that this material would communicate well with my intended transformation processes and would produce successful

types of form for my pieces, these concepts constituted a promising prospect for the PhD composition program that I was just starting.

On the other hand, although certain foundational aspects were working well in my creative practice, their aesthetic direction was not yet fully developed. I was aware of certain natural phenomena and/or physical objects towards which I had a predilection, but I was not sure if my music was connecting to them directly. These natural phenomena were of a recurring nature, such as waves, pendulums etc. which had as common denominator the ideas of cycle and repetition. In some of them, such as in the pattern of the year's seasons, the aspect of time was also crucial. The main reason for this unsure connection was that my starting points when I composed a piece were technical and related to musical fundamentals, such as pitches, chords and/or gestural sonic behaviors, avoiding metaphoric spaces. This was happening because at that time I had developed a conviction that when the latter interfere with the creative process, and is communicated to the listener, it can distract their attention from being focused on the music itself. I was also thinking that this could restrict the multiple interpretations that a musical piece can have when it doesn't refer to a "program". As a matter of fact, up to the moment that I came to UC San Diego, my music had rarely made use of a clear extra-musical reference. Literary stories, philosophical concepts, visual images or specific life experiences were distant from my musical thinking. Instead of investing to this space, I was focusing more on the structural aspect of a piece, and on how this could be deepened.

During the discussions with my principal advisor Prof. Roger Reynolds in our individual meetings, he mentioned two main points in my creative work that had a potential

for improvement. The first were the structures that I usually referred to. Although they had a potential to produce rich musical outcomes, they were not enough by themselves to guarantee a successful composition. He didn't forget to always remind me that relying too much on austere structures may result in predictable/limited musical results. According to him, such an approach is likely to lead to an unnatural and inflexible way of communicating material with form and to a piece lacking organicity. He expressed the idea that the most crucial point when designing a piece is not only how interesting a musical structure is made but its flexible use, and that this aspect goes hand in hand with alertness from the side of the composer during their creative process to consciously avoid to merely follow what the structure dictates. However mathematical, proportional, or geometric the latter might be, the composer should have the ability to make exceptions in its rules, whenever s/he feels that this is needed during the musical discourse. He characteristically described those moments as though the composer observes from "outside" the process, deliberately deciding when and if s/he will continue to conform to it. To a certain extent, even in these "moments of deviation" in relation to the structural plan of the piece, *purpose* plays a decisive role as it determines these choices.

The second point of our discussions focused on what he called the "fuel" of the creative process, which is what lies *behind* the structural decisions of a composer, forming the foundational ground outside music that generates the musical decisions. In simple terms, we were discussing a potential "metaphoric space" which I hadn't yet established, and at the same time, the strategies that I could develop in order to translate it into music. For Prof. Reynolds, this is an equally important point along with the structural flexibility in music

composition, as it contributes significantly to the shaping of the “identity” of the composer, in their search to find their personal voice. It also determines their aesthetics to a certain extent.

The first two years of my composition studies at UC San Diego were a searching period of refining the concepts of the proposals and of filtering the suggestions of my advisor. The pieces that I composed during that period deal with permutative metrical structures, tonal material without functionality, and the use of a variety of taleas¹ in the organization of my temporal structures. During the first year and while composing my second piece for the so called “second Jury process” of our composition curriculum², I had a life experience that had a significant impact on me personally and affected the way in which I approach my creative process from that moment and afterwards. I experienced one of the most vibrant dreams that I ever had in my life. This included unfamiliar imagery and a remarkable scenario with manifold metaphysical implications. This dream was a unique combination of childhood memories involving cyclic flights at varying times over landscapes, a huge black dog, a white vulture-faced angel in dazzling light, and Lucifer, which all gave me stimuli to compose that piece.

In particular, this dream had two fundamental aspects in which I found very strong inspiration and which shed light on dimensions that my music could possibly develop. The

¹ This term comes originally from the composition technique of *Isorhythm*, which was widely used in the Western European music of the Middle Ages. A *talea* was usually understood to denote a freely invented rhythmic configuration, several statements of which constitute the note values of the tenor of an isorhythmic motet. In my own pieces I made use of this idea in combination with additive music durations.

² In this process that takes place during the WQ and SQ of the first year of studies at UC San Diego, the graduate composition students are expected to compose a piece of about 15min. for a medium ensemble and to collaborate with the performers of our school. In an open discussion that follows the concert of these pieces, the composition students explain the intentions of their works and they are evaluated by the composition faculty.

first aspect was that the cyclic flights that my body was experiencing were perceived as *simultaneous* in their visual representation, despite the fact that the events which were involved in each one of them had happened at *different* times during my childhood life. The second aspect was that I experienced a clear equivalence between the length of the cyclic route of each flight and the speed with which this was being completed. In addition, the age and size of my flying body was also equivalent to those lengths and speeds. To give an example, the fastest the speed was, the shortest the cyclic route and the youngest version of my body (in the case of the fastest possible speed I was a small baby), while a long route was executed by myself being at a late age, and flying at a slow speed.

This remarkable experience made me think that the *visual* domain, either real or imaginary, could be very fruitful for the development of the metaphoric space that was missing in my creative work. With the completion of the second jury piece, I understood that vibrant images, such as these included in that dream, can intrigue me to such an extent, that I can generate strong concepts on the structure, sound and/or temporal domain of a composition in a natural way, even automatically. This ease to translate an extra-musical — in this case visual — reference to a musical element, was for the first time very obvious to me, in contrast to references coming from other disciplines, such as literature, theater and/or philosophy, to name a few. After that moment, a concept of principal interest of mine became specific and it defined the main directions on which I based my next compositions.

a. The concept of the cycle

This concept was the *cycle*, especially applied to the temporal domain but was not restricted to this. I was intrigued by the *illusory* (or *deceiving*) nature of the cyclic movements, as, when they happen, they are experienced as a departure from an initial point, however, they also involve an approaching to this same point³. I find this aspect fascinating, as it creates ambiguity in the way that the listener can perceive this phenomenon. In my opinion, this is one of the *paradoxes* of cyclical phenomena which makes them so intriguing to our ears. Another paradox of cyclic movements is that — especially when a couple of repetitions of the same cycle occurs — they change our perception of time, as they create an effect in which time is *dilated* or, otherwise, the *present* is perceived as augmented and more focused. This particular change can be compared to an interesting *shift* during the listening experience, which I have also experienced as being very strong.

After having the experience of this dream, I thought that it would be interesting to create *horizontal* textural layers in my pieces, superimposed upon each other, and which would develop *simultaneous* different speeds in a similar manner as the cyclic flights of the dream. I also thought that in order for these speeds to be clearly perceived as such, it was imperative that certain boundary conditions should be set.

³ This interesting idea is expressed by the German composer Karlheinz Stockhausen (1928-2007) when he elaborates on the analysis of his work *Zyklus* for solo percussion (1959) in: Stockhausen, Karlheinz (1964). “Texten zu Eigenen Werken zur Kunst Anderer Aktuelles, v.2”, m. DuMont Schauberg, Köln, p. 73.

b. Musical streaming and fore- background interplay

During the following years at UC San Diego, a couple of additional factors shaped my compositional thinking even further. The first was the graduate seminar *Music Creativity and Science*, which I attended, along with two further seminars organized by Professors Roger Reynolds and Rand Steiger that were conceived as its continuation. This involved a series of lectures by the invited Prof. Steven McAdams from the University of McGill, Montreal, in which topics of human perception and cognition in relation to musical timbre and orchestration were presented. Through this seminar, I developed a high interest in the domain of *musical streaming*⁴, as this psychoacoustical concept aligned well with the idea of the musical layers that I had already started developing in my music. In this subject area, I found it interesting to investigate the possible connections between musical streaming, cyclic structures and temporal simultaneities (the speeds that I mention in p. 6) and the high potentiality that this might entail in the creative process.

The second factor was the preparation for my qualification exams which occupied the whole third year of my studies at UCSD. During this, my regular meetings with one of my committee members in particular, Prof. Miller Puckette, proved of extreme importance as during these I analyzed the electronic piece *Sud* (1985) of Jean-Claude Risset. In this piece, I discovered a second concept of interest that could be possibly combined with the idea of the cycle. In *Sud* two different sound worlds encounter each other, the first being represented by artificial electronic sounds, which symbolize the human factor, and the

⁴ *A stream is a sequence of events produced by a single sound source or groups of blended sound sources, which are perceived as connected in some way and form a unitary musical pattern over time. Such streams are groups that behave linearly.* Reynolds Roger (2020). Notes from the graduate seminar MUS206 - Foundations of Innovation when Composing or Performing, UC San Diego FQ2020.

second by environmental recordings, symbolizing nature. By using these two sound categories as his initial compositional material, Risset bases the form on the idea that these two different sound worlds can transform and gradually merge with each other. In order to achieve this merging, he develops various ways of material exchange, through borrowing of spectral components of sounds from one category and imprinting them on the sounds of the other. This borrowing unavoidably alters the identity of the sounds and enables their transformation, creating hybridic forms of sound objects. An additional element that contributes to the creation of these sonic *hybrids*, is the fact that these sound objects do not develop their *pitch* material, but they are set into a constant *flux* of motion instead. This creates an *unstable* environment inside which they travel. The relation of these objects to their background and the degree of their contrast with it determine their identity, as some of their perceived elements belong to the object itself and some are mere reflections of the background in front of which they travel.

Much more than the concept of *merging* of two sound worlds in one, I was intrigued by the idea that a sound object can transform *while* being in motion because of the activity that occurs behind it, constituting its background. The question that arose in my mind at that moment was that this fruitful idea could be combined with the superimposed cyclic structures, in which different speeds are applied, in a way that through their simultaneous sounding an interesting interplay between foreground and background can occur. Furthermore, provided that these cycles would have clear starting and ending points, an overall periodic fluctuation could be created, that would serve as an organization principle of the temporal domain of the piece substituting cadential and/or climactic moments.

The sonic space that I envisioned at that time was certainly *heterogeneous*. It was my intention to create separately perceived streams, as the music material that would occupy each one of them, would have been chosen carefully, so that it wouldn't fuse with its surroundings. On the other hand, from the very beginning, when I expressed a major interest in the cyclic idea, I wanted it to serve primarily as a foundational tool for the structural design of my pieces, cohering different sections *and* making their distinctions *less* obvious. In these terms, these cycles are not supposed to sound as *loops* of repetitive music instantaneously perceived at the surface of the musical texture, but as pitch rotations and time lengths, which are *felt* as cycles, without necessarily revealing all of their components. In a way, with my approach I was looking more towards the side of *independent* temporal simultaneities, while keeping an overall periodic pulse, more or less implied.

By these two strong sources of inspiration, the dream and the traveling object(s) inside an unstable environment, my creative work expressed specific aesthetic predilections unavoidably. Although the dream involved flights in open space, my subsequent works developed a predilection towards *rotation* and *enclosure*, which created a more or less restricting space inside which the compositional material is constantly transformed. The utilization of the cyclic concept in the domain of rhythm in a variety of ways supported this direction. With the exception of *Fractures and permutations*, which is a piece based on an earlier draft and which doesn't fully reflect my most recent investigations on the above-described concepts, the two more recent dissertation works draw strong inspiration from two separate visual metaphors and *do* relate with these concepts in a variety of ways. I will now

proceed on the presentation of these three works, focusing on their metaphoric space and on some of their analytical aspects.

II. *Fractures and permutations* for violin and live electronics (2021)

a. Acoustic part

As I already mentioned in p. 9, this piece is more of a formal exploration, in the form of a live electronics etude, and it does not have a strong connection with an extra-musical idea. This is my first work that makes use of the electronic medium, and is based on the idea that a single phrase, composed by a sequence of metrical lengths, can be cut up to its constituent parts and produce the whole composition by their constant reordering. The initial phrase that I constructed for this purpose has a symmetrical form of seven bars with the following lengths in number of quarter beats: 3-4-3-1-3-4-3. The compositional idea that I put into practice is to repeat this symmetry a couple of times, while changing the position of the central bar of 1/4 in a zig-zag motion inside this metrical grid. At the same time, reorderings of the two patterns of 3-4-3 also occur in each new repetition, however in a less regulated way.

Concerning the pitch material that I use in this piece, it is derived by the manipulation of the chromatic total in such a way that 17 pitches are produced, organized in seven groups of 1-4 notes. The principle that remains constant throughout is that these groups are formed by pitches that are adjacent to each other in the chromatic scale, usually a semitone apart, with very few exceptions. In these 17 pitches, G appears either natural or a $\frac{1}{4}$ tone raised, depending on the bar in which it is placed. Each one of these note groups is assigned to one

of the seven bars of the original metrical sequence, and each time that the sequence is repeated in a re-ordered version of its parts, the note groups are shifting to the new position that their bar takes. In this way, harmonic fields of high dissonance degree are alternating positions inside the grid without being developed. The pitches of these groups are not register-fixed and the rhythmic patterns used are guided more or less by intuition. A general aesthetic line that I had in mind when I made these choices was that the permutating bars are supposed to sound highly contrasting to each other. In this aspect, this piece focuses on the idea of *confrontation* of relatively short sonic gestures inside a closed space that re-orders its constituent parts. However, there are a couple of decisions that I made as the piece progressed, which differentiate the grid from being an actual metrical cycle.

From the fourth repetition of the sequence and after, a different material is gradually inserted replacing the original harmonic fields in some of the bars. This inserted material is virtuosic and disrupts the metrical permutations. It also creates an expectation to the listener that a more drastic change may occur later in the piece. The moments of inserted material become higher in number — and also become lengthier — in the subsequent repetitions of the grid, and they are also combined with some bar omissions and/or the integration of rests. This creates a gradual diminution of the initial length of the grid, although not in a very consistent way. At the very last repetition of the sequence (number 13), the musical material consists of the inserted virtuosic passage — in its mostly expanded form — along with small remnants of the original chromatic pitch groupings.

In addition to these choices, that certainly transform the structural design of the piece, I also took some liberties during composing, whenever I felt that it was necessary in order

to avoid predictable results that the metrical permutations were producing. Some of these were the following: omitting some notes of a harmonic field or replacing them with notes a semitone higher or lower, integrating noise effects, and most importantly, *expanding some gestures* by prolonging their durations and/or by adding beats in some bars. The last choice, which had certainly the most drastic results, was integrated in order to allow more time for dense passages to sound and to have more presence in this way. The final form of the acoustic part of the piece that came as a result of the above-described processes, is comprised by 13 repetitions of the original bar sequence, which are marked with the rehearsal letters A-M in the score.

b. Electronic part

Although I had some ideas on the electronic part of this composition from the very beginning, I started designing them in detail and developing a Pd patch after the completion of the score. In order to build this patch, I worked regularly with my committee member Prof. Miller Puckette. Through our interaction I acquired a significant amount of knowledge in a previously unknown space and I would like to express my big gratitude to him.

The principal ideas that I explore in this electronic part are the following: a. subtle manipulations of sound localities in the violin part, b. spatialization. I also connect both of these ideas with the metrical structure of the piece and with the cyclic concept. In this piece, I decided not to develop an overwhelming electronic part that would obfuscate the violin's presence and the clarity of its gestures, since its material is already complex and changes quickly. For this reason, I consciously avoided to work with electronic feedback and/or with

multiple speakers that would spatialize the sound in diverse sound routes. I used two loudspeakers instead, in a way that I explain in p. 14.

Concerning the idea of subtle electronic manipulation at a local level, I decided upon four types of sounds after experimenting with the patch. I named them: “plastic”, “dry”, “muted” and “foggy”, which are characterizations that describe the sound results on the violin input. The first three types of sounds are produced through an equalization tool, which is an FFT (Fast Fourier Transform) filter⁵. In this patch⁶, this filter takes the form of table, inside which one can draw lines and/or shapes. This table represents the frequency (in Hz) and amplitude (in dB) of the input sounds along the x and y axes correspondingly.

With the drawing of a shape on a spectral mapping, one can allow certain partial tones of the original input sound to increase their volume, and reduce others. In this way, the “plastic” sound is produced through the removal of the whole lower part of the spectrum, resulting to a sharp, inharmonic sound of a piercing quality, without much sonic depth. For the “dry” sound, a smaller area of the lower spectrum is removed, which produces a sound that projects more the noisy elements of the violin’s bow when it is drawn across the string. The “muted” version does the opposite of the “plastic”. It removes the higher part of the spectrum, thus resulting to a sound as if the violin were playing in a small closed space. On the other hand, the “foggy” sound is produced by a kind of distortion which occurs when the violin input passes through a high and low pass filter at the same time, with appropriate frequency values. Its result is very close to the effect of strong distortion from a microphone.

⁵ A fast Fourier transform (FFT) is an algorithm that can be used in order to split a sound into narrow frequency bands. In this way it is easy to build filters such as described above.

⁶ This patch is called the “null patch” and it was created by Miller Puckette.

These four electronic manipulations affect specific gestures in the violin part, which are organized in four groups of interrelated material. Each of these groups is coupled with only one of the four types of sounds. As I mentioned in pp. 10-12, the piece is comprised by 13 repetitions of a metrical sequence, which constantly reorders its bars. Because of this process, a couple of iterated metrical patterns appear, usually twice in the same sequence, with the most common being 3+3+4 and 4+1+3, along with their permuted versions. The strategy that I follow is that these four localities affect the violin's sound only within these particular metrical patterns. Also, whenever two identical patterns are close to each other, a different electronic sound is used for each of them. In addition, I used another filter in the patch, which produces a "metallic" quality of sound, and also a ring-modulator. These two additional procedures come more sporadically in the piece as it develops, without being strictly connected with its metrical structure.

i. Spatialization in two levels

In this piece I use two loudspeakers which are positioned at the left and right side of the violinist⁷. I based the spatialization of the electronic sound on the shape of the cycle, both in terms of placement of the loudspeakers and of sound movement. As the loudspeakers are only two, I built reverberation objects inside the patch, which when they are used, they create the illusion that the sound comes from a distant location. In this way I created four possible sound locations: front right - distant right (coming from the right loudspeaker) and

⁷ At the premiere of the piece on 22nd November 2021 at Conrad Prebys Music Center Experimental Theater of UC San Diego, the two left and right loudspeakers of the ceiling were used instead, as their sound was blending better with the violin sound. Either option can be used in future performances depending on the hall's response each time.

front left - distant left (coming from the left loudspeaker). Then I assigned each one of the four types of sounds to one of the four locations as if they occupied the four parts of a cycle (Fig. 1 p. 15). In addition, the four sounds interchange positions four times during the piece in a free permutative way. Because of this, the 13 sequences are grouped in four different stages (1-2, 3-5, 6-10 and 11-13), in which these permutations occur. This is the first level of spatialization, which produces subtle shiftings in the violin sound.

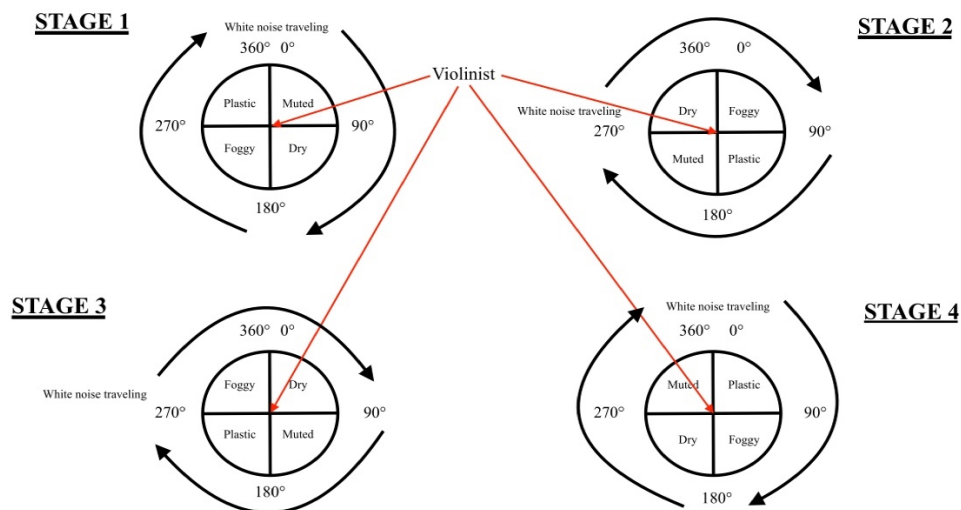


Figure 1: Four stages in the first level of spatialization of the electronic part of *Fractures and Permutations*. In this diagram, the four sound types (Dry, etc.) are repositioned in space with each new Stage.

The second level focuses on the utilization of white noise. In the four above-mentioned stages of the piece I used travelling white noise in a way that it creates a moving cloud in circular routes. This travelling is quite simple, having as its initiating points either the 0° or the 180° location of a large *imagined* cycle in the center of which the soloist is

placed. The route of the noise's movement always covers a semicircle — from 0° to 180° or from 180° to 360° — and the time duration of its traveling coincides with the time length of the metrical sequence each time. During sequences 3-10 the starting and ending points of this movement shift to 90° and 270° correspondingly, and in the sequences 11-13 they return to their initial location. As a matter of fact, the idea of the cycle is reflected in multiple levels of the piece, applied both to the use of space and to its time structure.

Concerning the white noise component, there is a dramaturgy that guides the changes in its relative pitch bandwidth, density and dynamics over time, which was designed meticulously, mainly guided by intuitive choices. An additional important factor that determined this design was the balance with the acoustic part of the piece which sounds simultaneously with the layer of noise. A further elaboration on this subject would exceed the intended length of this essay.

ii. The role of the background

Up to now I have described two layers of electronic sounds that coexist with the acoustic part: the sound localities that alter the sound quality of the live instrument and the traveling cloud of the white noise. There are two further layers of electronic activity that are quite important because they significantly contribute to the totality of sound. Both of these layers are happening in the background of the musical texture.

The first layer is composed by sounds that I would characterize as “noise chords”. For most of the piece's bars, I composed vertical chords of variable density with pitches that sound already in the violin part, making free use of register. I also added extra pitches in

some of them. The sound of these chords is produced through a process of filtering, in which three standard band-pass filters⁸ are involved and the input is colored noise. This process creates an interesting sound, as these chords are not well-tempered and because of this they have a high potential of blending with all other sound layers of the piece. Among others, this interesting blending results to the reinforcement of some violin pitches when these coincide with the same pitches of the noise chords in the same register. Another possible result is that the violin layer acquires more harmonic depth when the noise chords repeat the same pitches in different octaves. In general, these chords proved particularly useful in this work, as they dimensionalized the acoustic part and made the distinctions between the layers of the texture more ambiguous⁹.

With the noise chords, my intention was to create a distant “static wall” upon which all other layers of the musical texture would sound. Although this idea comes from my listening experience and analysis of Risset’ *Sud* (cf. p. 7), and its unstable sonic environment, for this particular piece I decided that the background wouldn’t move and also that it wouldn’t present foreign material in relation to the violin as this would involve the danger of confusing the listener and/or distracting them from focusing on the soloist. In order to achieve this static background, I composed the majority of these chords with common notes to their adjacent ones, so that all chord connections would be as smooth as possible with barely perceived boundaries.

⁸ A band-pass filter (BPF) is a device that passes frequencies within a specific range and rejects all other frequencies outside this range.

⁹ E.g., this layer blends also very well with the traveling white noise.

Last but not least, some violin sounds were time-stretched in order to be played backed in the background for the purpose of emphasis and punctuation. This effect occurs five times in the piece and it always starts towards the end of a metric sequence, ending on its closure point. These five moments are also placed somehow symmetrically in the overall form: the first appears in sequence number 2, the subsequent three are concentrated in the middle of the piece (sequences 5-7) and the last appears in sequence no. 10.

III. *Monodromic* for solo piano (2021)

My second solo piano work is the first long form (ca. 24min.) that I composed after a long period of time when I was producing shorter pieces. As I mentioned before (cf. p. 5), quite a few of my compositions draw inspiration from strong visual images. For this piece, this image was an imaginary visual space of abstract nature, which provided me with fruitful ideas especially for the structural design of the work in relation to the idea of cycle.

I am not in a position to know all the psychological factors that created this image in my mind. However, an aspect that most probably played a significant role was that it appeared at a period of social isolation and after a creative block¹⁰. I imagined a closed dark room, which had objects lying on the floor that were barely visible. Inside this room, a big ray of light of conic shape was penetrating the space coming through a tiny crack of the ceiling. At the same time, light rays of a smaller size were entering the room from different directions and it was unclear where their origin points were located. Their sizes and conic diameters were very diverse, but certain distinctions of long, short, thick and/or thin rays

¹⁰ This happened in January 2021 during a lockdown in San Diego because of the Covid pandemic.

could be made. However, it seemed to me that only the big one was coming from the ceiling and that all the rest were projected either from the four walls of the room or from the floor. The total number of rays was 12 and the general visual image was blurred, as some of them were hitting the hidden objects on the floor creating diffractions of light at spots of the four room's walls. This visual image was black and white and of a geometric abstract nature and the psychological effect that it was producing to me was a continuous and unresolved tension. After imagining this image, I felt a strong motivation to compose a long solo piano piece, as it seemed to me that its abstract nature would match well with the timbre of the instrument. I started designing multiple aspects of the form of the piece right away.

For this piece, I conceived a form that is a hybrid between *episodic* and *cyclic*. I first decided the lengths and angles of the 12 triangle-shaped rays (in a two-dimensional space) and I drew them on white paper. One of my initial decisions was that some of the triangles would appear only once, while some others twice, having the plan that when the same triangle appears for a second time, I had to find ways so that this would be perceived as a repetition of some sort in the music. So, I decided that 7 rays (no. 2, 3, 7, 9, 10, 11 and 12) would be doubled and that most of them would be of a smaller size than the rest. Then I started to experiment with the placement of these 19 triangular shapes ($7 \times 2 + 5 \times 1$) on paper and especially with their order of appearance. I produced multiple versions of rays' sequences by rotating, reordering and/or moving them up or down. The final version was chosen intuitively and it was the one that satisfied me more in its visual balance. This version that can be seen in Fig. 2 p. 20, creates a type of a three-fold large form. It is structured by a first part (the beginning until ray no. 8), where rays are presented successively, with some

occasional gaps between them, a second part (first appearance of ray no. 10 until the first appearance of ray no. 11), which is characterized by a high increase in textural density because of the simultaneous appearance of multiple rays in the vertical space, and a last, third part where a significant dilution of the previous density is achieved. The two largest rays (no. 4 and no. 1) characterize the two latter parts correspondingly. Ray no. 1, the biggest of all, represents the central one that was passing through the ceiling of the room in my imagined image.

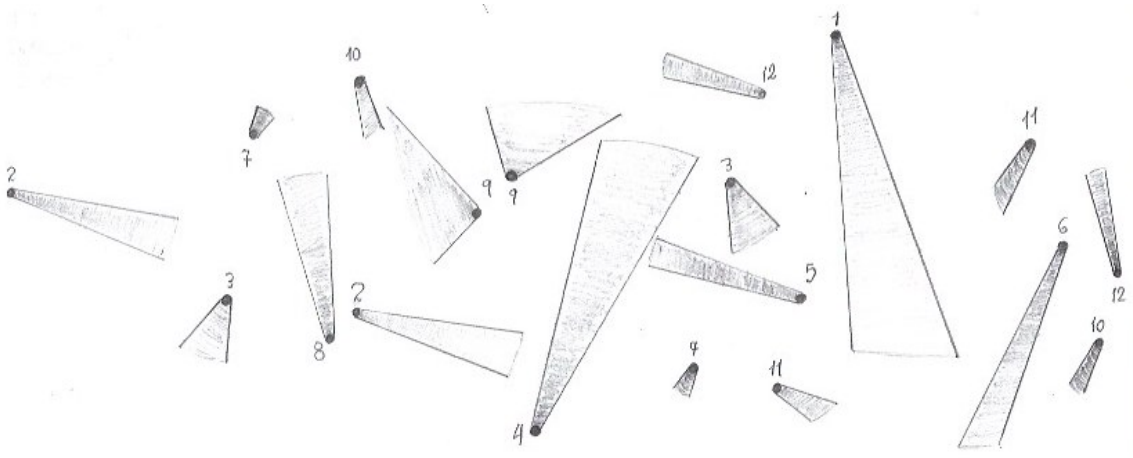


Figure 2: Final version of the 12 rays' placement on paper in *Monodromic*

Then I spent about a month and a half on designing all dimensions of the work on this chart *successively*, approximating from the abstract to the more specific. The domains of the work that were designed separately on copies of this chart were the following: i. form, duration and rhythm, ii. Pitch, iii. Texture and density, iv. Connectivities between the rays.

In the following part of this essay, I will elaborate briefly on how I worked on the three first of them.

a. Form, duration and rhythm

i. Metrical cycles and proportions

A major characteristic of the image that I imagined was that it was creating *tension* in a closed space that was not resolving. In fact, the projection of the rays in this space and the way they were hitting the objects on the floor had an accuracy and persistence, which in combination with the darkness of the room were creating a continuous situation of relentlessness and inescapability. At the same time, these rays were not remaining static in their interiors, as the particles of light were creating a constant fluctuation and reordering inside the boundaries of each cone. The compositional idea that was created in my mind by this visual metaphor was that each ray could constitute a temporal unit having the function of a large cycle. This would then include interior subdivisions, in the form of smaller cycles, whose number would be determined by the length of each ray. This aspect of the piece reflects the *cyclic* dimension of its form which I mentioned in p. 19. At the same time, each one of these rays constitutes an *episode* of the piece. This is mainly because of their textural design, on which I elaborate in p. 30. They are perceived as discrete self-contained entities. The gaps between them, whenever they appear, serve as a space for musical interludes, which are composed with freer material. They usually prepare the mood of the listener for the appearance of the next episode, as they function as an opening door to the subsequent musical events and not as concluding sections.

In order to construct these cycles, I made use of a simple idea: each ray would consist of two superimposed metric structures based on a specific proportion. These structures would be assigned to the right and left hand of the pianist. One principle that stays constant throughout the piece is that the proportions that I use are always formed by two numbers that have a difference of 1. They range from 3:2 up to 7:6. These change with each new subdivision of the ray, in a way that the numbers of the new proportion are the closest possible to these of the previous one (i.e. 7:6 - 6:5 - 5:4 etc.) (cf. Table 1 p. 22). The time signatures in the score and the number of the meters' repetitions are all determined by these metrical proportions.

Table 1: Use of proportions in *Monodromic*

No. of ray	Number of internal subdivisions	Proportions (from left to right)
1	5	7:6 - 6:5 - 5:4 - 4:3 - 3:2
2	3	7:6 - 6:5 - 5:4
3	2	6:5 - 5:4
4	5	7:6 - 6:5 - 5:4 - 4:3 - 3:2
5	3	6:5 - 5:4 - 4:3
6	4	6:5 - 5:4 - 4:3 - 3:2
7	1	3:2
8	4	7:6 - 6:5 - 5:4 - 4:3
9	3	7:6 - 6:5 - 5:4
10	2	4:3 - 3:2
11	2	5:4 - 4:3
12	3	5:4 - 4:3 - 3:2

What I actually conceived with this idea were five two-layer *structural polyrhythms* that constitute the core of the temporal domain of this piece. The idea of the cycle is very

central in them, as the two metrical structures *converge* after a number of their repetitions. This convergence occurs when the LCM¹¹ of the two numbers of the proportion involved is completed in number of meter's beats. When this happens, it determines the end of a small cycle which is in fact a subdivision of the ray. I will now give an example from the beginning of the piece, where ray no. 2 appears (mm. 1-15 in the score¹²). This ray has three subdivisions which make use of the following proportions: 7:6 – 6:5 – 5:4 (cf. Fig. 3 p. 24). In the first of them two metrical structures: 6 x 7/4 (upper layer) and 7 x 6/4 (lower layer) compose the temporal domain. The time signature 7/4 is notated in m.1¹³. This double structure indicates that after 6 repetitions of the upper layer and 7 repetitions of the lower, the LMC of the two numbers (7,6 = 42) is completed and the first subdivision of ray no. 2 closes with the convergence of these two unequal metrical structures (end of m. 11). The boundaries of these subdivisions are marked by a double line in the score, and the end of a whole ray with a thick single line (e.g., end of m. 15).

¹¹ In mathematics, the least common multiple, or lowest common multiple of two integers a and b, is the smallest positive integer which is divisible by both a and b.

¹² Please refer to the score for all forthcoming mm. references.

¹³ For the notation of the time signatures of the piece, I always used the longer metrical structure of the available two.

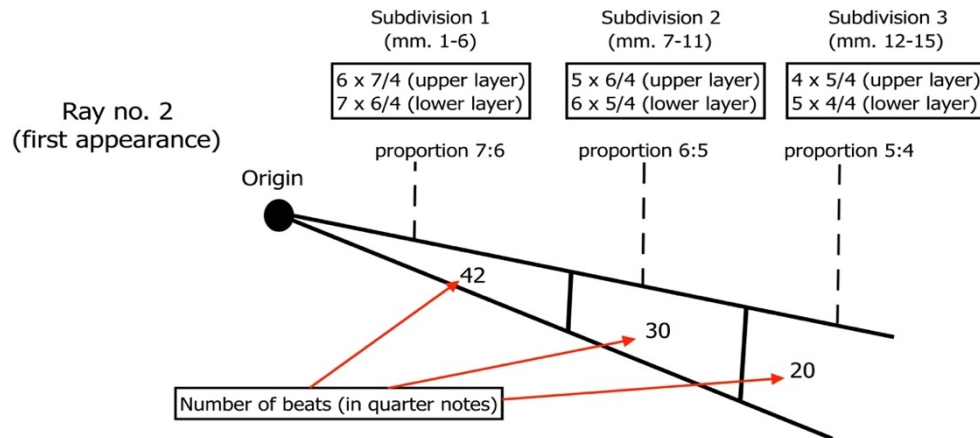


Figure 3: Metrical structure of ray no. 2, first appearance, mm. 1-15

In fact, the above-described idea was not mine. I encountered it when I analyzed the first movement of György Ligeti's *Piano Concerto* (1988) during my qualification exams preparation with my principal advisor Prof. Reynolds. In this movement, Ligeti works with two-layer polyrhythms and with the convergences of their metrical cycles in a similar way. This was an idea that he developed after investigating the music of the Sub-Saharan region of Africa.

ii. Temporal speeds and the idea of friction

The idea of the continuous unresolved tension that I mentioned before (cf. p. 21), made me think of two roles in constant motion, which are assigned to the two hands of the pianist and which come to a temporal discord, thus creating an ever-lasting *friction*. In order to achieve this, I constructed a simple scale of speeds of 10 degrees. This again, makes use of proportions whose numbers have always the difference of 1, this time applied to the

domain of rhythm. As a matter of fact, this scale ranges from 1 (lowest possible speed) to 10 (highest possible speed) and is expressed by corresponding numerical proportions (3:2 to 12:11). I decided to keep the tempo of the work steady throughout (setting the quarter note at 36 M.M.) and to work with tuplets derived from these proportions, in order to achieve the desirable shifts of speed. These are intended to be always gradual and subtle, creating an effect parallel to the movement of the particles of the light rays. In these terms, the fastest possible speed in this piece is the 12-tuplet against the 11-tuplet (both in 32nd notes), and the slowest the eighth note triplet against the eighth note, in the above-mentioned tempo (cf. Table 2 p. 25). The way that these speeds change throughout the piece is determined by a chart that I made for the overall work, which can be seen in Fig. 4 p. 26.

Table 2: Scale of speeds in *Monodromic*

Degree of speed	Used tuplets (in two layers)
10	12-tuplets against 11-tuplets (both in 32 nd notes)
9	11-tuplets against ten-tuplets (both in 32 nd notes)
8	ten-tuplets against nine-tuplets (both in 32 nd notes)
7	nine-tuplets of 32 nd notes against 32 nd notes
6	32 nd notes against septuplets of 16 th notes
5	septuplets against sextuplets (both in 16 th notes)
4	sextuplets against quintuplets (both in 16 th notes)
3	quintuplets of 16 th notes against 16 th notes
2	16 th notes against triplets of 8 th notes
1	triplets of 8 th notes against 8 th notes

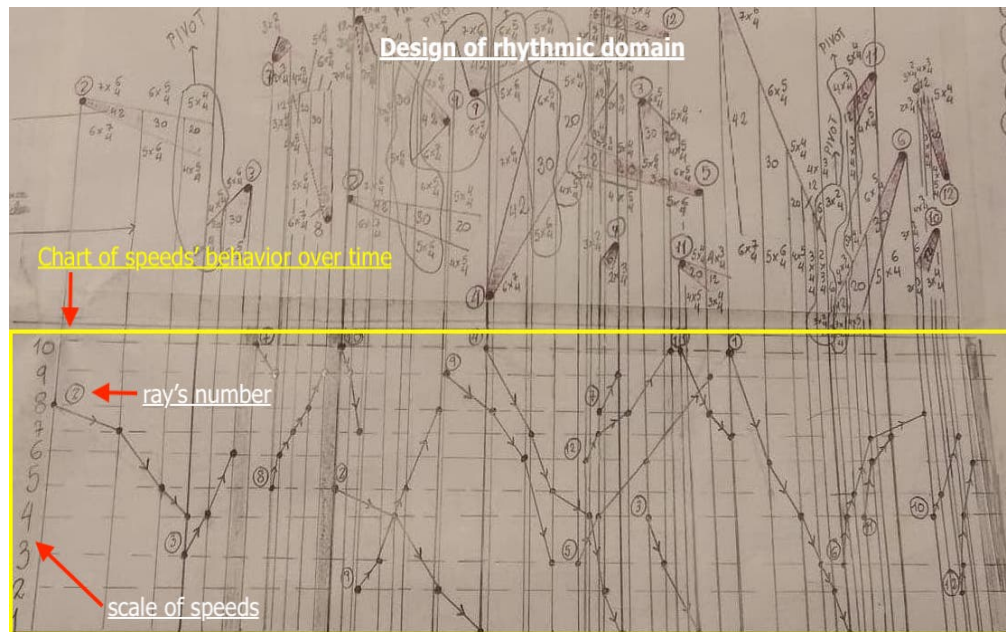


Figure 4: Chart of speeds' behavior over time in *Monodromic*

The major principles that I followed in order to design it where the following:

- The speeds are constantly changing even though slightly. There isn't any spot in this piece where the rhythm is stabilized for more than a couple of beats. This unavoidably creates a general *instability* in the rhythmic domain, which goes hand in hand with the idea of friction and the unresolved tension that it produces.
- The biggest rays (no. 1 and 4) create a very gradual slowdown from the highest possible speed to the lowest.
- Whenever a ray appears for a second time, it realizes the opposite change of speed than in its first appearance (with a few exceptions).
- After the first half of the piece, where the texture becomes very dense, multiple speeds have an augmentative tendency. The reason for this choice is that I wanted a

fast “impetus” to be felt until the appearance of the central biggest ray no. 1, after which a general slowdown and a relative dilution in the texture occurs, leading to the end of the composition.

- The rest of the choices are more or less intuitive, while imagining the speed changes that I expected to listen.

b. Pitch

In a similar way to the temporal domain, the use of pitch reflects the two central concepts of the piece: a. the idea of the *cycle* and b. the sustained *friction* between two roles that are in constant discord. My initial idea was to create a sequence with the 12 pitches of the chromatic total and to distribute them in specific registers so that they constitute the origin points of the 12 rays. Then I composed 12 chords of variable density (ranging from 2 to 6 pitches) in a way that the 12 initial pitches were used either as the highest or as the lowest pitch of these chords. The pitches that constitute the body of each chord were selected from parts of a 12-tone row and its multiple transpositions, inversions and retrogrades. This row was created by a reduction of the initial 12 pitches inside an octave’s range (cf. Fig. 5 p. 28). The principle that I followed when selecting those parts, was to pick up 2-5 pitches that were close to each other, always following the same direction of “scanning the row” (i.e. from left to right). The spacings of these chords were guided by careful listening, aiming to a result that would have the degree of stability/instability and/or dissonance/consonance that I wanted each time. After that I experimented with all possible inversions of the chords and I made a selection of some of them, again, through listening.

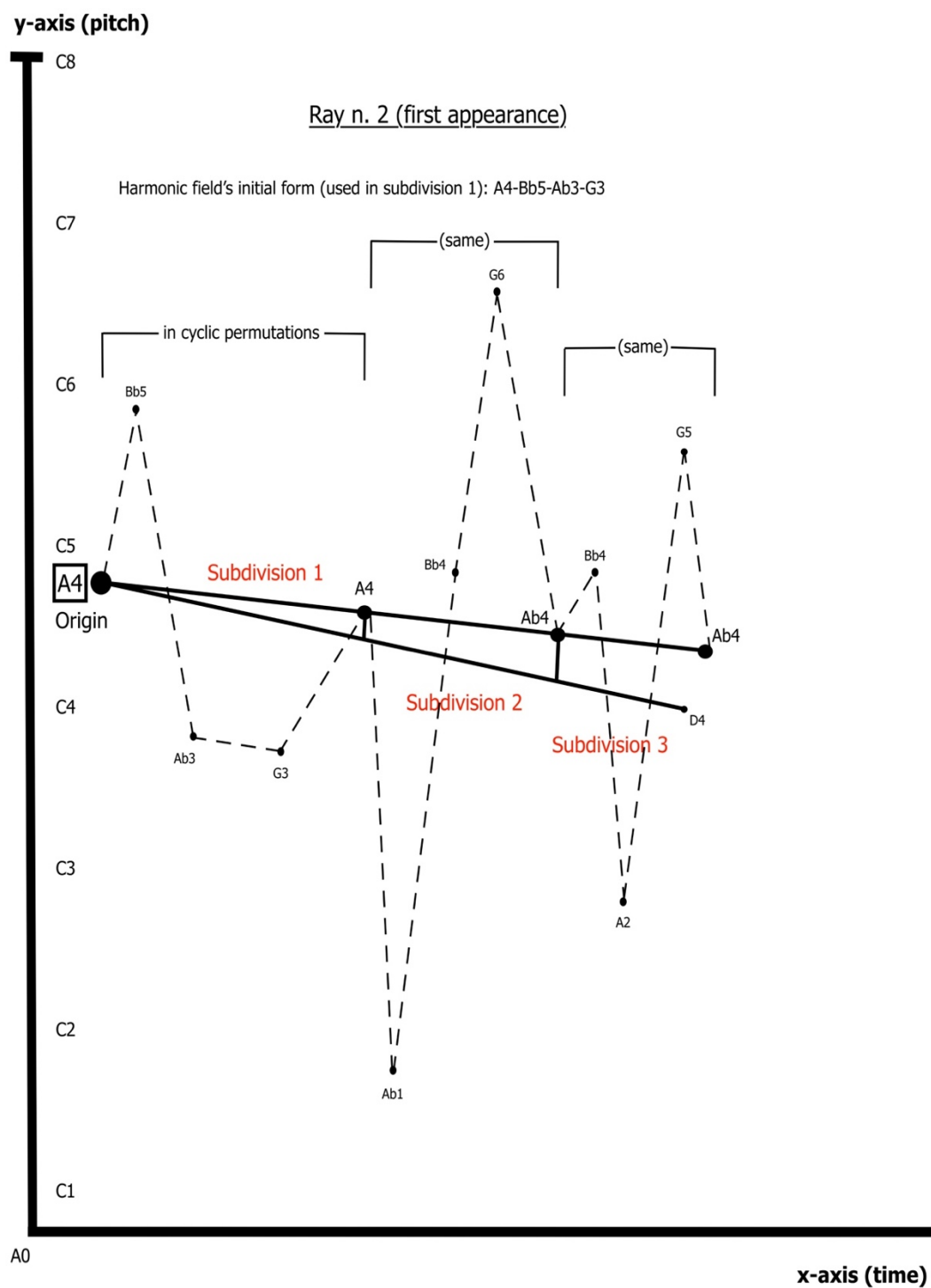


Figure 6: Pitch design of ray no. 2 in *Monodromic*¹⁴

¹⁴ In this chart the zig-zag routes of the harmonic field's pitches represent their skeletal design and *do not* accurately correspond with the x-axis. In the actual realization of the piece, each one of these three routes is

c. Texture/density

The idea that lies behind the textures that I composed for the 12 rays is quite simple. I drew six abstract graphics based on fundamental shapes, which I defined as: solid, dotted, curly, angular, lined and curvy, and I created pairs of rays which make use of the same texture. I also wanted to connect them with the time structure of the piece and in particular with the rays' subdivisions (or sub-cycles). Because of this, I decided that when, for example, a ray has three subdivisions, these go successively from sparse to thick (or the other way around depending on the ray). Going back to the point that I mentioned above (cf. p. 28), I decided that the pitch material which shapes these textures, should be as neutral as possible, so that the clarity of the harmonic fields and the zig-zag motion of their pitches would not be obfuscated. To give some examples, these textures were composed by dissonant dyads, three-note clusters, trills and/or tremolos, etc.

d. Synthesizing the various dimensions in a whole

After this stage of preliminary work, I started to work on the piece creating a skeletal draft of it, by collecting ideas from the above charts with the purpose of synthesizing them. A central characteristic that I wanted this piece to have from the beginning, was a *constant* impetus that is never ceasing. I had also envisioned that it would sound relatively fast. For this reason, I needed an extra layer of material that would be composed using a high number of pitches. For this I needed passages of notes, in the form of fast running melodies, which would be characterized by *redundancy* on one hand, and on the other by a constant shifting

repeated in cyclic permutations and in such a way that it communicates with the metrical structure of each subdivision. This process is explained in detail in section III.e p. 32.

between note groups. This shifting should be subtle and not strictly calculated, so that the whole would be perceived as a continuous stream without clear internal boundaries. This idea also relates with the visual image of the particles of light in the rays' interior, which were unstable and constantly reordered. It also communicates with the subtle shifting of speeds of the two-layer temporal structure of the piece (cf. p. 25).

As a matter of fact, I created four relatively long melodies (of 35-40 pitches each) by extracting trichords and tetrachords from multiple forms of the row, this time avoiding intervals wider than a 3rd. Then I used them in the piece keeping in mind the cyclic idea. Each ray in the trajectory of the piece (reading the chart in the x and y axes from left to right) integrates only one melody in its body, selecting them in the order 1-2-3-4. After the completion of all four, this pattern starts to permute cyclically producing the forms of 2-3-4-1, 3-4-1-2... and so on. In this way the same melody is distributed among different rays and it doesn't always coincide with the same texture and/or harmonic field. Along with the multi-level time and pitch structure of the piece I described earlier, this particular use of the four melodies in relation to the textures contributes significantly to the unification of its big form.

From this idea, two different roles appear in this piece, a melody that never stops running, and the neutral dissonant material of the rays' interior. In this interesting interplay, the zig-zag routes of the harmonic fields' pitches create the frame that encloses these two roles. As it was mentioned in p. 28 the boundaries of these routes are determined by the shape and subdivisions of each ray (which actually is a determinant factor of the metrical structure of the piece). Without intending to go into an analysis of this work at a deeper level,

I will now briefly elaborate on how pitch material and temporal domain communicate along these lines, bringing as an example the first episode of the piece (mm. 1-26) which is represented by ray no. 2.

e. Ray no. 2 – short analysis

The first episode is structured in three subdivisions, corresponding to the subdivisions of ray no. 2 in Fig. 6 p. 29. The used proportions for these are the following: 7:6, 6:5 and 5:4, thus producing 42 (mm.1-6), 30 (mm.7-11) and 20 beats (mm. 12-15) correspondingly. In the first of these polyrhythms the upper layer of the metrical structure (the notated 7/4 meter) executes a gradual deceleration — with frequent back and forth — from the speed of the ten-tuplet 32nds to this of nine-tuplet 32nds, while the lower (a meter of 6/4 which is not visible in the notation¹⁵) does the same from ten-tuplet 32nds to 32nd notes. The result of this process is that at the point where these two metrical structures converge (end of m.6) the speed has already slowed down to the polyrhythm 9:8¹⁶.

The harmonic field that is used in this first subsection is the following: A4-Bb5-Ab3-G3. These pitches are sounding inside the shorter metrical cycle (of 6/4) *horizontally*, in certain beats apart from each other (in this case 3+2+1) and constitute the *space* in which all other activity of this bar is enclosed. These four pitches remain fixed in their registers but in each new repetition of 6/4 they execute cyclic permutations (cf. FN. 13 p. 23). In addition, the internal durational pattern (3+2+1) also permutes in a freer way. In this metrical layer,

¹⁵ As I mentioned in FN. 13 p. 23, in these two-layer metrical structures, I notated the time signatures of the piece by always using the longer of the available two.

¹⁶ The numbers refer to the tuplets used and not to the metrical structure.

the “running melody” is also assigned (see m.1 left hand) and most of the times, its slurs indicate the internal subdivision of the metrical cycle of 6/4 (i.e. 3+2+1 in m.1).

An additional level in the design process that helped me to dimensionalize the pitch domain was the utilization of four fundamental shapes in the form of abstract graphics¹⁷. Their first goal is to create connectivities between the different rays of the piece. The way these shapes work is the following: they connect *all* pitches of the harmonic field of each ray, having a gradually augmentative or diminishing size until they arrive at the ending point of the ray. The decision for the shape’s type each time and also between the two options of their size development was made by observing the whole trajectory of the piece’s skeleton and depending on the degree of contrast or smoothness that I wanted to have during the change from one ray (episode) to the next. On the other hand, there is also a second important goal for the use of these graphics. Driven by the visual metaphor of the light rays’ diffractions in multiple directions inside the imagined room (cf. pp. 18-19), I made use of the registral locations that these lines determine, in order to randomly inject pitch material. The pitches that I use for this purpose are already sounding in the running melody at the same or near the same spot. For these decisions, intuition and the performability aspect played the central role.

On the other hand, the dissonant verticalities that compose the texture of this ray (this particular being the “solid” type from the six before-mentioned in p. 30), are given to the slightly longer metrical cycle, which defines the length of the bar (the right-hand layer, 7/4). These small clusters and dyads have an internal durational pattern (4+2+1), which permutes

¹⁷ These shapes have the four following forms: sinusoid, flaring, stepwise, and zig-zag.

in every new repetition, in a similar way that the pattern of the harmonic fields does (cf. pp. 32-33). However, the verticalities themselves do not permute cyclically. They follow certain patterns instead, which are determined by the external boundaries of the ray and its slope. E.g., in this first section they have a downward direction in their movement, as they “fall” starting from the initial A4 of m. 1, which is the origin point of ray 2 (cf. Fig. 6 p. 29).

As the piece develops, the pitches of these two layers coincide quite often with the permuting skeleton of the harmonic field and in this way the overall pitch space is blended, producing a more or less *homogeneous* sound of highly complex nature. By this blending, the perceived layers of pitch activity are finally three: the running melody, its “diffraction” pitches that follow the graphic shapes described earlier (cf. p. 33), and the dissonant verticalities of the ray’s texture. Despite the complexity of the music, the perceptual result is that cycles are clearly *heard*, at least in most of the episodes. The main reason for this is that I have taken decisions which project the rhythmic/metrical elements of these cycles more towards the surface of the musical texture. For example, the boundaries of the 7/4 structure are marked by the repetition of dyads at the end of each bar and these of the 6/4 by an accent or a trill, to name a few strategies. These decisions work also well for the creation of the intended *impetus* that characterizes this piece throughout. In Fig. 7 p. 35 we can see the main structural ideas on which I elaborated in this unit, as they took shape in their final form in m.1 of the score.

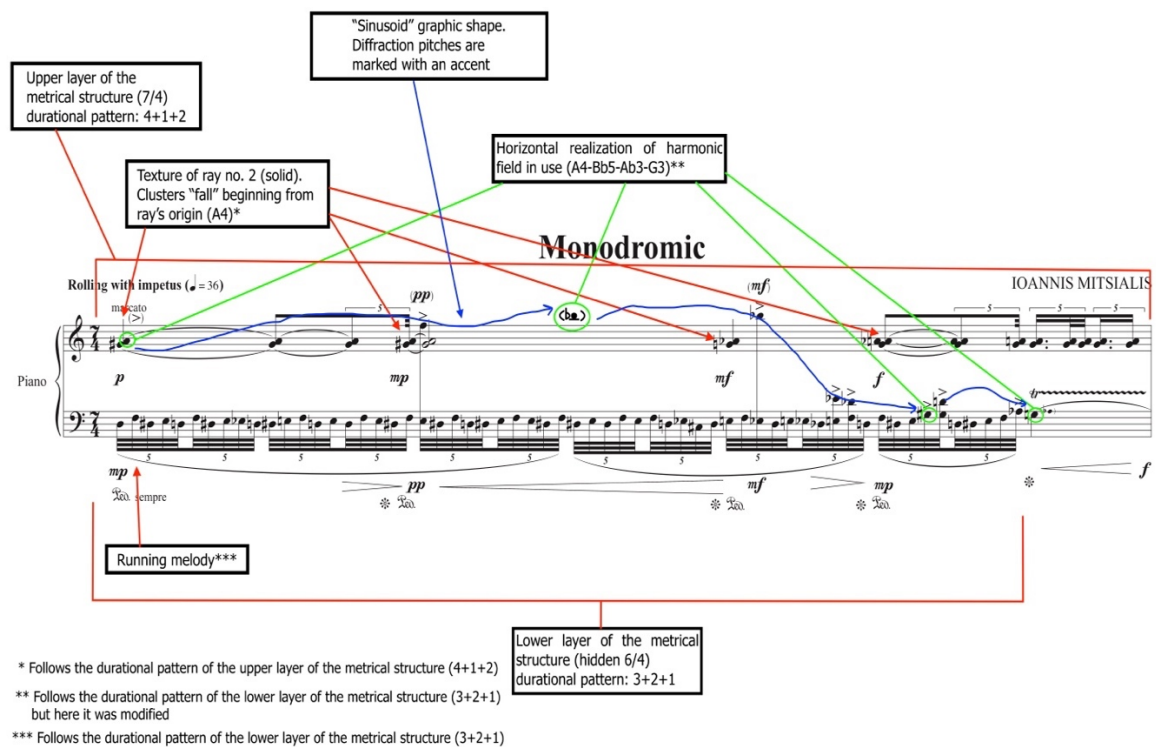


Figure 7: Analytical chart of m.1 of *Monodromic*

f. The use of the vertical aspect of sound as gravitational point

Before proceeding to the last piece from this group of three, which constitute my dissertation at UC San Diego, I would like to elaborate on some remaining aspects of *Monodromic*, which merit consideration. First and foremost, in this work I wanted to reinforce the *horizontal* aspect of the musical sound. This was a new space of investigation for me as in my previous pieces I was investing more in block-like musical textures that were shaped by shorter gestures. The latter approach is more or less the case for *Fractures and Permutations* (cf. p. 10). In order to enter this new space, I needed to make use of longer metrical structures, and to project my harmonic fields beyond the local. This was achieved

by the *successive* presentation of their pitch content in combination with the idea of cyclic permutations. From the result of this investigation, I remained quite satisfied, as my music gained in *persistence* of a musical idea, an aspect that was less strong in my previous musical practice.

Because of the design of the piece and the multiple rays that appear in the vertical space in the middle part of the initial chart, a maximum level of complexity is reached in mm. 79-88. These bars synthesize textural elements from four rays simultaneously, keeping one texture as primary, while having all others subordinate and more fragmentary. In this case the stream of martellato notes in the very low register of the piano, which belongs to the big ray no. 4, is the primary texture. The result is a highly dense amalgam which makes the piece gain in gravity and to weaken its horizontal impetus for a while. This starts to change in m. 86 with the emergence of the legato layer in the left hand, which leads to the maximum outburst of energy that occurs at any point in this work (m.89-90). A further spot where I weaken the horizontal aspect again is the highly fractured section titled “harsh” (m. 107-109). Right after this section, a relatively long silence follows, and after it the section “with a pulsating flow” triggers the piece to start moving again, shaping the texture of the biggest central ray no. 1.

This is actually the very last moment in which the piece sounds assertive. From “poetic” and after, it was my intention to create a gradual “departure” of the music away from the listener, as if it were a vibrant visual image that fades away. Although there is musical material in this part that comes from earlier spots of the piece, quite often the textures are more fragmentary, and in all respects sparser. The horizontal aspect of the sound

is still apparent but because the registral distribution is more disjunct, and the injected rests many, the musical texture is perceived less as a rolling stream of fluctuating speeds and more as a reserved musical space that gradually fades out. To this impression, the soft dynamics and the open spacing of the vertical sonorities contribute significantly.

These two episodes of gravitational weight were intentionally used not only for emphatic purposes, but also in order to clarify a significant aspect of the structure in relation to the overall trajectory of the form. They actually delimit the boundaries of the most dense part of the piece, which starts with ray no. 4 (martellato texture) and ends with the first appearance of ray no. 11 (fractured section). This is a significant orientation for the listener for the understanding of the continuity of the piece, and the idea of “departure” of the sound that comes soon after. It is also an orientation for the work’s formal function, as it starts nearly at the half point of the total duration and it ends a little bit before its 2/3rds.

It is also important to mention that the two different approaches towards the musical sound (horizontal vs vertical) have also a *performative* aspect, which was communicated and developed during my wonderful collaboration with the pianist Kyle Adam Blair, over three months. We discussed possible strategies in order to achieve a successful realization of the piece and to reinforce the one or the other direction in each of its sections, depending on the material that is involved. In this direction, I found support and ideas of extreme value from him, which I wouldn’t be able to have without this interaction.

Finally, concerning the piece’s title (*Monodromic*), this certainly does not relate to the algebraic term of *monodromy*, neither does it make use of such a model of function at a structural level. It is derived from the Greek word monodromos (μονόδρομος) which means

one-way. This aspect is reflected in the unrelenting single force that characterizes the piece throughout (the constant *impetus* that I mention in p. 30), which is created by multiple layers of activity. The main idea is that despite the complexity and multiplicity of these layers, the piece cannot escape from itself, its unresolved tension and instability. In fact, its highly cyclic nature with all the recurring rhythmic and pitch elements of the textures creates this phenomenon. In my opinion, even the last part, in which the high energy finally drops, is not perceived as a release but more as a departure of a sound that may continue elsewhere with the same non-stop process.

IV. *The Angel Standing in the Sun*, chamber piano concerto after J.M.W. Turner's painting (2021)

One important aspect of my studies at UC San Diego that contributed significantly to the development of my creative thinking, is that composition is not taught as a practice detached from other disciplines. UC San Diego's philosophy focuses on expanding the frame of music so that it can interact with other arts, the sciences and other domains of the contemporary society. In this educational environment, the mentoring approach and creative work of my advisor Prof. Reynolds intersects with these lines. Among the interesting courses and seminars that I attended in this fruitful environment, of particular importance for me was his musical analysis seminar that took place in WQ2019, where he presented the work of composers whom he had a personal connection with. In this seminar I discovered the work *Orion* for orchestra (2002) of the Finnish composer Kaija Saariaho, and I wrote an analysis paper on it, in which I investigate the connections of its formal structure with the extra-

musical references that inspired Saariaho. One of these references are two anonymous paintings from the 15th c., which she saw at the Cleveland Museum of Art in 2001, exposed in the form of a single double-sided painting¹⁸. This experience had a very strong impact on her and for this reason she decided to base the first movement of her symphonic work (*Memento Mori*) on it. In this movement, she takes advantage of the manifold intellectual stimuli that this painting creates, in order to develop its formal and structural aspects in particular¹⁹.

One of the tasks in this seminar, was to *extrapolate* the ideas of the piece that we had chosen to analyze. This meant to use them in another context of our personal interest and to create something new out of it. For *Orion*, this specific task was to choose another painting and to propose a new personal project based on this, which would develop a parallel thought to Saariaho's. It was actually during that period when I started research on paintings that I found intriguing and I came across *The Angel Standing in the Sun* of J.M.W. Turner. Although I knew his work more or less already, this particular painting had escaped my attention. It had an instantaneous strong impact on me and it generated manifold ideas to be applied on the temporal and timbral domain of a proposed orchestral piece that I didn't realize at that time.

¹⁸ Both paintings are of German origin and anonymous. They were created in the same year (ca. 1470). The first is named *A Bridal Couple* and can be accessed in the following link: <https://www.clevelandart.org/art/1932.179>, while the second, *The Dead Lovers* also known as *The Rotting Pair* here: <https://www.musees.strasbourg.eu/oeuvre-musee-oeuvre-notre-dame/-/entity/id/672888>. In the following link: <https://www.clevelandart.org/events/music-and-performances/behind-the-beat/episode-07> the composer talks with the museum's director of performing arts on this experience.

¹⁹ The two-fold AB structure of this movement is based on the themes of the painting's two sides.

This particular painting, which Turner created in 1846²⁰, impressed me both for its emotional power and structural use of color. More than its prominent biblical references, I am highly interested in Turner's concepts on vision — radical at that time — and in ideas parallel to these, which I investigate in my recent compositional work. One of the early examples of Western European painting that challenges the established technique of *perspective*, *The Angel* makes it difficult both to prioritize foreground/background roles with certainty and to separate a figure from its surroundings. The main reasons for this are the special use of the light and the diffuseness of the colors. On the other hand, this light mass that is violently diffracted on the canvas creates a vortex-like radiation from a center, where the Angel is placed.

Through encountering this image, I found a couple of features in my own music that aligned to its fundamental concepts. Coming back to the point on which I elaborated in p. 8, the idea of combining superimposed cyclic structures with an intended ambiguity between fore- and background musical events in the form of streaming, seemed to have a lot of potential. The idea of cyclicity could be based on its whirling nature and the fore- and background interplay on its challenge of the traditional idea of perspective. As I work with sound objects [chords (cf. p. 1)] that are gradually transformed through their constant reordering instead of actually being developed, I thought that for this piece it would be interesting to create an overall multi-layered structure, in which these objects would rotate inside “closed spaces”. These spaces could be again metrical cycles as in the solo piano piece but because of the nature of the painting and its implications, their boundaries should be *less*

²⁰ A digital image of the painting can be accessed in the following link:
<https://www.tate.org.uk/art/artworks/turner-the-angel-standing-in-the-sun-n00550>

visible. This would also contribute to the creation of an overall sonic texture of a “melted nature”, where the distinctions between different musical streams remain subdued.

While having all these ideas in mind, because of the engagement with additional composition projects during my 4th year of studies at UC San Diego, this orchestra project remained pending. Then the commission by the conductor Steven Schick and Palimpsest Ensemble came, for which I am deeply thankful as this wonderful opportunity is given to very few students each year and the selective process is highly competitive. This commission was for a chamber piano concerto (piano + max. 6 instruments) from a pool of instruments that was mixed. Having this opportunity, I decided to reconsider the painting of Turner in this new setting, and to compose this piece for the following instrumentation: piano solo, flute, oboe, harp, percussion, cello and double bass. The most crucial reason for which I proposed this instrumentation was that in this painting a variety of visual characters are represented — e.g., Cain who is running after having killed his brother Abel, Samson and Delilah weeping, a flock of birds etc.²¹ — and are distributed all over the canvas. These are very *singular* in their identity but at the same time they are partially differentiated from their surroundings.

For this reason, a highly heterogeneous ensemble such as the one that I chose, could serve for the purpose of *attaching* different instruments to characters, and this would determine their singular texture and musical behavior. All these individual textures would

²¹ This painting comes from Turner’s late creative period and deals with scenes from the Old Testament of the Bible. Its overall atmosphere reflects an omnipresent element of death. In the center of the canvas, Archangel Michael appears, while in the foreground scenes of murder and betrayal are depicted [Tate. “Joseph Mallord William Turner, The Angel Standing in the Sun, exhibited 1846”, Gallery label (2020) at: <https://www.tate.org.uk/art/artworks/turner-the-angel-standing-in-the-sun-n00550>].

then synthesize the overall sound. It was my intention from the beginning, that each character would be attached to a small *group* of instruments (2-4 instruments each) and not to a single one. I made this decision because I wanted to avoid a programmatic musical approach, where a character would be easily identified by its sounding “instrument”. Another important reason was that these small groups, heterogeneous in their nature too, have a high potential of creating multiple connections to their surroundings and when they sound all together a clear-cut distinction between the groups is not possible. This choice goes hand in hand with the way that Turner represented his characters on the canvas. With the same point of view, an initial idea that I had of representing the Angel of the painting as the piano soloist’s part was abandoned. Last but not least, in this piece I also explore a compositional field in which I feel that I am less experienced, which is the structural use of the non-pitched percussion family²². In p. 47 I explain how I used it inside the cyclic structures of the work. The piece received its premiere at the Concert Hall of UC San Diego in November 4, 2021, with Steven Schick conducting and Mari Kawamura as soloist.

a. Form of the concerto – sections, visual characters and instrumental groups

One of the significant challenges that I encountered in this project was its short length in relation to my imagined sonic space. Because of the logistics of this project, the piece shouldn’t exceed about 10min. in its total duration. This created some difficulties during the design as the visual characters of the painting were many and there were not given enough time to establish their sonic presence. The final version which I determined in order to

²² For the percussion setup of the piece please refer to the preface of the score.

overcome this issue was an episodic form with some of its sections integrating only one character — i.e., the two transitions in the piece (cf. Table 3 p. 43) —, and all others having one main character combined with one or two secondary characters. In the following Table 3 p. 43 we can see the overall formal design, the chosen characters for each section and their representative instrumental groups²³.

Table 3: Formal plan of *The Angel Standing in the Sun*

Section	A	Transition I	B	Transition II	B'	A'
Rehearsal letters in the score	A	B	C+D	E	F	G
Principal character	Angel	Blots and scratches	Judith and young girl (conceived as one character)	Flock of birds	Adam, Eve and Skeleton (conceived as one character)	Angel
Instrumental group*	pn, fl, hp, vc	pn, ob, db, s	pn, s	pn, fl, vc, db, w+s	pn, ob, w	pn, vc, db, s
Secondary characters	Sword		1. Cain 2. Smog		1. Samson and Delilah (conceived as one character) 2. Cain's shadow	Wing
Instrumental group*	ob, db, w+s**		1. ob, vc, db, w 2. fl, hp, m**		1. vc, db, m 2. fl, hp, s	fl, ob, hp, m

* Refers to the foreground activity

**w = woods, m= metals, s = skins

²³ In the appendix I of this essay (cf. p. 53) the chosen visual characters have been marked on the painting.

i. The use of the cyclic idea in combination with the fore- and background interplay

When I conceived this composition project, I had the intention to integrate some of the structural aspects of the previously composed piano solo piece, and also some of its *material* in order to develop it inside a new context. As I perceive the painting, although the cyclic aspect is inherent in it (e.g., in the rotation of the Angel's sword), the painting directs us more towards the idea of *radiation*, which is quite different from the more assertive movement that the light rays' conic shapes of my imagined visual space, in the case of the solo piano work, were suggesting. For this reason, I thought that the cyclic structures which I was going to create this time, shouldn't reveal their elements at the surface of the musical texture as much as in the solo piano piece, and for similar reasons the rolling *continuum* that comprised the fundamental aspect of the identity of the latter should also be reduced.

The cycles that I composed in this piece, have more the function of the closed spaces to which I refer in p. 40, inside which the musical material *appears* but does not necessarily *move*. After making this decision, I applied a different proportional logic in these cycles, using pairs of numbers that do *not* always have a difference of 1 (cf. p. 22). For example, proportions such as 17:6 or 7:3 were also used, based on a chart on which I will not elaborate because such a detailed analysis would exceed the intended length of this essay. These proportions construct the metric cycles of each character, in a similar way that I used them in *Monodromic*²⁴. In this way, each character makes use of *one* two-layer polyrhythm, applying one layer to its foreground and one to its background. As a matter of fact, *two* layers of cyclic activity appear when a section integrates one character — e.g., in transition I —,

²⁴ Please refer to the two-layer polyrhythms that I mention in pp. 22-24.

and *four* when the characters are two — e.g., in the opening of the work, where the foreground and background cycles of each one of the characters “Angel” and “Sword” sound simultaneously²⁵.

The different speeds that I used inside these cyclic structures make use of tuplets in a similar way to the solo piano, however sometimes they remain *stable* and most importantly they do not appear always in their full realized form. These choices reduce significantly the degree of *tension* which resulted from the clearly perceived *friction* between two close speeds in the solo piano piece. I made the above-mentioned choices, since I believe that they align more with the idea of the overall “melted nature” of a heterogeneous sound that I intended for the concerto. In my opinion, an approach that would clearly project persistent speeds at the surface of the musical texture wouldn’t match well with the more subterranean, highly complex atmosphere of Turner’s painting.

b. Pitch material

As I mentioned in p. 44, it was my intention that this piano concerto would relate in one or another way with *Monodromic*. Especially in the domain of pitch material, I wanted to use the previously established harmonic fields by eventually expanding them and orchestrating them with the instruments of the ensemble. As the aesthetic purposes of the concerto were different, I took two important steps in the modification of this pitch material. First and foremost, the sonorities of the solo piano piece are quite often intentionally *abrasive*, which give to the work a unique sonic character. I believe that this aspect worked

²⁵ For both mentioned examples see Table 3 p. 43.

well in combination with the persistence of the cycles that are clearly heard. In contrast to this approach, for the concerto I needed more ambiguous chords, that could create multiple connections with their surroundings, without asserting their presence so strongly. For this reason, I reworked the spacings of the chords so that they would sound *less* dissonant and most importantly, less differentiated. The only section of the piece in which I *do* use some of the highly dissonant chords of the piano solo piece, and only in the soloist's part, is *B* (rehearsal letters C and D in the score), in which the main character is *Judith*. In this, I used such chords because I wanted them to reflect in sound the brutal nature of her action, the beheading of Holofernes. Secondly, because I simply needed more pitches and also octave doublings for my instrumental combinations, I increased the density of those chords, either by adding pitches from the harmonic series, taking as fundamental tone the lowest note of the chord, or by borrowing pitches from the previous and/or next chord in an original chord sequence that I created. These additional pitches were designed to sound in the background, while the initial principal pitches of each chord in the foreground. In a similar working process as with *Monodromic*, these decisions were guided by careful listening.

In this work again, the chordal material is used *horizontally*, in the form of pitch cycles. Their communication with the metrical structure is simple. Each pitch marks the beginning of a metrical unit. For example, in the above-mentioned polyrhythm with proportion 7:3 (cf. p. 44), the upper layer (foreground) realizes a *successive* presentation of the *main* pitches of a selected chord, a new pitch occurring every 7 beats. At the same time, the lower layer (background) does the same with the added *secondary* pitches of this chord appearing every 3 beats. When all pitches of a layer are exhausted, the process repeats with

a cyclic permutation of these pitches, in the same way as in *Monodromic*. The major difference in my new approach in the concerto is that the zig-zag routes that I had created in the solo piano piece (cf. p. 28) are now realized between *different* instruments, and more specifically between the instruments that form the group to which a visual character is attached. As, in most sections of the piece, two characters are sounding simultaneously, the result is that cycles are *shifted* relative to each other, functioning more as a branched harmonic net and less as *perceived* cycles. This net, which actually constitutes the skeletal design of the piece, was then “filled” with material of similar nature as in the piano solo piece: textures of different sorts, pitches from newly constructed long melodies and so on.

In this pitch structure, when the percussion is attached to a character, this is associated with a specific timbral category (wood, metal and skin). When this happens, its role becomes more active, revealing the speeds of its metrical units forcefully. This process initiates always when the first pitch cycle in the other instruments of the character has been completed.

c. The role of the pianist

In this piece I wanted to avoid the traditional approach of assigning the role of the leader to the soloist, which would most possibly require to present my musical material in the solo part and in the ensemble in alternations of various types. In response to the visual metaphor of the Turner’s painting, this approach would involve the danger of drawing simplistic music parallels to its characters. For the same reason, an ensemble texture that would occasionally *accompany* the material of the piano — in the literal sense of the term

— seemed also problematic to me as it was coming into conflict with the intended overall sonic texture of “melted nature” as I describe it in p. 41. I thought that in this work, the separation of roles between soloist and ensemble and between the instruments of the ensemble itself should exist in a more subtle way, aligning to the aesthetics of the painting.

Having all these factors in mind, I decided that the piano would alternate between foreground and background activity and that in both cases it would sound more or less independent from the ensemble without being disconnected from it. The solution that I found in this ambiguous relation, was to make use of the potential of the designed cyclic structures in its part, while *deviating* from the ensemble in the domain of *gestural behavior*²⁶. The main idea that lies behind this choice, is that the pianist is assigned the role of a *traveler* through different spaces, which are the different textures that were composed for each one of the five sections of the piece. Through this travelling, I intend to constantly renew the signification of its role, which otherwise remains persistent throughout the whole piece. In a way, this choice relates to my listening experience and analysis of Risset’s *Sud*. In my piece, the piano certainly does not *exchange* elements of its musical texture with these of the ensemble, but it sounds constantly *embedded* in it — some times more dominant being clearly heard in the foreground — and some other times as if it is “diluted” inside the overall musical texture. This interplay unavoidably affects its perceptual identity and determines its ambiguous role.

For the differentiation of the pianist’s role, I reinforced the element of *movement* in her part, utilizing similar strategies as in my solo piano work. The most significant of them

²⁶ These structures that I already described in p. 47 as cycles *shifted* with regard to each other, are pitch and metrical cycles that quite often *connect* the layer of the soloist with instruments of the ensemble. These connections are determined by the visual characters of the painting and their corresponding instrumental groups (cf. Table 3 p. 43).

was the application of the long “running” melodies that I mention in pp. 30-31, combined with some of the graphic shapes which dimensionalize their pitches in the form of diffractions. This particular strategy in combination with the abrupt registral shifts of the melodies that are caused because of the pitch cycles’ structural design, creates in many sections (e.g., in the first) a sound effect that can be compared to a “spinning wheel”. This was inspired by the rotation of the Angel’s sword in the sky, which can be seen in the upper part of the painting.

V. Comparisons between my two most recent works — Conclusions

Having now completed the solo piano piece and the concerto, I believe that a thoughtful consideration of my discoveries through them is very important for my future creative path after graduation, especially because of the compositional ideas that they have in common. This consideration unavoidably raises a couple of questions for me, and their answers are crucial for the aesthetic direction that my work will follow from now on. The first intersection that these two pieces create is whether my music bends more towards *homogeneity* or *heterogeneity* in the domain of texture. The materials of *Monodromic* have a tendency towards mixing into one medium. The main reason for this is the unifying role that the rays’ harmonic fields and their pitch rotations play, and the ways in which they interact with the three streams of the musical texture (cf. p. 34).

In the concerto, the sonic space is more heterogeneous not only because of the diverse nature of the ensemble but also because of the wide variety of figurations that I used in the instrumental lines. This is the first question for my work, which I am not in a position to

answer with certainty at the moment, as I am interested in both directions for different reasons. By listening again to these two works, I am more inclined towards the approach of the piano solo, as, despite its high degree of complexity, it has a congruent sonic identity, which I achieved for the first time in my creative practice. This congruence comes as a result of the flexible interaction between its skeletal design and the complex but malleable components of the musical texture that are set in constant motion. As a musical work, it also has a high degree of clarity in regard to its intentions. On the other hand, I find that the heterogeneous nature of the concerto is also quite promising, as it reflects a certain *vibrancy*, which is a characteristic that *all* of my visual metaphors have in common, regardless of whether they come from my dreams, my imagination or from reality (i.e. the painting of Turner). I find that, in this piece, this particular aspect of the sound's nature was more successfully realized in the interaction of the soloist with the ensemble.

The second important point is the way I intend to make use of the cyclic idea: either as *sounding* as such or as a skeletal frame that appears *deeper* in the texture and that is not (always) heard. As I mentioned in p. 34 the cyclic structures in the solo piano piece are heard more at the surface of the musical texture, mainly because of my choices in the rhythmic and gestural domain. In the concerto I used them having in mind the second approach, so that they can play the role of invisible *shapers* of the overall texture and of the harmony in particular. Concerning this point I have decided and I certainly intend to proceed along the lines of *Monodromic*. The main reason for this choice lies in the fact that I want to focus on the impact that my music can have on the listener's perception of time²⁷. When these cycles

²⁷ Please refer to this aspect of the use of the cycle's concept in p. 6.

are not clearly heard for a sustained time period this impact doesn't emerge as strong as I would expect. In addition, the overall *impetus* that is very important for my musical aesthetics is hard to achieve when important elements of the designed structure remain hidden for the listener (e.g., the boundaries of the metrical cycles). Concerning this aspect, with the approach of the concerto I got more static results with the exception of the piano's layer.

On the other hand, the idea of the fore- and background interplay in the form of streaming, which came from my listening experience and analysis of Risset's *Sud*, is still at a preliminary stage. In the piano solo piece the streams are prominent and clearly perceived but there is no structural use of a fore- and background interplay (this is intentional). In the concerto this idea is investigated to its highest possible degree through the organization of the pitch cycles of the harmonic domain, and my intention was to communicate it through the instrumental groups that are attached to the visual characters. The goal of harmonic coherence inside a complex texture was achieved very successfully, while the interplay between fore- and background musical activity comes in the center of the listener's attention occasionally. I suspect that the reason for this was the combination of the "hidden" aspect of the cyclic structures with the diversity of the chosen instruments within each group, in addition to the figurative aspect of the instrumental lines (cf. p. 49). This particular aspect created a challenge for me not in the composition of the piece itself, but in the realization of the idea of musical streaming. Musical streams sound for sure, but sometimes the perceived groupings are different from those that the visual characters dictate.

Last, but not least, after having composed the package of these three pieces for my dissertation in composition at UCSD, I drew useful conclusions on the creative phase in which I find myself at the moment. First and foremost, in this most recent year, I took a decisive step towards expanding the music material that I use at the *horizontal* level, by creating longer lines of musical activity that persist in time. This characteristic enabled me to develop my structures in a way that they sound more convincing in regard to their cyclic identity and recurring nature. I also developed the use of optimal proportions in my metrical and rhythmic structures, which aided coherence in the temporal domain of my work in comparison to my previous pieces. Moreover, by experimentation in this field, the idea of constant *friction* between two roles took stronger shape. I elaborate on this in pp. 24-26. With this idea, I found a reliable point of reference in order to frame the general notions of *instability* and *unresolved tension* that characterize many of my musical choices and to make use of them in a more multi-dimensional way. All these discoveries initiated from my strong affiliation with the visual domain, for quite a while. I have the hope and intention that the ease of being inspired by an image in order to create sound, is going to be expanded soon so that my music might come into dialogue with other experiential domains too.

APPENDIX I



1 = Blots and scratches	4 = Wing	7 = Cain's shadow	10 = Samson and Delilah
2 = Flock of birds	5 = Angel	8 = Cain	11 = Judith and young girl
3 = Sword	6 = Smog	9 = Adam, Eve and Skeleton	

Image 1: The chosen visual characters in *The Angel Standing in the Sun*²⁸

²⁸ This version of Turner's painting was accessed at the following link:
<http://davidsartoftheday.blogspot.com/2014/11/jmw-turner-angel-standing-in-sun-100th.html>

APPENDIX II — Music Score of *Fractures and Permutations*

IOANNIS MITSIALIS

FRACTURES AND PERMUTATIONS

for Violin and live Electronics

San Diego, September 2021

FRACTURES AND PERMUTATIONS

for Violin and live Electronics

Duration: ca. 7'

INSTRUCTIONS

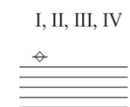
Violin



pizzicato Bartók



pizzicato Bartók with absence of pitch (muffle with hand)



natural harmonic (node point) on the indicated strings



play behind the bridge on the indicated strings



The amount of supplementary bow pressure: decreasing (above), increasing (below). Maximum pressure results in a scratch sound.



The amount of supplementary bow pressure: maximum and steady pressure that results in a scratch sound.



vibrato lento



double vibrato lento



molto vibrato



slow ricochet



gradual transition from one mode of playing to another
(i.e. from sul tasto to sul ponticello)



microtonal accidental. Quarter tone higher



microtonal accidental. Quarter tone lower

Electronic part

The electronic part of the piece is realized through a Pd patch named “null patch”, which was originally created by Miller Puckette and it is available upon request. Its further development for the needs of this work came as a result of my collaboration with him. The patch is designed to have two outputs with the two loudspeakers positioned at the left and right side of the violinist on stage and at enough equal distance. At the premiere of the piece on 22nd November 2021 at the Conrad Prebys Music Center Experimental Theater of UC San Diego, the left and right loudspeaker of the ceiling of the theater were used instead, as their sound was blending better with the violin. Either option can be used in a performance depending on the hall’s response each time.

Program notes

This is my first work that makes use of the electronic medium, and is based on the idea that a single phrase, composed by a sequence of metrical lengths, can be cut up to its constituent parts and produce the whole composition by their constant reordering. The initial phrase that I constructed for this purpose has a symmetrical form of seven bars with the following lengths in number of quarter beats: 3-4-3-**1**-3-4-3. The compositional idea that I put into practice is to repeat this symmetry a couple of times, while changing the position of the shortest central bar of 1/4 in a zig-zag motion inside this metrical grid. In this structure, a variety of short sonic gestures appear in the violin, which are shaped by pitch groupings from a total of 17 pitches and by intuitive rhythmic choices. These gestures confront each other in a violent manner, inside this closed space.

The main ideas that I explore in the electronic part of this piece are subtle manipulations of sound localities in the violin part and spatialization. For their realization I worked primarily with white noise, filters and reverberation. I also connected both of these ideas with the metrical structure of the piece and with the cyclic concept in a variety of ways. I developed a Pd patch that makes use of two loudspeakers and for its preparation I worked regularly with Prof. Miller Puckette to whom I would like to express my gratitude for his invaluable mentoring and support since the very beginning of this project.

Fractures and permutations

With a lot of energy (♩ = 60)

IOANNIS MITSIALIS

Violin

Electronic part:***

1. Layer (white noise component)
2. Layer (filters, distortion and ring modulation)
3. Layer (pitch chords derived from white noise)

Q1* Q2 Q3 Q4 behind the bridge on indicated strings Q5 ordinario Q6

ff f p mf mp

MUTED-DR

Vln.

Q7 Q8 sul tasto → ord. Q9 Q10 IV ord. Q11

f ff ppp III

PLASTIC-DL

Vln.

Q12 sul pont. → ord. Q13 pizzicato Q14 arco glissando col legno battuto 8va Q15 loco Q16 ord. III

ff > mf ff p < mf mp pp

* Indicates the point of initiation for the implementation of each que ** The amount of supplementary bow pressure (maximum results in a scratch sound)

*** Layer 1: Intermittently moving filtered white noise clouds with various relative pitch bandwidths, densities and amplitudes, which execute the following spatial routes: 0°-180°, 180°-360°, 90°-270°, 270°-90°, depending on the section. These routes usually start at the beginning of a bar that is marked with a rehearsal letter and end at the end of the bar right before the following rehearsal letter. In addition, in Q21, 54, 62, 74 and 95, clouds of time-stretched sounds of selected violin material from a specific passage, sound in the background. They usually last until the end of the bar right before the following rehearsal letter.

Layer 2: Filters that manipulate the violin input and produce four types of sounds designated "plastic", "dry", "muted" and "metallic". In addition, there is ring modulation and a type of distortion termed "foggy". Four of these six types of sounds are subtly spatialized in the following four locations: front right (FR), distant right (DR), front left (FL), distant left (DL). Their effect lasts 1-3 mm. They are marked at the bar where they appear.

Layer 3: Static background pitch chords derived from white noise. Their changes are notated between brackets below the bar that they sound.

Vln. **Q17** *p* *6* *6* *gliss. ord.* *6* **Q18** *IV* *ppp* *mp*

Vln. **Q19** *marcato ord.* *8va* *loco* **Q20** *rit. poco a poco ...* *8va* *loco* *mf* *f* *ff* *f* *ff* *mf* **PLASTIC-DL**

Vln. **Q21** *staccato* *6* *6* **Q22** *pizz.* *3* **Q23** *a tempo molto vibrato* **Q24** **Q25** *arco* *3* *pizz. bh. the br.* *mp* *mf* **FOGGY-FL**

Vln.

26

Q26 arco
col legno tratto

Q27 pizz.

C

Q28 arco
ord.

Q29

Q30

8^{va} - - -

pp *p* *f* *mf* *ff* *mf* *f* *ff*

FOGGY-FR

Vln.

30

Q31 (8^{va})
loco

Q32 sul pont.

ord.

Q33 trenchant spiccato(Δ)
bh. the br.

Q34 Q35 Q36 Q37

8^{va} - - -
vibrato lento

mp *f* *pp* *f*

Vln.

35

Q38 (8^{va})
bh. the br.

Q39 bow tremolo
ord. 8^{va} - - -

Q40 loco

Q41 D
ricochet staccato

f *ff* *mp* *f*

5

RING MODULATION

Vln.

40

Q42 Q43

ord.

3

3

ppp

DRY-DL

Q44

pizz. Bartok

3

arco

Q45

8va

loco

Q46

Q47 Q48

f

fff

PLASTIC-FR

Vln.

45

Q49

aggressive

fff

N

ff

Q50

7

p

ff

p <

Vln.

47

Q51

f

E

III

3

3

pp

5

5

p

f

fff

stop on string

Q54

ff >

51 Vln. Q55 pizz. Q56 arco Q57 col legno battuto Q58 arco Q59 Q60

mf *p < mp* *mf ff ppp* *p*

MUTED-FL

56 Vln. Q61 bh. the br. Q62 arco ord. Q63 Q64 bh. the br. Q65 ord. Q66 Q67 aggressive

f *mf* *p < mf* *pp* *f*

DRY-DR

61 Vln. Q68 normale Q69 slow ricochet Q70 Q71 spiccato

p *f* *p* *pp* *p*

PLASTIC-FL RING MODULATION

Q72 arco

65 3

3

6 6

hh. the br.
trenchant spiccato (Λ)

Q73 ord.

stop on string *

f *mp* *ff*

Q74 aggressive
sul t.

67 5 6

6 7

ord.

Q75

mp *ff*

PLASTIC-FL

Q76

69

Q77 marcato
(thorny) (Λ)

pizz. Bartok
with absence
of pitch
(muffle with hand)

arco

f *fff* *f*

METALLIC

* Despite the string crossing connect as much as possible

Q78 non marcato ***** **H** **Q79 Q80** sul pont. **Q81** pizz. staccato **Q82 Q83** pizz. Bartok arco sul t. → ord. molto vibr. vibr. lento **Q84** loco **mp** **f** **ff** **pp** **f** **mp**

MUTED-FR **FOGGY-DL**

Q85 col legno batt. **I** **Q86** **Q87** bh. the br. pizz. **Q88** arco aggressive **ff** **METALLIC**

Q89 molto rit. ... **Q90** a tempo marcato **Q91 (beat #3)** stop suddenly **J** **Q92** **Q93** **Q94** **f** **mp**

RING MODULATION

* Maximum amount of supplementary bow pressure (scratch sound resulting to indefinite pitch)

66

Q109 Q110 Q111 Q112 Q113 Q114

double vibr. lento

95

Vln.

f *mp* *f* *mp*

FOGGY-FR

Q115

loco aggressive

[M]

Vln.

mf *f*

METALLIC

Q116 Q117 Q118

normale

100

Vln.

ff *mf* *p*

Vln. *aggressive*

102

mf $\leq$ *f*

f $\longrightarrow$ *ff*

Vln.

Q119 *sfz* *f* *ff* *ppp* *f* *ppp* *ff*

Q120 *normale* Q121 Q122 Q123 *aggressive* Q124 *8va normale loco*

MUTED-DL

Vln.

108 *aggressive* *fff* *p* *mf* *p*

Q125 *normale vibr. lento* Q126 (beat #3) Q127 Q128 *pizz. III*

PLASTIC-DR

Q129
arco
sul pont.
8^{va}

Vln. *111*

pp *ppp*

FOGGY-FR

Q130 **Q131** **Q132 (beat #3)**

Vln. *112*

mp

METALLIC

IOANNIS MITSIALIS

MONODROMIC

for solo Piano

San Diego, April 2021

MONODROMIC

Duration: ca. 24 min.

INSTRUCTIONS



depress keys silently



long fermata (ca. 3"- 4" sec.)

(sostenuto)

middle pedal

U.C.

una corda

Program notes

My second solo piano work is the first long form that I composed after a long period of time when I was producing shorter pieces. For this piece, I found strong inspiration from an imaginary visual space of abstract nature, which provided me with fruitful ideas especially for the structural design of the work in relation to the idea of cycle.

I am not in a position to know all the psychological factors that created this image in my mind. However, an aspect that most probably played a significant role was that it appeared at a period of social isolation and after a creative block. This happened in January 2021 during a lockdown in San Diego because of the covid pandemic. I imagined a closed dark room, which had objects lying on the floor that were barely visible. Inside this room, a big ray of light of conic shape was penetrating the space coming through a tiny crack of the ceiling. At the same time, light rays of a smaller size were entering the room from different directions and it was unclear where their origin points were located. Their sizes and conic diameters were very diverse, but certain distinctions of long, short, thick and/or thin rays could be made. However, it seemed to me that only the big one was coming from the ceiling and that all the rest were projected either from the four walls of the room or from the floor. The total number of rays was 12 and the general visual image was blurred, as some of them were hitting the hidden objects on the floor creating diffractions of light at spots of the four room's walls. This visual image was black and white and of a geometric abstract nature and the psychological effect that it was producing to me was a continuous and unresolved tension.

The form of the piece is a hybrid between *episodic* and *cyclic* and for its realization I made use of a simple idea. Each ray, which constitutes each "episode", consists of two superimposed metric structures based on a specific proportion. These structures are assigned to the right and left hand of the pianist and create polyrhythms that constitute the core of the temporal domain of the piece. The idea of the circle is very central in them, as the they are of unequal length and they converge after a number of their repetitions. Through this idea, and with the use of appropriate temporal speeds, the two hands of the pianist represent two roles in constant motion, which come to a temporal discord, thus creating an ever-lasting *friction*.

The title of the piece (*Monodromic*), does not relate to the algebraic term of *monodromy*, neither does it make use of such a model of function at a structural level. It is derived from the Greek word *monodromos* (μονόδρομος) which means *one-way*. This aspect is reflected in the unrelenting single force that characterizes the piece throughout, which is created by multiple layers of activity. The main idea is that despite the complexity and multiplicity of these layers, the piece cannot escape from itself, its unresolved tension and instability. In fact, its highly cyclic nature with all the recurring rhythmic and pitch elements of the textures creates this phenomenon.

Monodromic

Rolling with impetus ($\text{♩} = 36$)
marcato (>)

Piano

IOANNIS MITSIALIS

2

Pno.

3

Pno.

The musical score is written for piano and consists of three systems of music. Each system begins with a measure number (1, 2, or 3) and a piano part. The tempo is indicated as 'Rolling with impetus (♩ = 36)' and 'marcato (>)'. The score includes various dynamic markings such as p, mf, f, mp, and pp, as well as articulation marks like accents and slurs. The key signature has one sharp (F#).

74

The image displays three systems of musical notation for piano, measures 10 through 12. The notation is complex, featuring many beamed sixteenth and thirty-second notes, often with slurs and accents. Dynamics such as *mp*, *f*, *mf*, *p*, and *ff* are indicated throughout. Articulation marks like accents (^) and slurs are used extensively. Some measures include the word "loco" above the staff. The systems are labeled with measure numbers 10, 11, and 12 at the beginning of the first staff of each system. The piano part is indicated by "Pno." at the bottom of each system. The notation includes various musical symbols such as clefs, key signatures (one flat), and time signatures (4/4).

The image displays three systems of musical notation for piano, each featuring complex passages with various dynamics and articulations. The notation includes treble and bass staves, with notes, rests, and dynamic markings such as *mf*, *f*, *ff*, *mp*, *p*, and *ff*. The first system includes a *loco* marking and a *5* fingering. The second system includes a *non marcato (only when notated)* marking and a *16* fingering. The third system includes a *normal* marking and a *18* fingering. The notation is dense and includes many slurs, ties, and dynamic markings.

System 1: Features a *loco* marking and a *5* fingering. Dynamics include *mf*, *f*, and *ff*. The notation includes many slurs and ties.

System 2: Features a *non marcato (only when notated)* marking and a *16* fingering. Dynamics include *mf*, *f*, *ff*, *mp*, and *p*. The notation includes many slurs and ties.

System 3: Features a *normal* marking and a *18* fingering. Dynamics include *mf*, *f*, *ff*, *mp*, and *p*. The notation includes many slurs and ties.

6 20 Pno.

mf *loco* *f* *ff* *depress keys silently* *p* *mf* *pp*

22 Pno.

mf *pp* *p* *mp* *p* *mf* *pp* *p* *mp* *p*

24 Pno.

pp *p* *mp* *p* *pp* *p* *mp* *p*

Piano score, measures 25-30. The piece is in 4/4 time. The right hand (RH) features a melodic line with a 6th fingered scale-like passage (measures 25-26) and a 7th fingered passage (measures 27-28). The left hand (LH) provides harmonic support with chords and moving lines. Dynamics include *mf*, *f*, *pp*, and *p*. The score includes various musical notations such as slurs, ties, and fingerings.

Piano score, measures 31-36. The right hand (RH) continues the melodic development with a 7th fingered passage (measures 31-32) and a 6th fingered passage (measures 33-34). The left hand (LH) maintains the harmonic texture. Dynamics include *mp*, *f*, and *pp*. The score includes various musical notations such as slurs, ties, and fingerings.

Interlude (rubato) Piano score, measures 37-42. The right hand (RH) features a melodic line with a 5th fingered passage (measures 37-38) and a 6th fingered passage (measures 39-40). The left hand (LH) provides harmonic support with chords and moving lines. Dynamics include *f*, *mf*, and *p*. The score includes various musical notations such as slurs, ties, and fingerings.

80

*Dynamics that are placed in the middle of the two music staves refer only to the small clusters along with their grace notes. The sounding dynamics are the same regardless the register.

**Refers to the small clusters' layer along with their grace notes, which is not supposed to be affected by the 8va signs

10

38

mp

mf

pp

Pno.

39

pp

p

pp

Pno.

40

pp

p

pp

Pno.

[illegible]

84

*From this point the marked dynamics refer to both hands' parts unless different dynamics appear in the upper and lower music staff

[illegible]

*Staccatissimo ends here

[illegible]

17

The musical score for measures 65-67 is written for piano (Pno.) and consists of three systems. Each system has a grand staff with a treble and bass clef. Measure 65 begins with a forte (f) dynamic and a sixteenth-note triplet in the right hand, followed by a sixteenth-note triplet in the left hand. The music continues with various rhythmic patterns, including sixteenth-note groups and eighth-note pairs. Measure 66 features a forte (f) dynamic and a sixteenth-note triplet in the right hand, followed by a sixteenth-note triplet in the left hand. The music continues with various rhythmic patterns, including sixteenth-note groups and eighth-note pairs. Measure 67 features a forte (f) dynamic and a sixteenth-note triplet in the right hand, followed by a sixteenth-note triplet in the left hand. The music continues with various rhythmic patterns, including sixteenth-note groups and eighth-note pairs. The score includes dynamic markings such as f, mf, and f, and articulation markings such as accents and slurs. The tempo is marked as 'loco'.

71 *mf* *f* *mf* *p* *mp* *p* *ff* *loco* *

Pno.

77 *p* *mp* *pp* *p* *pp* *loco* *

Pno.

83 *p* *mp* *pp* *p* *pp* *loco* *

Pno.

The musical score for "The Great Gatsby" by Jay McInerney is presented in three systems. Each system consists of a piano (Pno.) part and a voice part. The piano part is in 3/4 time and features a complex, syncopated melody. The voice part is in 4/4 time and features a melody with a strong syncopated feel. The score includes various musical notations such as notes, rests, and dynamic markings (p, mp, mf, p, mp, mf, p, mp, mf). The piano part is marked with "Pno." and the voice part with "V". The score is divided into three systems, each with a piano part and a voice part. The piano part is in 3/4 time and features a complex, syncopated melody. The voice part is in 4/4 time and features a melody with a strong syncopated feel. The score includes various musical notations such as notes, rests, and dynamic markings (p, mp, mf, p, mp, mf, p, mp, mf). The piano part is marked with "Pno." and the voice part with "V".

[illegible]

94

The image displays three systems of piano music, measures 83 through 85. Each system consists of a grand staff (treble and bass clefs) with multiple staves. The music is characterized by complex textures, including rapid sixteenth-note passages, staccatissimo markings, and martellato (hammered) effects. The notation includes various dynamics such as *ff* (fortissimo), *f* (forte), *mf* (mezzo-forte), and *sfz* (sforzando), as well as articulation marks like accents and slurs. Measure 83 shows a transition from a staccatissimo section to a more melodic line. Measure 84 features a prominent martellato section. Measure 85 continues the complex texture with staccatissimo and martellato markings. The page number 23 is located at the top left.

83

Pno.

(staccatissimo)

ff

(martellato)

84

Pno.

(martellato)

ff

(staccatissimo)

mf

(martellato)

85

Pno.

(martellato)

(staccatissimo)

ff

(martellato)

(staccatissimo)

f

96

25

loco
89
fff
marrillato sempre
Pno.

non martellato
(only when notated)
93
Pno.

marcato
93 (>)
pp
Pno.

[illegible]

musical score for the piano part of "The Song of the Lark" by Maurice Strakosky. The score is for the piano (Pno.) and features a variety of dynamic markings and articulations. The piece is in 2/7 time and consists of 27 measures. The score is written for the left hand on a grand staff. The dynamics range from ppp (pianississimo) to marcato (marked). The articulations include staccatissimo, marcato, and no accents. The score is divided into measures 1-6, 7-12, 13-18, 19-24, and 25-27. The tempo is marked "Allegretto".

[illegible]

(8^{vo})

The musical score for the piano part consists of two staves, treble and bass clef. The key signature has one flat (B-flat). Measure 102 starts with a treble staff containing a half note B-flat and a whole note chord of D-flat, F, A-flat, C. The bass staff contains a half note B-flat and a whole note chord of D-flat, F, A-flat, C. Measures 103-106 show various rhythmic patterns and chords, including triplets and sixteenth notes. Dynamics include *p*, *f*, *mp*, and *pp*. There are also markings for accents and slurs. The piece ends with a double bar line.

no accents
Piano

*Be sure that the attacks in the upper range of the piano don't sound wooden

*Be sure that the attacks in the upper range of the piano don't sound wooden

28

103

Pno.

104

178

Pno.

179

253

Pno.

normal

* 1/2 Ped. ends here

29

Pno.

106 *ff*

marcato (*>*)

loco

pp

8va - - - loco

9

5

(sost.)

118

5

(sost.)

Harsh

107 *a tempo*

Pno.

p

marcato (*>*)

loco

marcato (A)

mp

8va - - - loco

9

5

(sost.)

118

5

(sost.)

108

Pno.

mf

loco

marcato (*>*)

marcato (A)

loco

marcato (A)

8va - - - loco

9

5

(sost.)

118

5

(sost.)

[illegible]

*long fermata (silence of 3"-4") **Take care not to overemphasize the beginnings of the phrases

The image displays a page from a musical score for the piece "Poetic" by Luciano Berio. The score is written for piano (Pno.) and voice. The piano part is in the lower register, while the voice part is in the upper register. The score includes various musical notations such as notes, rests, and dynamic markings (e.g., *pp*, *p*, *mp*, *f*, *mf*, *ppp*). There are also indications of articulation like "staccato" and "loco". The score is divided into measures, with some measures containing multiple staves for the piano part. The overall style is contemporary, with complex rhythmic patterns and a focus on texture and dynamics.

*molto marcato ends here

[illegible]

106

108

Pno.

Pno.

Pno.

* 1/4 Ped. ends here

[illegible]

The musical score is for the piece "Una corda" by Franz Liszt, originally from the album "Liszt: The Complete Piano and Violin Works". The score is written for piano (Pno.) and violin (Vln.).

Key Performance Instructions and Dynamics:

- Piano Part:**
 - 154: *ppp* (pianissimo)
 - 155: *ppp* (pianissimo)
 - 156: *ppp* (pianissimo)
 - 157: *ppp* (pianissimo)
 - 158: *ppp* (pianissimo)
 - 159: *ppp* (pianissimo)
 - 160: *ppp* (pianissimo)
 - 161: *ppp* (pianissimo)
 - 162: *ppp* (pianissimo)
 - 163: *ppp* (pianissimo)
 - 164: *ppp* (pianissimo)
 - 165: *ppp* (pianissimo)
 - 166: *ppp* (pianissimo)
 - 167: *ppp* (pianissimo)
 - 168: *ppp* (pianissimo)
 - 169: *ppp* (pianissimo)
 - 170: *ppp* (pianissimo)
 - 171: *ppp* (pianissimo)
 - 172: *ppp* (pianissimo)
 - 173: *ppp* (pianissimo)
 - 174: *ppp* (pianissimo)
 - 175: *ppp* (pianissimo)
 - 176: *ppp* (pianissimo)
 - 177: *ppp* (pianissimo)
 - 178: *ppp* (pianissimo)
 - 179: *ppp* (pianissimo)
 - 180: *ppp* (pianissimo)
 - 181: *ppp* (pianissimo)
 - 182: *ppp* (pianissimo)
 - 183: *ppp* (pianissimo)
 - 184: *ppp* (pianissimo)
 - 185: *ppp* (pianissimo)
 - 186: *ppp* (pianissimo)
 - 187: *ppp* (pianissimo)
 - 188: *ppp* (pianissimo)
 - 189: *ppp* (pianissimo)
 - 190: *ppp* (pianissimo)
 - 191: *ppp* (pianissimo)
 - 192: *ppp* (pianissimo)
 - 193: *ppp* (pianissimo)
 - 194: *ppp* (pianissimo)
 - 195: *ppp* (pianissimo)
 - 196: *ppp* (pianissimo)
 - 197: *ppp* (pianissimo)
 - 198: *ppp* (pianissimo)
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*Una corda

IOANNIS MITSIALIS

THE ANGEL STANDING IN THE SUN

chamber piano concerto after J. M. W. Turner's painting

San Diego, September 2021

THE ANGEL STANDING IN THE SUN

Ensemble

Piano (soloist)
Flute + Piccolo + Bass flute
Oboe
Percussion
Harp
Cello
Double bass

Duration: ca. 12 min.

INSTRUCTIONS

Piano

(sostenuto) _____ middle pedal

Flute + piccolo + bass flute



flutter tongue (applies only to notes with this stem notation)



harmonics. In the second case the small head note indicates the resulting sound, while the normal head note the fingered sound.



lip pizzicato



harsh tongue pizzicato with tone. Allow overtones to speak.

 jet whistle (usually combined with poco glissando)

 microtonal accidental. Quarter tone higher

 microtonal accidental. Quarter tone lower

Oboe

 flutter tongue (applies only to notes with this stem notation)

 microtonal accidental. Quarter tone higher

 microtonal accidental. Quarter tone lower

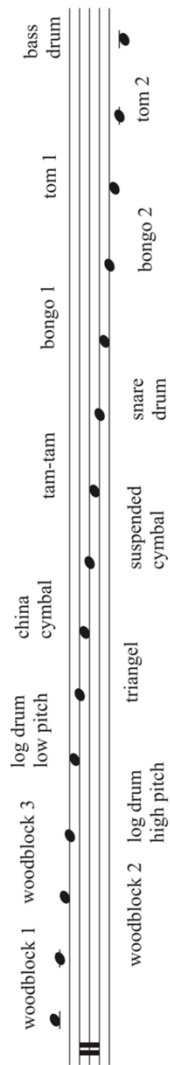
Percussion setup

3 woodblocks 1 $< 2 < 3$
 medium log drum (sounding lower than woodblock 3)

big triangel
 small china cymbal
 medium suspended cymbal
 medium to small tam-tam

snare drum

2 bongos (1 < 2) – nr. 2 untuned to achieve a lower pitch
 2 tons (1 < 2) – medium and low
 medium bass drum



+ ●
dead stroke

⊕
muffle with hand


rubbing on tam tam's metallic surface in an irregular back and forth motion. Arrow indicates continuation of action.


gradual transition from one mode of playing to another (i.e. near the rim – close to the center)

l.v.
let vibrate

Whenever a mallet indication appears in parentheses, it means that the performer should keep it between their fingers in advance, while performing with different mallets.

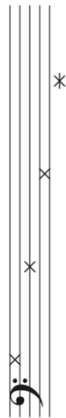
Cello + double bass



pizzicato Bartók



behind the bridge on indicated strings (cello)



behind the bridge on indicated strings (double bass)



The amount of supplementary bow pressure: decreasing (above), increasing (below). Maximum pressure results in a scratch sound.



vibrato lento



gradual transition from one mode of playing to another (i.e. from sul tasto to sul ponticello)

#

microtonal accidental. Quarter tone higher

b

microtonal accidental. Quarter tone lower

Program notes

The painting *The Angel Standing in the Sun* (1846)¹ of J. M. W. Turner has always impressed me both for its emotional power and structural use of color. More than its prominent biblical references, I am highly interested in Turner's concepts on vision -radical at that time- and in ideas parallel to these, which I investigate in my recent compositional work. One of the early examples of Western European painting that challenges the established technique of *perspective*, *The Angel* makes it difficult both to prioritize foreground/background roles with certainty and to separate a figure from its surroundings. The main reasons for this are the special use of the light and the diffuseness of the colors.

The main intention that I have in this piece is to achieve an overall sonic texture of a "melted nature", where contrasting elements do exist, but they remain subdued. For this idea, I drew strong inspiration from the light mass of this painting, which is violently diffracted on the canvas, and is similar to a vortex-like radiation from a center.

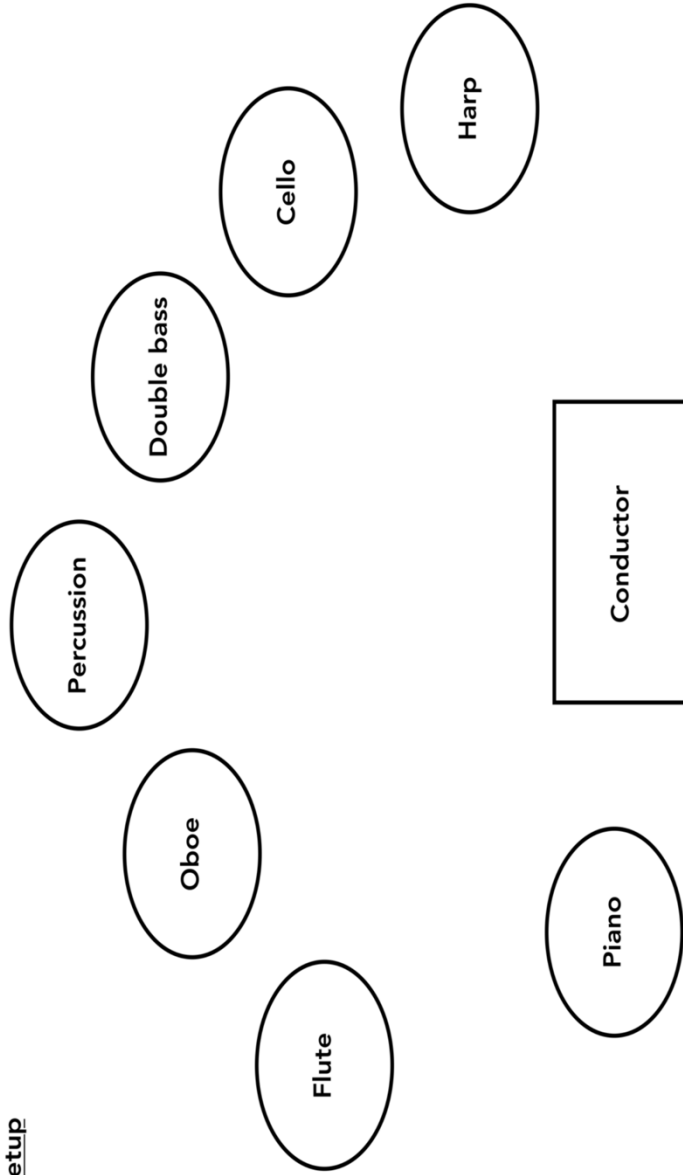
In order to realize this intention, I worked on compositional concepts that characterize my recent work, such as creating ambiguity between foreground and background events and gradual transformation of sound objects that are rather being reordered instead of actually being developed. These objects behave in a closed space where rotations occur, quite often incomplete, hiding parts of their process. In order to achieve sonic fecundity inside this space, I based it on two main ideas: a. the development of parallel cycles applied to pitch and temporal domain, which appear shifted between each other both in the fore- and background musical events, and b. the use of the pianist as a traveler through different textures, composed for each one of the five sections of the piece. Through this travel, I intend to constantly renew the signification of its role, which otherwise remains persistent throughout the whole piece. These textures are based on characters/details extracted from Turner's painting and they are assigned to

¹ A digital image of the painting can be accessed in the following link:
<https://www Tate.org.uk/art/artworks/turner-the-angel-standing-in-the-sun-n00550>

different instrumental groups with prioritized roles. To the above-described compositional goals of this project, I found strong support by the heterogeneous nature of the ensemble.

This piece is a commission by the Palimpsest Ensemble and conductor Steven Schick. I am deeply thankful to him for this wonderful opportunity.

Stage setup



IOANNIS MITSIALIS

* applies to all tremolos with enharmonic notes

The image displays a page from a musical score for 'The Firebird' by Igor Stravinsky. The score is written for a full orchestra and soloists, including Piano (Pno.), Flute (Fl.), Oboe (Ob.), Percussion (Perc.), Violin (Vc.), and Viola (D.B.). The music is in 3/4 time and features a variety of dynamic markings (p, mf, f, pp, mp) and articulations (accents, slurs, staccato). The score includes a key signature of one flat (B-flat) and a time signature of 3/4. The music is characterized by its complex rhythms and dynamic range, with various articulations and phrasing marks throughout.

4 *8va*-----

Pno. *loco* *mf* *6* *7* *8* *9* *10* *11* *12* *13* *14* *15* *16* *17* *18* *19* *20* *21* *22* *23* *24* *25* *26* *27* *28* *29* *30* *31* *32* *33* *34* *35* *36* *37* *38* *39* *40* *41* *42* *43* *44* *45* *46* *47* *48* *49* *50* *51* *52* *53* *54* *55* *56* *57* *58* *59* *60* *61* *62* *63* *64* *65* *66* *67* *68* *69* *70* *71* *72* *73* *74* *75* *76* *77* *78* *79* *80* *81* *82* *83* *84* *85* *86* *87* *88* *89* *90* *91* *92* *93* *94* *95* *96* *97* *98* *99* *100* *101* *102* *103* *104* *105* *106* *107* *108* *109* *110* *111* *112* *113* *114* *115* *116* *117* *118* *119* *120* *121* *122* *123* *124* *125* *126* *127* *128* *129* *130* *131* *132* *133* *134* *135* *136* *137* *138* *139* *140* *141* *142* *143* *144* *145* *146* *147* *148* *149* *150* *151* *152* *153* *154* *155* *156* *157* *158* *159* *160* *161* *162* *163* *164* *165* *166* *167* *168* *169* *170* *171* *172* *173* *174* *175* *176* *177* *178* *179* *180* *181* *182* *183* *184* *185* 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[illegible]

6

Pno. *p* *mf* *loco* *staccato sempre* *7* *mf*

Fl. *p* *pp*

Ob. *p* *mf* *ppp*

Perc. *p* *mf* *p* *mf* *tom 1* *mf* *p* *mf* *tom 2* *mf* *p* *mf*

Hp. *ff* *7* *mf* *A3* *C3* *B3* *D3/E3* *ff* *C3* *D3* *gliss.* *gliss.*

Vc. *glissando* *ff* *6* *pp*

D.B. *mf* *f* *mf* *p*

[illegible]

129

Urgent

B

mp *mf* *f*

staccato *staccato*

pp *p* *pp* *pp* *ppp* *pp*

ord. *sul pont.*

Pno. Fl. Perc. Hp. Vc.

10

Pno.

mf

p

Ob.

marcato sempre
(flurry) (s)

mf

Perc.

snare on (snare drum)

hard marmba mallets

marcato

Hp.

p

Vc.

11

The musical score for measures 11 and 12 is written for five instruments: Piano (Pno.), Oboe (Ob.), Horns (Hp.), Violoncello (Vc.), and Double Bass (D.B.).

- Piano (Pno.):** Measures 11 and 12 feature a complex, rapid sixteenth-note pattern in the right hand, with a forte (*f*) dynamic. The left hand plays a steady eighth-note accompaniment. A crescendo leads to a fortissimo (*ff*) dynamic at the end of measure 11, which then decays to a piano (*p*) dynamic at the start of measure 12.
- Oboe (Ob.):** Measures 11 and 12 feature a melodic line with a crescendo leading to a fortissimo (*ff*) dynamic at the end of measure 11, followed by a decrescendo to a piano (*p*) dynamic at the start of measure 12.
- Horns (Hp.):** Measures 11 and 12 feature a melodic line with a crescendo leading to a fortissimo (*ff*) dynamic at the end of measure 11, followed by a decrescendo to a piano (*p*) dynamic at the start of measure 12. The notation includes a "loco" marking and a "mf" dynamic.
- Violoncello (Vc.):** Measures 11 and 12 feature a melodic line with a crescendo leading to a fortissimo (*ff*) dynamic at the end of measure 11, followed by a decrescendo to a piano (*p*) dynamic at the start of measure 12. The notation includes a "mf" dynamic and a "vibrato lento sempre" marking.
- Double Bass (D.B.):** Measures 11 and 12 feature a melodic line with a crescendo leading to a fortissimo (*ff*) dynamic at the end of measure 11, followed by a decrescendo to a piano (*p*) dynamic at the start of measure 12. The notation includes a "mf" dynamic and a "vibrato lento sempre" marking.

135

136

[illegible]

Pno. *mf* *saccato* *7* *8th* *2da*

Fl. *mf* *non marcato* *6*

Ob. *f* *5* *p*

Perc. *p* *snare on (snare drum)* *snare drum sticks* *7* *mf*

Hp. *mf*

Vc. *pp* *mf* *ff* *5* *mf* *arco* *5* *mf*

D.B. *ff* *non col legno batt.* *bb. the bc.* *marcato (>)* *pizz. marcato (>)* *sul pont.* *5* *p* *f*

* The amount of supplementary bow pressure (maximum results in a scratch sound)

** only accented stems are articulated

[illegible]

Musical score for measures 48-52, featuring Pno., Fl., Ob., Perc., Hp., Vc., and D.B. The score includes various dynamics and performance instructions.

Pno.: Measures 48-52. Dynamics: *mf*, *p*, *mf*, *p*. Performance instructions: *marcato (-)*, *staccato (slurp)*, *loco*, *marcato (>)*, *loco*.

Fl.: Measures 48-52. Dynamics: *f*, *mf*, *p*. Performance instructions: *N*, *6*, *7*.

Ob.: Measures 48-52. Dynamics: *f*, *mf*, *p*. Performance instructions: *N*, *6*, *7*.

Perc.: Measures 48-52. Dynamics: *p*, *mf*, *p*. Performance instructions: *5*, *7*.

Hp.: Measures 48-52. Dynamics: *mf*, *p*. Performance instructions: *6*, *7*.

Vc.: Measures 48-52. Dynamics: *mf*, *ppp*. Performance instructions: *6*, *7*.

D.B.: Measures 48-52. Dynamics: *ff*, *pp*. Performance instructions: *6*, *7*.

Additional performance instructions for D.B.: *pizz.*, *arco*, *non col legno batt.*, *bb. the br.*

* Harsh tongue pizzicato with tone. Allow overtones to speak.

This page of a musical score is for a symphony orchestra. It features seven staves, each with a part name and a system number (52). The parts are:

- Pno.** (Piano): Includes a grand staff with treble and bass clefs. Dynamics include *mp* and *f*. Performance instructions include *loco* and *staccato (sharp)*.
- Fl.** (Flute): Includes a single staff with a treble clef. Dynamics include *pp* and *mf*. Performance instructions include *marcato sempre (-)*.
- Ob.** (Oboe): Includes a single staff with a treble clef. Dynamics include *pp* and *mf*. Performance instructions include *loco*.
- Perc.** (Percussion): Includes a single staff with a treble clef. Dynamics include *pp* and *mf*.
- Hp.** (Horn): Includes a single staff with a treble clef. Dynamics include *pp* and *mf*.
- Vc.** (Violoncello): Includes a single staff with a bass clef. Dynamics include *pp* and *mf*. Performance instructions include *loco*.
- D.B.** (Double Bass): Includes a single staff with a bass clef. Dynamics include *pp* and *mf*. Performance instructions include *loco*.

The score is written in a standard musical notation style, with notes, rests, and various musical symbols. The dynamics range from *pp* (pianissimo) to *mf* (mezzo-forte). Performance instructions like *loco* and *staccato (sharp)* are used to indicate specific playing techniques.

53

Pno. δ^{ma} marcato (-) f mp p $loco$ N δ^{b6}

Fl. mf N f ppp f

Ob. p f ppp f

Perc. mf p mf mp pp mf

Hp. f

Vc. mf $ord.$ $arco$ ff pp

D.B. pp mf f pp pp f pp

54

55

D

58 *mp* *loco* *mf* *marcato* *loco* *mf*

Pno.

58 *mf* *loco* *mf* *marcato* *loco* *mf*

Fl.

58 *p* *mf* *marcato* *loco* *mf*

Ob.

58 *pp* *mf* *marcato* *loco* *mf*

Perc.

58 *mf* *marcato* *loco* *mf*

Hp.

58 *mf* *marcato* *loco* *mf*

Vc.

58 *f* *marcato (crispy)* *arco* *pizz.* *f* *marcato (crispy)* *ord.* *pppp*

D.B.

58 *f* *marcato (crispy)* *ord.* *pppp*

bb. the br.

147

[illegible]

149

150

151

[illegible]

34 Poco meno mosso quasi cadenza (♩ = 44-46)

Pno.

pp *loco* *p* *mf* *mp* *f* *loco* *mf*

Fl.

p *N* *mp* *pp*

Ob.

p *N* *mp* *pp*

Hp.

mp *lv* *f* *loco*

Vc.

con sordino *p* *f* *p* *f*

D.B.

con sordino *p* *f* *p* *f*

156

Musical score for measures 94-104, featuring Piano (Pno.), Flute (Fl.), Oboe (Ob.), Percussion (Perc.), Harp (Hp.), Violoncello (Vc.), and Double Bass (D.B.). The score includes various musical notations such as dynamics (e.g., *mf*, *ff*, *mp*, *f*, *p*, *pp*), articulation (e.g., *loco*, *portato*, *arco*, *pizz.*), and performance instructions (e.g., *senza sordino*, *hard yarn mallets*). The score is written in 2/4 time and includes a rehearsal mark at measure 94.

The score is divided into systems for each instrument. The Piano part (Pno.) features a complex melodic line with a *loco* section and a *portato* section. The Flute (Fl.) and Oboe (Ob.) parts have similar melodic lines. The Percussion part (Perc.) includes a section for *hard yarn mallets*. The Harp (Hp.) part features a section for *arco* and a section for *pizz.*. The Violoncello (Vc.) and Double Bass (D.B.) parts have a section for *arco* and a section for *pizz.*.

The score includes a rehearsal mark at measure 94. The dynamics range from *pp* (pianissimo) to *ff* (fortissimo). The articulation includes *loco* (local), *portato* (portato), *arco* (arco), and *pizz.* (pizzicato). The performance instructions include *senza sordino* (without mutes) and *hard yarn mallets*.

[illegible]

*Slowly overlap hands when needed

160

40

107

Pno.

Fl.

Ob.

Perc.

Hp.

Vc.

D.B.

Musical score for page 41, featuring Piano (Pno.), Flute (Fl.), Oboe (Ob.), Percussion (Perc.), Harp (Hp.), Violoncello (Vc.), and Double Bass (D.B.). The score includes various musical notations such as notes, rests, and dynamic markings.

Piano (Pno.): The piano part features complex rhythmic patterns with many sixteenth and thirty-second notes. It includes dynamic markings such as *mf* (mezzo-forte) and *pp* (pianissimo).

Flute (Fl.): The flute part includes melodic lines with dynamic markings like *pp* and *p*.

Oboe (Ob.): The oboe part features melodic lines with dynamic markings such as *pp* and *p*.

Percussion (Perc.): The percussion part includes rhythmic patterns with dynamic markings like *ppp* (pianississimo) and *mf*.

Harp (Hp.): The harp part includes arpeggiated figures and sustained chords with dynamic markings such as *pp* and *f*.

Violoncello (Vc.): The cello part features melodic lines with dynamic markings like *mf* and *f*.

Double Bass (D.B.): The double bass part includes melodic lines with dynamic markings such as *mf* and *p*.

Musical score for page 43, featuring Piano (Pno.), Flute (Fl.), Oboe (Ob.), Percussion (Perc.), Harp (Hp.), Violoncello (Vc.), and Double Bass (D.B.). The score includes various musical notations such as dynamics (pp, ff, f, mf, p, ppp), articulation (accents, staccato), and performance instructions (no accents, l.v., sul pont.). The Piano part features complex textures with multiple staves and dynamic markings. The Flute and Oboe parts have melodic lines with dynamic markings. The Percussion part includes a section marked "no accents" and "l.v.". The Harp part has a section marked "p" and "muffl.". The Violoncello and Double Bass parts have melodic lines with dynamic markings.

Pno. *mp* *p* *ppp*
 Fl.
 Ob.
 Perc. *mp* *p* *pp*
 Hp.
 Vc. *p*
 D.B. *p*

bass drum beaters
p *pp*

p *ppp*

ADDITIONAL MATERIAL

1. Link to audio recordings:

<https://www.dropbox.com/sh/df5mc7qfqbjhf9/AAB-GZLixMxtbFv-5zpykrYva?dl=0>

2. Link to video recordings:

<https://music-cms.ucsd.edu/concerts/live.html>²⁹

3. Link to concert programs:

<https://www.dropbox.com/sh/3a0dfs27bdbjlb7/AABORLLw4u5ml5WIbuXpea-Ua?dl=0>

²⁹ From the video list at the left, select “Ioannis Mitsialis - Dissertation Recital” and “Fall Composition Jury Concert”. In the latter, the piece *The Angel Standing in the Sun* comes second in the program.

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Stanley Sadie (2001). "The New Grove Dictionary of Music and Musicians", Macmillan Publishers Limited London, United Kingdom.

Stockhausen, Karlheinz (1964). "Texten zu Eigenen Werken zur Kunst Anderer Aktuelles, v.2", m. DuMont Schauberg, Köln, p. 73.

2. Internet links³⁰

The Cleveland Museum of Art. "A Bridal Couple".

<https://www.clevelandart.org/art/1932.179>

Musées de la Ville de Strasbourg. "Les Amants Trépassés".

<https://www.musees.strasbourg.eu/oeuvre-musee-oeuvre-notre-dame/-/entity/id/672888>

The Cleveland Museum of Art. "Behind the Beat: Kaija Saariaho".

<https://www.clevelandart.org/events/music-and-performances/behind-the-beat/episode-07>

Tate. "Joseph Mallord William Turner, The Angel Standing in the Sun, exhibited 1846", Gallery label (2020).

<https://www.tate.org.uk/art/artworks/turner-the-angel-standing-in-the-sun-n00550>

³⁰ All referred website addresses were accessed in 2021.