

CARTOGRAPHIES FOR A NAVIGATION THROUGH TIMBRAL DRAMATURGIES

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in partial fulfilment of the requirements for the
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ABSTRACT

This commentary accompanies a portfolio of works composed between 2018 and 2021. My research explores a cartographic approach to conceiving timbre and dramaturgy. I see the cartographic approach as an orientation exercise or scheme of thought combining graphics, sketches, notes, drawings, and manuscripts to obtain a project's overview and to navigate structural relationships in 'sonic places'. I conceive sonic places as acoustic realities inhabited and travelled by the listener through the pathways proposed in my works. My pieces follow an expansion principle from timbre to dramaturgy using analogical and flexible skills. On one hand, the analogical tactics of this principle involve explorations on large sheets of paper, the use of domestic objects, and the manipulation of instruments by myself to define the behaviour and organization of events. On the other hand, the flexible tools of my expansion principle contain translations between notation and other aspects of my projects such as stage design, visual elements, or movements, stimulating greater freedom to explore relationships between the multiple dimensions of my projects. In the submitted pieces, the imagination of timbre emerges from strategies such as mapping sound landscapes or explorations with graphics where their components are combined, orchestrated, overlapped, and amplified by a system of categories that organise sonic events and textures in terms of hierarchy, geometry, pathway, and density. Furthermore, these categories consider expansions from timbre toward spatial and visual elements and, particularly, addressing a notion of dramaturgy embodied in the idea of 'acts' deduced from a text, the observation of a performance space, or from the issue that inspired the project.

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PORTFOLIO

Nb: Materials are provided in chronological order of creation.

1. ASWALAQ, ZOOS HUMANOS, A THEATRE OF VOICES

For a vocal ensemble of 4 sopranos and 4 altos. Composed between January and August 2018. 35 minutes. World premiere at Valparaíso, Chile, December 2018. Taktus Ensemble, Javiera Lara, conductor. With the support of the Chilean Government. Pulsar Prize for the best classical music artist of Chile. Other concerts:

- a) Palazzo Doria-Tursi, Genoa, Italy, March 20, 2022. VirgoVox Ensemble, Jacopo Facchini, cond.
- b) Chiesa Rossa, Milan, Italy, March 22, 2022, VirgoVox Ensemble.

1.1. Primary material

- score:

https://drive.google.com/file/d/12wOigjPpNq1b8hlnASsNFperoPiDwCOP/view?usp=share_link

- Performance video. Valparaíso, 2018. Subtexto prod: https://youtu.be/E_P7HVVTzYU

- Complete recording. Genoa, 2022: <http://bit.ly/3V4JLSi>

1.2. Supplementary material

- Backstage of Chilean premiere: <https://youtu.be/bTWgIfFoomA>

- Trailers for the Italian premiere (4 files): https://youtu.be/5ELEA_kwDmQ

<https://youtu.be/R0R8i6dJOYk> https://youtu.be/q_E6desDyTk https://youtu.be/d8D8dH_iLyl

2. PLANO DE LEVANTAMIENTO

For C flute, bass clarinet, piano, violin, viola, and cello. Composed between June and October 2018. 13 minutes. World premiere at Contemporary Music Festival, Santiago, Chile, November 2018. Ensamble Contemporáneo, Aliocha Solovera, conductor. With the support of the Ernst von Siemens Foundation. Other concerts:

a) December 2018. Music Institute, Universidad Católica de Valparaíso, Chile. Ensemble Contemporáneo.

b) January 2019. Municipal Theatre. Rancagua, Chile. Ensemble Contemporáneo.

- Score:

https://drive.google.com/file/d/1d2zoPVP5X72wauY8ONrz93B86KFtSJ0R/view?usp=share_link

- Complete recording. Santiago, 2018: <http://bit.ly/3ghRDkN>

3. SHUNYA

For full orchestra. Composed between January and April 2019 (revision 2020). 12 minutes. Not yet premiered.

Score:

https://drive.google.com/file/d/1syzRoJFeUNUA_VW-DUTHu33NCR_7FBKs/view?usp=share_link

4. DDŪWÉWÉ, A SYNESTHETIC INVASION

For recorders (Helder and Paetzold Subcontrabass in F) and installation. Composed between September and December 2019. 20 minutes. First version, world premiere at Richard Steinitz Building, University of Huddersfield, United Kingdom, January 2020. Paola Muñoz, recorders, Laura Bisotti, installation. With the support of the University of Huddersfield. Second version, scenic direction and theatre performance by Cristina Fuentes:

a) September 2021. Theatre of Cultural park, Valparaíso, Chile.

b) November 2021. Festival Expresiones Contemporáneas, Jalapa Mexico (videostreaming).

4.1. Primary material

- Score:

https://drive.google.com/file/d/1I_-jJ_5lGagnbt6VQZinCiEJHxgpPoQD/view?usp=share_link

- Performance video. Second version, Valparaíso, 2021. EstudioManero:

<https://youtu.be/y2ZJaCJu-ck>

4.2. Supplementary material

- Performance video. First version, Huddersfield, 2020. David Vélez: <https://youtu.be/hGRplkCHNbg>
- Backstage of the first version: <https://www.youtube.com/watch?v=EvAqme0nMQs>
- Technical information on performance at the cultural park theatre of Valparaíso (august 2021): https://drive.google.com/file/d/1uSJn2Vz5GuENpUvi7z5SEgk4CFvF_P-4/view?usp=share_link

5. LOS OJOS DEL PUEBLO ACUSAN AL ESTADO TERRORISTA

For piano and cello. Composed between December 2019 and January 2020. 10 minutes. World premiere at St Paul's Church, Huddersfield, United Kingdom, March 2020. Plus-Minus ensemble: Alice Purton and Mark Knoop.

- Score:

https://drive.google.com/file/d/1YHbejQkwziuQ5Szkpl2pZT2ygYOoedpD/view?usp=share_link

- Complete recording, Huddersfield, 2020. CeReNeM: <http://bit.ly/3EQqDSw>

6. LIDIO

For two guitars. Composed between January and April 2020. 12 minutes. World premiere at Mixtur Festival, Barcelona, Spain, September 2020. Estelle Lallement and Filipe Marques.

- Score:

https://drive.google.com/file/d/1pnRhU5FURrDiXmj_7vHkeqQqJEZXd1s/view?usp=share_link

- Complete recording, Barcelona, 2020. Mixtur Festival: <http://bit.ly/3i4ejVO>

7. LA FURIA DEL ERMITAÑO, A THEATRE OF SOUNDS ABOUT MADNESS

For two female voices and an ensemble of seven instruments. Composed between March and December 2020. 35 minutes. World premiere at GAM centre, Santiago, Chile, August 2022. Taller de Música Contemporánea Ensemble; Pablo Aranda, conductor; Carolina Sagredo, scenic direction. With the support of the Ernst von Siemens Foundation, the Turing Scheme of the UK Government, the University of Huddersfield, and the Pontificia Universidad Católica de Chile.

7.1. Primary material

- Score:

https://drive.google.com/file/d/1UZBFwohZinMt52054dYySvuZv3WzMM_/view?usp=share_link

- Performance video, Santiago, 2022. EstudioManero: <https://youtu.be/GID9VcNOTx8>

7.2. Supplementary material

- Recoding, Santiago, 2022. EstudioManero:

https://drive.google.com/file/d/1pNspuP5JxQIO0AN6KMKtiohandcMYf0E/view?usp=share_link

- Video with explanations on string techniques:

<https://www.youtube.com/watch?v=0gBBxl0xSng>

- Trailer: <https://youtu.be/scBgEpXLSbk>

8. TAIKEN

For cello. Composed between December 2020 and February 2021. 11 minutes. Broadcasted online from New York, United States, July 2021. International Contemporary Ensemble. Michael Nicolas.

8.1. Primary material

- Score (A4 format):

https://drive.google.com/file/d/1WSsSRHUE0d7GZVtwmGpU1r8vMuUWqNbm/view?usp=share_link

- Scores in full size without breaking pages:

https://drive.google.com/file/d/1snKkNY10GAZaYT_P3iGLNipzeeWdOg7j/view?usp=share_link

- Performance video, New York, 2021. ICE Ensemble: <https://youtu.be/H896mAl4ykY>

8.2. Supplementary material

- Video scrolling score:

https://drive.google.com/file/d/1aPYsbh_OHYezzPYZpGwrcBFAYNg9SXZA/view?usp=share_link

- Video with explanations on cello techniques: <https://youtu.be/yN5QzqpzBxw>

INTRODUCTORY CHAPTER

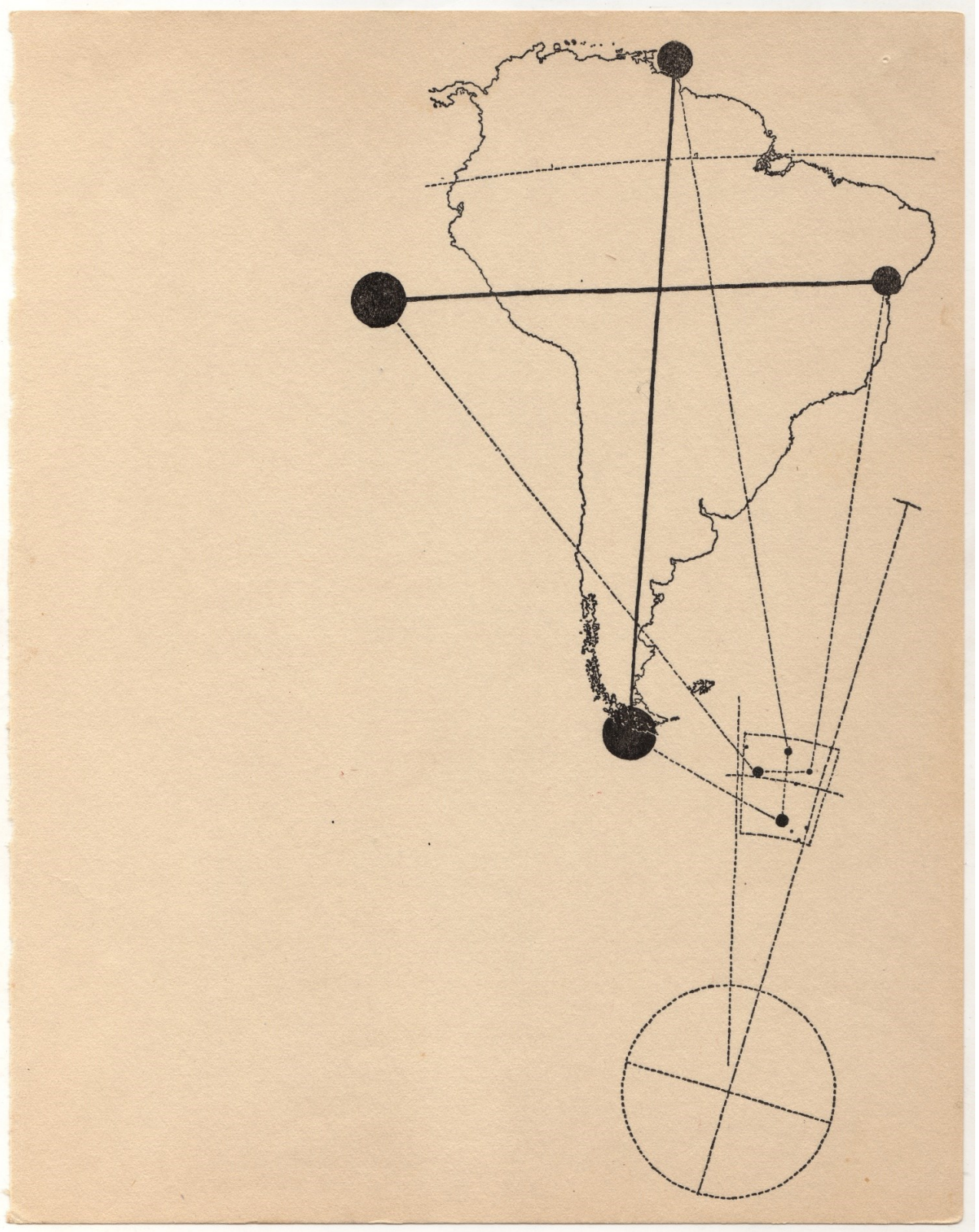


Figure 0. A drawing representing the Southern Cross constellation projected on a map of South America in the book *Amereida* (Ediciones e[ad], 1967, p. 35). Courtesy of the publisher, Valparaíso, 2022.

vivir en los contornos de una figura
frente a su mar de dentro
es nuestro modo
huir
o enfrentar
es guardarnos
incursionarlo
o andar por él
desde y para otra parte
que sí mismo
es no aceptarlo
un mar interior se abre
para nuestra consistencia ¹

¹ A fragment of the Poem *Amereida* (Ediciones e[ad], 1967, p. 23). The text distribution through the horizontal axis of the page and the absence of upper case letters comes from the book's original layout. My translation: "living in the contours of a figure/ in front of its interior sea/ is our way/ scaping/ or facing/ is keeping us/ venturing into it/ or walking through it/ from and to another part/ that itself/ is not accepting/ an interior sea is opening/ for our consistency".

1. BACKGROUND

1.1. Architecture: structure and articulation

Before starting my music training in Santiago, the capital of Chile, I had in the same city a brief period of studies, between 1997 and 1999, at the school of architecture at the Pontificia Universidad Católica. This initial creative stage of my career was fundamental for learning some cues that define a work of architecture. Summarizing, these cues address the question of what 'inhabiting' is. One of the most important ideas that I learnt as an architecture student was the hierarchical distinction between 'structure' and 'enclosure'. The structure is fundamentally the skeleton that keeps the building standing, while the enclosure corresponds to all kinds of articulations that complete the building: pilasters, windows, decorations, internal walls, etc.

Figures 0.1 and 0.2 show a comparison between classical and modern architecture and the differences between structure and enclosure. At the left, the Agrippa's Pantheon in Rome (First century AD) shows that the skeleton of the building contains the elements of the space articulation as the oculus, the domus, and the cell. At the right, Le Corbusier's Domino House (1914) demonstrates the modernist separation between the structure and the enclosure: while the structure is an autonomous category and it's made of floor plants, columns, and staircases, the enclosure (still not constructed in the example) can be made with windows, façades, internal walls, etc.

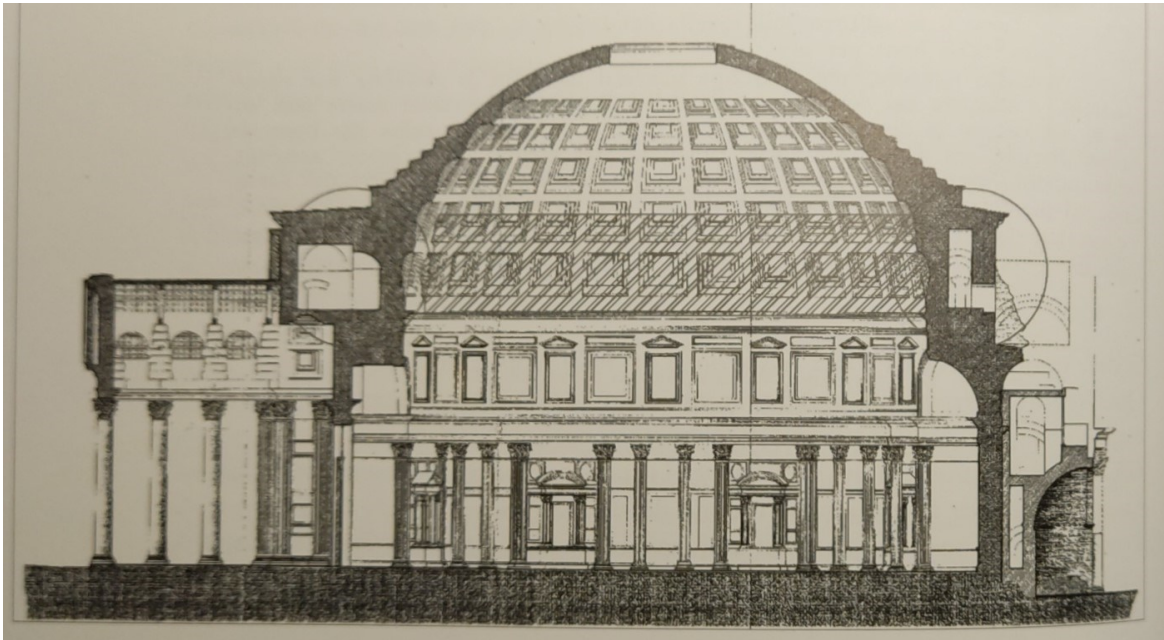


Figure 0.1. The Agrippa's Pantheon in Rome. Longitudinal section In Belardi, G. (2007). // *pantheon, storia, tecnica e restauro* (p.132). BetaGamma. Courtesy of the publisher.

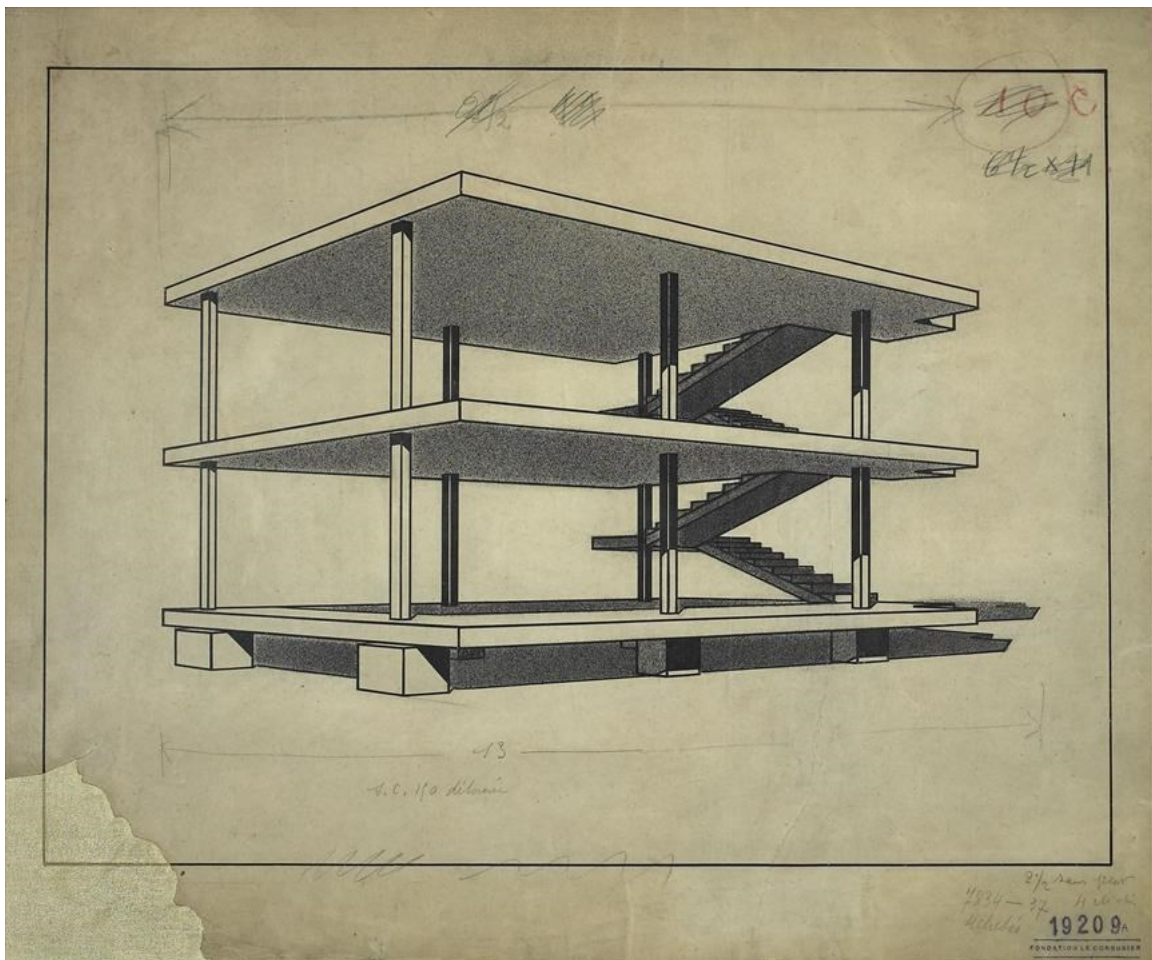


Figure 0.2. Le Corbusier's *Dom-ino* House (1914). By kind permission, © F.L.C. / ADAGP, Paris and DACS, London, 2022.

The binomial structure/enclosure has a consequence on the inhabitant's experience. Extending this principle to the acoustic dimension, I consider the listener's perception like an interaction between the music structure and the articulations of such structure. Therefore, my work as a composer was linked with this distinction. This allows me to conceive music composition as realities configured by acoustic elements or, in other words, like 'sonic places' or acoustic realities that listeners perceive as physical spaces that are travelled by an inhabitant. This analogy provided an initial approach to imagining music in visual and spatial terms rather than a purely acoustic reality.

1.2. Influences on configuring a compositional approach

In 2006, I moved to Italy, where I continued my studies at the Milan Conservatory and the Accademia di Santa Cecilia in Rome. My experience with the composers Ivan Fedele (b. 1953), Alessandro Solbiati (b. 1956), and Gabriele Manca (b. 1957) helped me to create specific strategies or mechanisms for projecting well-structured sonic textures. In Italy, my interest in compositions with a timbral approach addressed sonic densities with a clear sense of evolution. For example, I was particularly fascinated by *Lux Aeterna* (1966), a piece by György Ligeti (b. 1923 – 2006) with an exceptional construction on a limited pitch palette and precise micro-canonical techniques that generate a deep spatial character with a clear trajectory linked to the use of registers.

Another milestone during my studies in Italy was the approach of Salvatore Sciarrino (b. 1947). His new and fascinating vocabulary of instrumental techniques impressed me, alongside his use of graphics, as a fundamental way to achieve an overview of his compositional process. While my architecture studies influenced my interest in the perception of an inhabitant-listener who travels through sonic places, the approaches of Sciarrino and Ligeti brought me to a concrete definition in terms of compositional techniques

and construction tactics. Together with these elements, another important component during my training was the thought of Helmut Lachenmann (b. 1935). His reflections and questionings about taxonomies, syntaxis, and historical-cultural connotations of materials, stimulated new developments in my compositional approach, and alternative conceptions of my methods and issues.

1.3. Rethinking of periphery and scarcity

Once I finished my studies in Italy, I started to work in various artistic residences in France, Finland, Peru, Bolivia, and Italy as well. My projects addressed a reflection on the place in which the residence was developed. For example, my works outlined the question of inhabiting a building, a landscape, or a human settlement. Inhabiting was analysed in terms of the acts and situations that happened in physical places, understanding acts as the way in which people lived within. My artistic residencies in Peru and Bolivia represented a turning point regarding my interests and inclinations, bringing me back to Latin America and particularly allowing me to focus on issues that I didn't considered during my training. My work at remote landscapes as the Titicaca lake or the Altiplano, made me think that it could be worth exploring other issues and approaches, integrating my practice with topics derived from pre-Columbian cultures such as social relationships or rituality. Thinking of Latin America was a way to generate a personal contribution in the sense of a peripheral position, acting at the outskirts of the cultural, economic, and intellectual centre of our civilization. The Russian-American poet and Literature Nobel Prize Joseph Brodsky (b. 1940 – 1996) synthesizes this approach in the following statement:

Because civilizations are finite, in the life of each of them comes a moment when centers cease to hold. What keeps them at such times from disintegration is not legions but languages. Such was the case with Rome, and before that with Hellenic Greece. The job of holding at such times is done by the men from the provinces, from the outskirts. Contrary to

popular belief, the outskirts are not where the world ends, they are precisely where it unravels. That affects a language no less than an eye (Brodsky, quoted by Handford, 2000, p. 346).

During my work in Latin America, the thought of the architect and Pritzker Prize winner Alejandro Aravena (b. 1967) stimulated several aspects of my projects, particularly regarding periphery and scarcity. Aravena, who was also my teacher during my studies of architecture, has developed a vast trajectory in social housing, where economic and legal restrictions have prompted him to focus on flexibility in his methods combined with an aspect of irreducibility in his projects (Garlaza, n.d., p. 10). Furthermore, his approach criticized the idea of novelty, proposing an alternative focus on the notion of resistance to time:

The project which is too modern, trendy, will of course be accepted, but it is less likely that it will withstand 150 or 200 years. It is a question of physics and materials, the question of structure. More and more we seek to start the projects from structure. We strive to provide the resistance to time, even from the objective, material point of view of the structure. Given that, when the forces are in play, either seismic or gravitational, you have no choice but to come to terms with them, while with the milder forces there are still degrees of freedom in the interpretation.” (Bonono, 2016, p. 108, 112).

Years later, I met Liza Lim (b. 1966), which would help me rethink Aravena's ideas in a more specific artistic dimension. Lim's position on how music can embody, for example, power relationships, has made me think of timbre not as an element sought in itself but as an abstraction of the issues addressed in my projects. Such a reflection stimulated me to search for sonic abstractions focused on 'acts' as a tactic to address a notion of timbral dramaturgy.

1.4. The timbral expansions and influences

The writing of my chamber opera *Moebius* (2015, 2016) ² and its interdisciplinary exploration led my interest to composers whose sonic exploration is at the centre of projects with multiple dimensions working together.

A first example is Rebecca Saunders (b. 1967), whose works radically focuses on timbre and colour rather than pitch or melody. Her music appears as propositions of *chiaroscuro*, gradation, blending, shadows, and colour expansions. Such terminology suggests metaphoric connections with visual aspects rather than only musical ones. (McMullan-Glossop, 2017, p 495).

Another composer who proposes expansions from the sonic field is Chaya Czernowin (b. 1957), especially in large scale works where she displays a rich timbral palette that I perceive as sonic pathways with a vast vocabulary of breathing and spoken words. Czernowin looks at a dramaturgical dimension that she describes as the "sharing of emotions" (Czernowin, 2015 p. 449). Her research expands compositional concerns to music theatre and opera projects such as *Hear Chamber* (2019) or *Infinite Now* (2017).

Prometeo, Tragedia dell'ascolto (1981-1985) represents a milestone in the career of Luigi Nono (b. 1924 – 1990). This work constitutes another relevant influence on my timbral conception, inspired by the close link between sound and architectural construction built in *Prometeo* with the collaboration of architect Renzo Piano (b. 1937). Nono's clean and archaic vocal approach stimulated the austere and contemplative treatment of voices in the central sections of my piece *Aswalaq, Human Zoos*.

² A complete performance of this work is available on my website www.macontrerasv.com. An English trailer can be found here: <https://youtu.be/XgM3HfgpkoA>

Pierluigi Billone (b. 1960) is a direct heir to Helmuth Lachenmann's compositional approach that explores the timbral qualities of instruments in depth. In my research, Billone's perspective is a starting point that influences my sound exploration oriented towards the construction of timbral dramaturgy, especially in projects like *La Furia del Ermitaño*, *Lidio*, and *Los Ojos del Pueblo acusan al estado terrorista*.

At the beginning of my Ph.D., composer Mary Bellamy (b. 1971) asked me how to imagine timbre. Her question refreshed something present in my practice since my undergraduate studies as a way to reflect on modelling timbre through aspects such as orchestration and a combination of techniques. My answer outlined how these aspects address sonic experimentation incrementing the communicative capacity of my practice. Bellamy's question was another stimulus to look for a notion of dramaturgy in my pieces.

The multiple dimensions operating in a project (stage design, movement, sound, text, and so on) guided me to a timbral approach in which sonic places expand toward dramaturgy by incorporating aspects from architecture and theatre. My projects translate the architectonic idea of inhabiting to conceiving the perception of music as one or various 'acts' of the listener who travels through the sonic places proposed in my works.

Furthermore, the expansion toward theatrical aspects is influenced by the ideas of dramaturgists such as Romeo Castellucci (b. 1960) and Tadeusz Kantor (b. 1915 – 1990) and their radical questioning of the spectator's perception conformed by theatrical elements treated like ruins (De Laet & Cassiers, 2015, p. 21; Kobjalka, 1986, p. 170). This idea is also present in Lachenmann as 'musical ruins' (Dyer, 2016, p. 39).

2. HYPOTHESIS: THE EXPANSION PRINCIPLE

The experiences mentioned so far brought me to undertake my Ph.D. firmly anchored on the timbre as the core element in my research and, from there, seeking links towards the necessary dramaturgical aspect for the growth of my practice as a composer. This process involves interdisciplinary tools that open my work to a synergistic perspective. I hypothesize that this growth affects my criteria, my methods, and my interpretations, and this is my way of understanding an expansion principle.

Between the timbral and the dramaturgical dimension of my projects, the expansion shows two main characteristics with specific consequences in my methods and approach:

- The expansion occurs with elementary tools. Working with handmade devices allows me to control the information flows on paper and to visualize the various angles of my projects. My idea of a device can be physical or logical (as a scheme of thought), and I name it 'cartography': a navigation chart with drawings, notes, diagrams, or a combination of tools during the creative process. Cartography stimulates the imagination of timbre and the organization of materials, developments, and considerations about the listener's perception.
- The expansion operates with a flexible system. My timbral exploration addresses dramaturgy by an approach that associates certain aspects of my projects with four categories to organize the materials of the works and their evolution. These categories, which I name hierarchy, geometry, density, and pathway come from the architectural distinction between structure and enclosure and propose a flexible application of general criteria.

3. THE RESEARCH QUESTIONS

The research questions that guided the various projects in this portfolio emerge from three fundamental premises:

1) Considering the listener as a human being that discovers and inhabits sonic places, one could think about 'inhabiting' as something multidimensional by expanding the concept to discovering and experiencing a physical or visual dimension:

- What elements make up the timbre and the sonic places that emerged from this conception?
- How do these sonic elements behave if addressed to other dimensions beyond timbre such as non-musical disciplines or issues?

2) Understanding timbre as the factor that configures the sonic places and cartographies:

- With what resources is the timbre imagination developed and organized to form pathways within these sonic places?

3) Inhabiting and traveling through sonic places involves an idea of an act, which determines my dramaturgical conception of timbre:

- What aspects bring into play to treat the acts as elements of timbral dramaturgy?

4. THE AIMS

These premises and research questions lead me to formulate the following objectives:

- To deepen a compositional approach with a strong emphasis on timbral exploration, in order to create a substantial body of works of various scales, forces, and configurations.

- To explore alternatives for the structural hierarchy of musical and interdisciplinary projects, in order to discover new strategies for sonic organization and relationships between its components.

- To generate connections between musical composition and dramaturgy as a result of interactions between sonic, visual, literary, theatrical, and spatial aspects.

CHAPTER ONE

WORKING METHODS

1. THE IMAGINATION OF TIMBRE

Throughout the PhD, my compositional approach has been gradually shaped by connections between musical aspects and contributions from other fields of knowledge. These connections could be understood as expansions, fundamentally from timbre toward my personal notion of dramaturgy. The imagination of this process has connections with Lachenmann, particularly with his conception of sound events as phenomena with the potential of expanding in different ways and beyond the dimension of colour:

Orthodox serialism has worked with parameters that one could certainly treat, but which remain more or less sterile regarding durations, pitches, dynamics, and, in a particularly limited way, the timbre. For me, composing music means finding, developing, 'mobilizing' more complex qualities that are not only nuanced, graded. Each scale must include a sound aspect that is transformed, which exceeds the control in terms of quantity - a primitive control, like that of a simple cursor along with a series of numbers- which passes, on the contrary, by different sound qualities, or more than sound. Instead of talking about parameters, I prefer to talk about categories or aspects. Because the creative problem is not to discover a new sound or a new arrangement of the sounds, but to activate, to make work a new aspect of the sound, like an element of a syntactic innovation. We often experience a more or less new situation in the acoustic sense, but quite conventional as an expressive situation. In other words: I look at each sound element as a point belonging to an infinity of lines that lead to an infinite number of directions. To compose means to choose and implement its system of new lines, treating this point as a degree of a transcendent scale that transforms and individualizes its acoustic evidence (Szendi, 1993, p.5).

It is worth remarking on Lachenmann's critical position towards the mere idea of sound innovation, focusing his interest on the syntactic aspect and the projections of the acoustic world in different directions and ways. His statement reinforces my hypothesis regarding timbral expansion as the core of a new perspective of sound that I will investigate.

2. CATEGORIES

Since the beginning of my career, the elements of architecture have influenced my creative thinking. This influence manifests in linking both disciplines through a categories system studied during my architecture studies and after personalized during my compositional trajectory. During the PhD, the following description of four categories helped me to imagine timbre, combining elements and strategies to think about different nuances of the sonic construction. I consider my categories as a working method because I use them to orientate my compositional decisions to configuring timbral dramaturgies.

These categories operate simultaneously at different levels within a compositional process. It is not a rigid system that applies to all works, so they change their scope of influence according to the characteristics of each project in the portfolio. Furthermore, one or more categories can contribute to the conception of the same element within a work.

The first two categories – hierarchy and pathway – refer to a more global aspect of each work in the portfolio, while the last two categories – density and geometry – contribute to a more precise definition of specific aspects of each piece. Rather than discriminate between 'first' or 'second order' categories, such distinction demonstrates the flexibility of the system and its capacity of displays the compositional imagination from complementary perspectives and scales. For example, the aspects involved in the project's hierarchy or pathway can be understood as a result or as the combination of operations conceived from geometry and density acting together. Moreover, the flexibility of categories allows me to include visual, choreographic, literary, or theatrical elements in my projects.

2.1. Hierarchy

I understand the hierarchy of my pieces following the differentiation between structure and articulation explained in the introductory chapter. This category allows me to distinguish essential elements from complementary aspects which underline or reinforce certain qualities of behaviours within each project. On one hand, hierarchies could help to identify general criteria or main procedures from where the other mechanism or strategies will emerge. On the other hand, this category operates with a statistical criterion to identify elements that prevail during the piece. I perceive Liza Lim's *An ocean beyond earth* (2016) as an example of structure and articulation with dramaturgic results. Here, the (non-sonic) irreducible and structural factor is the distance between the cello and the violin, connected by a cotton thread between both instruments. This thread builds the tension from which the sound events emerge, such as bowings, silences, or sounds produced by contact with the strings. Such sound events have the role of articulation and nest a dramaturgical and visual expansion of the piece.



Figure 1. Séverine Ballon playing Liza Lim's *An ocean beyond earth* (2016). Courtesy of the ELISION Ensemble, 2022.

2.2. Pathway

This category addresses our travel through sonic places. Therefore, what distinguishes the pathway is that it contains an idea of movement and perception through the sonic places within a work. From an architectural perspective, movement is necessary for perceiving the space and its various parts (Toro, 1997, p. 3). While architecture uses internal limits such as walls, pilasters, or balconies to model the physical space and the inhabitant's movements, music uses transitional spots to remark, transform or connect zones through the piece and organize the listener's journey. In her orchestral work *Zohar Iver* (2011), Chaya Czernowin shows clear acoustic spaces delimited by textural contrasts and changes in the combination and characteristic of timbre. The titles of each section remark such delimitation in the score. Toward the third part of the piece, a section called *Suspension* contrasts with the predominant texture of the work by its long suspended masses that freeze the listener's experience as if an acoustic obstacle blocks the journey through the piece.

2.3. Geometry

Unlike the pathway's emphasis on the listener and its perception, geometry places its accent on how sonic places are organized from a topographical aspect of events that evolve in time, whether by a linear (horizontal), simultaneous (vertical), or overlapped (oblique) position of their components. Horizontal geometry describes events as pedals, sequences, resonances, sustained sounds, or insistent pulsations. Vertical geometry illustrates elements such as sonic blocks, chords, clusters, *sforzato*, *acciacatura*, and repeated fragments. Oblique geometry combines horizontal and vertical situations to generate events as sound clouds or fragmented textures. The evolution between the initial and central section of Mary Bellamy's *Beneath an ocean of air* (2017) could be an example of two geometries interacting in the piece. The first one is oblique, notated graphically (especially on strings), and manifesting as an unstable and oscillating texture. The second geometry in

this piece is horizontal and appears as long notes or pedals working as brief stops in the sonic flow.

2.4. Density

This category involves the quantity, variety, and distance between events. Distance is a fundamental element that sonically refers to the silence or differences in dynamics. The relationships between density and distance may emerge as the depth of field or how far or close the events appear to an observer/listener. Moreover, density refers to generating contrasts, accumulations, vanishings, or emptiness. Rebecca Saunders' *Vermilion* (2003) makes extensive use of silence and declension, creating an illusion of *sfumato* where the instruments merge, enter, and disappear in a game of depths of field articulated by pauses and resonances (McMullan-Glossop, 2017, p. 512).

3. WORKING WITH CARTOGRAPHIES

3.1. An orientation exercise

My categories were applied to configure timbre and generate bridges with other dimensions as dramaturgical situations and elements that involve spatial and visual aspects. This passage requires a greater fluidity to work with the various aspects of my projects, addressing them as the imagination of the listener's navigation. This conception unfolds as a mapping of the multidimensional world created in each piece: an exercise of orientation. To do this, I worked on the idea of cartography. As a consequence, I had a clearer vision of what happened while I was working on the paper, where decisions emerged from the preparatory sketches to the manuscript, and while I was dealing with other factors such as obtaining a general directionality of music textures or the construction of internal coherence of the pieces.

3.2. A scheme of thought

The cartographic approach is a scheme of thought aimed to cover the entire project or a considerable portion of it with a reduced amount of tools and decisions. This exercise is not only a preliminary sketch that I left once the project departs with it many stimuli appearing simultaneously and often quickly. Therefore, my cartographic approach does not aim to define all topics when the project begins or at its first stages. On the contrary, I constantly go back to cartographies during further stages of the compositional process, just as maps are consulted and adjusted during navigation, considering complementary instruments to observe and measure the landscape. Cartography and its complement of categories constitute an attempt to make my thoughts intelligible to myself and to orient me within the project. Cartography, as systematization, aims to frame the contents that the projects address.

3.3. Impact and the various forms a cartography can take.

The cartographic approach shows the various factors of the project interacting together and emerging around sonic considerations to configure a synoptic perspective, impacting the works through different ways and levels: manuscript, interdisciplinarity, form, and dramaturgy. The appendix video of this commentary shows further details regarding the impact of the cartographic approach on the portfolio.

Manuscript

The cartographic approach may coincide with the elaboration of the manuscript of the work. In this case, it stimulates connections between distant points within a piece to achieve greater internal coherence. While in *Aswalaq* (see page 61), the cartographic approach uses big sheets of paper to observe the project on a large scale, *Taiken* (see page 161) inverts this action to generate a contraction of the entire composition on a single piece of paper.

Interdisciplinarity

Cartography can also be deployed as a multidimensional device to organize collaboration with other practitioners and the information flows between sound elements, visual-graphic explorations and spatial observations, expanding the composition from musical notation to the conception of an installation-stage design, as described in *Ddūwéwé* (see page 82).

Form

Cartography maps the issue of the project to generate translations into formal schemes at various levels. Three examples demonstrate this: Firstly, the tripartite structure and the definition of sonic limits in *La Furia del Ermitaño*, as explained on page 104. Secondly, the

characterization, balance and concatenation of orchestral textures in *Shunya* (see page 145 – 150). Thirdly, the translation of a poem and its structure to the internal configuration of the sonic places in *plano de levantamiento* (a detailed example of this translation appears in Chapter Three, Figures 3.3 and Figure 3.4, pages 140 to 142).

Dramaturgy

The works of the portfolio share a condition of a connector between timbre and dramaturgy. The cartographic approach unfolds as a mapping of relationships through sonic elements that directly allude to the project issue and remains through the creative process - like ruins - to become dramaturgical elements.

Such a phenomenon emerges with particular force in *Los Ojos del Pueblo* (page 152), where cartography navigates the composition's issue of the Chilean social outburst in 2019. The result is a concatenation of dramatic, concise and emphatic peaks as a metaphor for a political manifesto.

In the case of *Lidio*, graphics and drawings explore an increasing dramatic tension oriented toward a final section with gestures of performers on the stage and their sonic and theatrical consequences. The timbral dramaturgy of this piece is the result of sonic interpretations of the last poem of the songwriter Victor Jara a few hours before his execution (see page 155).

3.4. Graphic approaches of reference

The overall view of my cartographies finds similarities with composers such as Salvatore Sciarrino and his graphic sketches, which represent a way of dealing with the form and musical language. Sciarrino's graphics explore detailed aspects regarding pitches and

rhythm but have a general tendency to concentrate the essential elements of each piece in only one or very few sheets of paper (D'Angelo, 2018).

Musical discourse proceeding through complex wholes is mirrored in Sciarrino's peculiar composition method. For him, the layout of a score in traditional notation - always with very beautiful and careful handwriting - is preceded by a graphic-visual project (which he calls "flow chart") allowing synthetic control of the form and highlighting the relationship between the construction and space (Misuraca, 2012, p. 75)

In general terms, Sciarrino defines his graphs or flow charts as structured yet flexible guides that can take on various physiognomies and levels of detail:

The flow charts are very after the idea and represent a point of arrival. These come into play in the realization of the project. That does not mean that changes or new solutions are impossible, but they are more like a structured guide, which should never be applied mechanically, but which has a form. There are different types, some more abstract, others schematic: graphic, symbolic, or similar to a dried-up score. As I tell students, it takes a long time to make them your own, to use them as a means of writing without being a slave to them (Petracci, 2017, my translation).

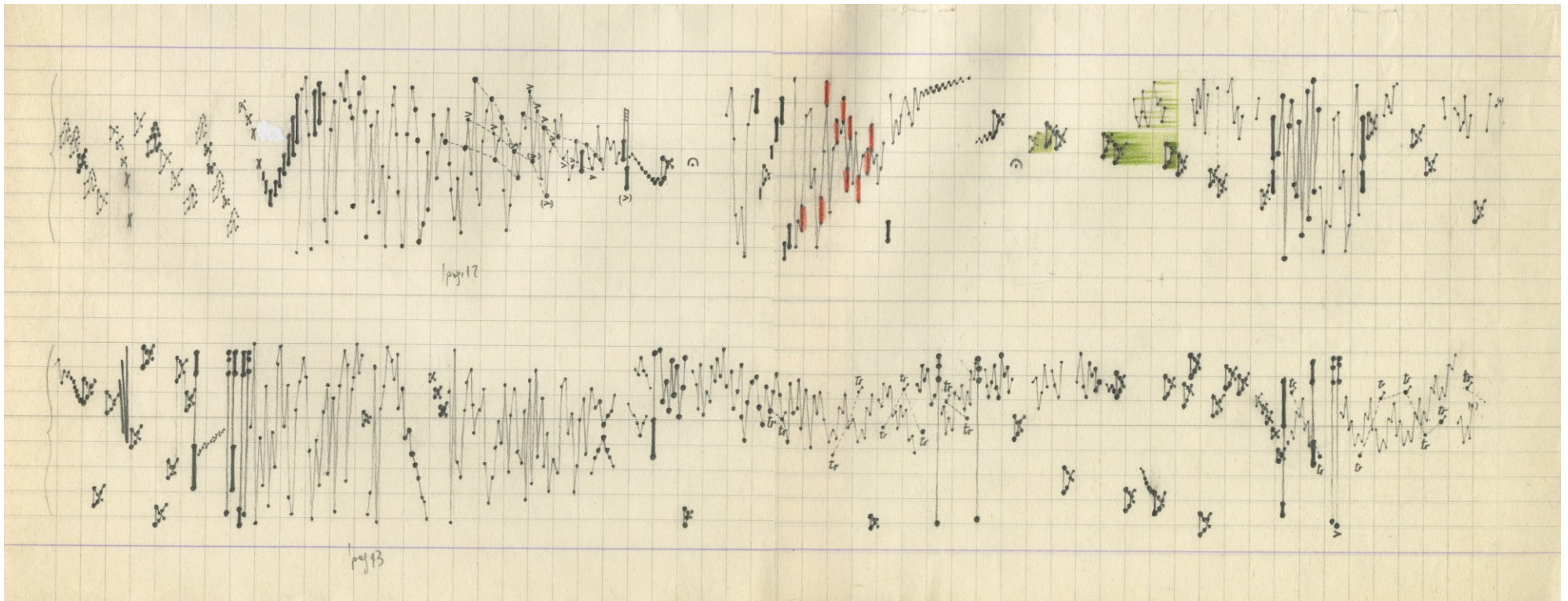


Figure 1.1. Sciarrino, S. (1988). *III Sonata*, diagram, sheets 1-4, [autograph]. Archivio Storico Ricordi, Milano. Courtesy of the publisher, Milan, 2022.

In his doctoral thesis dedicated to Sciarrino, Carlo Carratelli describes some of the composer's graphics. Among them, he offers the following example taken from the orchestral work *Il paese senz'alba* (1977), in which Carratelli observes (italic characters in the quoted text):

Above all, the diagram clearly shows the *relationship* between musical elements, the articulations between events, their emergence or disappearance, discontinuities, or persistence. Furthermore, the staff placed underneath in correspondence with each system is a helpful tool for, already now, sketching the harmonic configurations that will characterize each event during the writing of the score (Carratelli, 2006, p. 147-148, my translation).

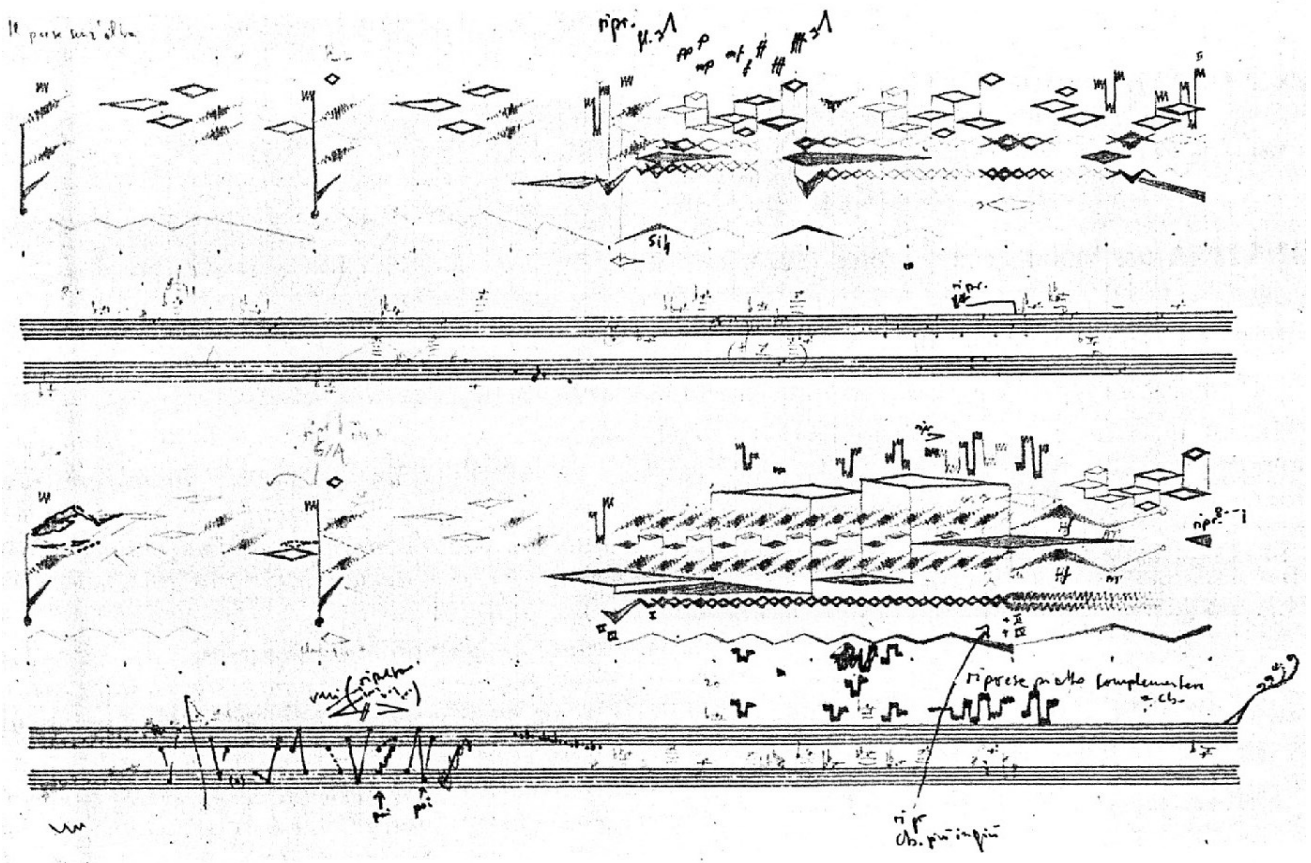


Figure 1.2. Sciarrino, S. (1977). A page from the preparatory diagram of *Il paese senz'alba*. By the kind permission of Paul Sacher Foundation, Basel, 2022.

Another important reference in line with my idea of cartography is composer Iannis Xenakis (b. 1922 – 2001), who developed a deep connection between architecture, music, and mathematics. Like Sciarrino, Xenakis takes drawings to do a progressive exploration through the various strata of his works (Kanach, 2002, pp. 191), investigating multiple and simultaneous dimensions in his projects:

I had to organize this new material. It was natural for me and advantage over other composers was that I could design much easier for me to use a graphic approach to music than the classic notation with which I had never been able to see everything at the same time, as you do on a graph (quoted in Kanach, 2002, p. 191).

Metastasis (1953, 1954) is the first orchestral work of Xenakis and is an example of how a graphic approach informs a global thought in the composition process. In figure 1.3, the graphic score shows the evolution of string sections of this piece where gradual *glissandi* expand the register to create a massive texture of sound. Figure 1.4 shows a detail of the closing *glissando* of figure 1.3 by the contraction of the texture. In this case, the vertical axis indicates pitches from which *glissandi* starts, while the horizontal axis shows the various durations and velocities of the movements through the register.

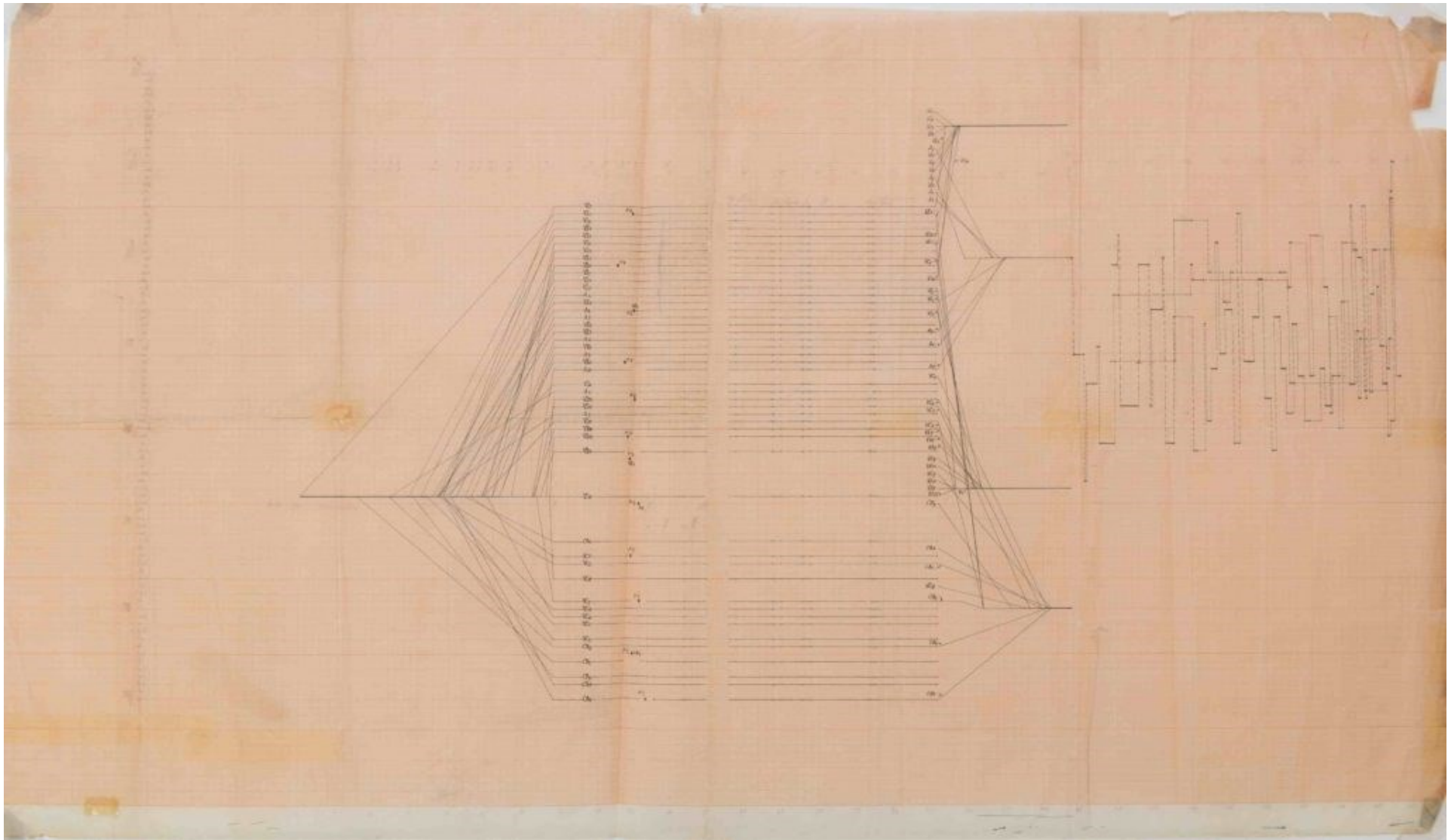


Figure 1.3. Xenakis, I. (1953, 1954). *Metastasis*, partition graphique sur papier millimétré, OM 1/5 p. 8. In *Coll. Famille IX DR, Archives Iannis Xenakis*, © *Les Amis de Xenakis*. Courtesy of Mâkhi Xenakis and Etienne Assous, Paris, 2022.

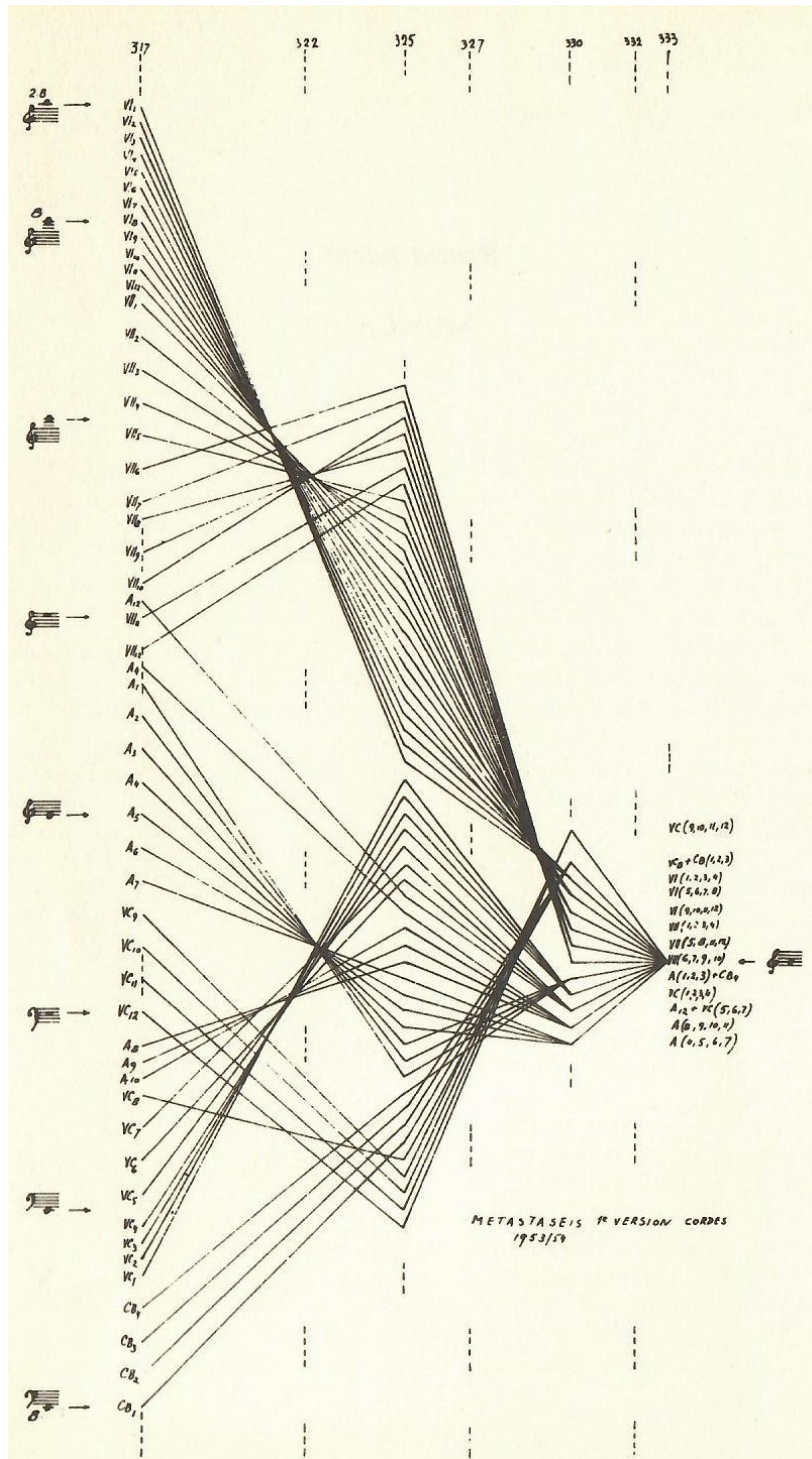


Figure 1.4. Xenakis, I. (n.d.). A detail of the graphic score for *Metastasis*. In Xenakis, I. (2003). *Musica, Architettura (3rd ed.)* (p.10). Spriali, Bologna. Courtesy of Mākhi Xenakis and Etienne Assous, Paris, 2022.

As figure 1.5 shows, the composer and architect translated some of these elements in his space research for the *Philips Pavilion* of the Universal Exhibition in Brussels (1958). The incipit for such explorations was the imagination of a stomach (Xenakis, 2003, p. 103).

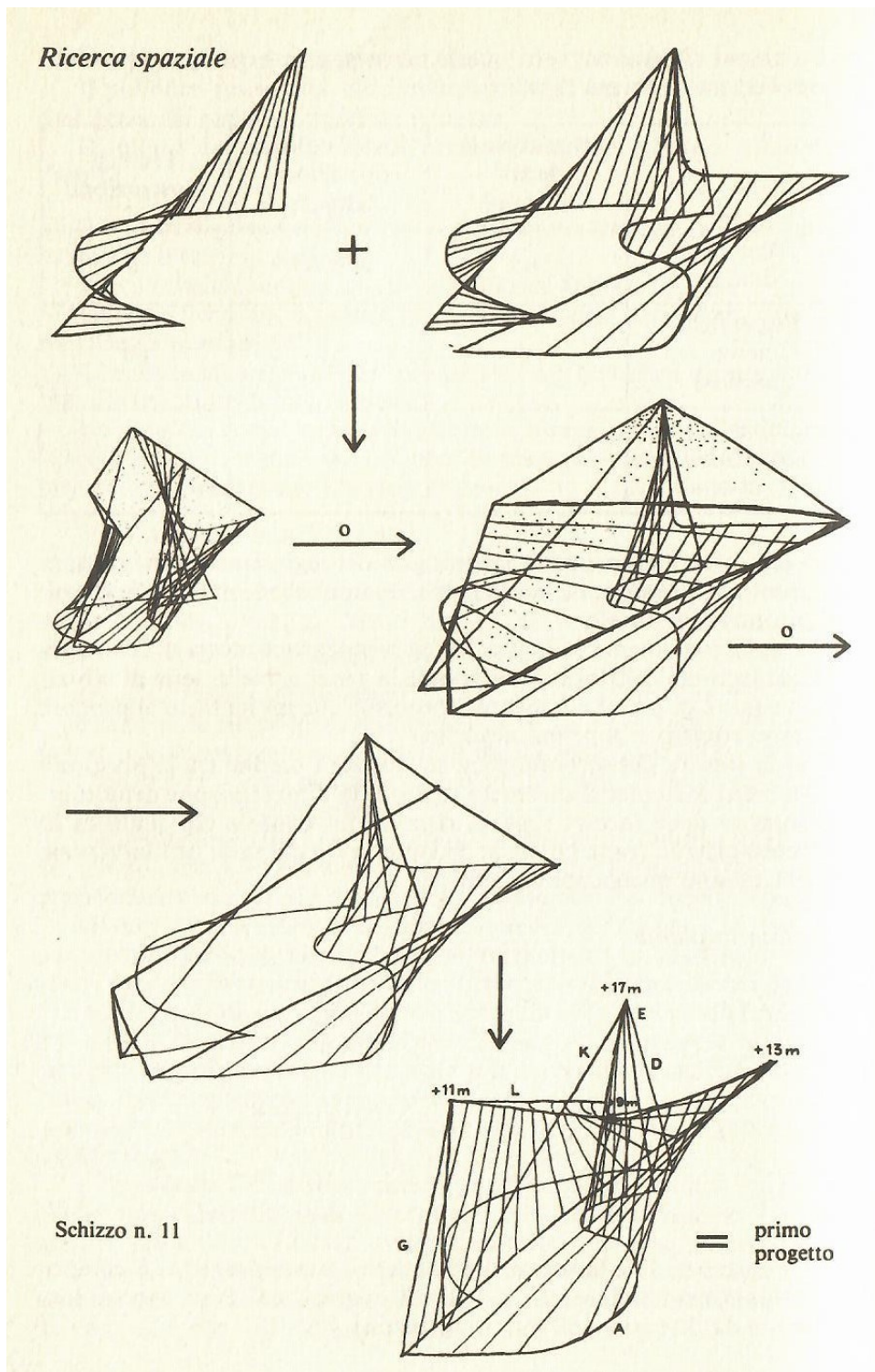


Figure 1.5. Xenakis, I. (1956). Spatial research on hyperbolic paraboloids for the Phillips Pavilion (Xenakis, 2003, p. 104). Courtesy of Mâkhi Xenakis and Etienne Assous, Paris, 2022.

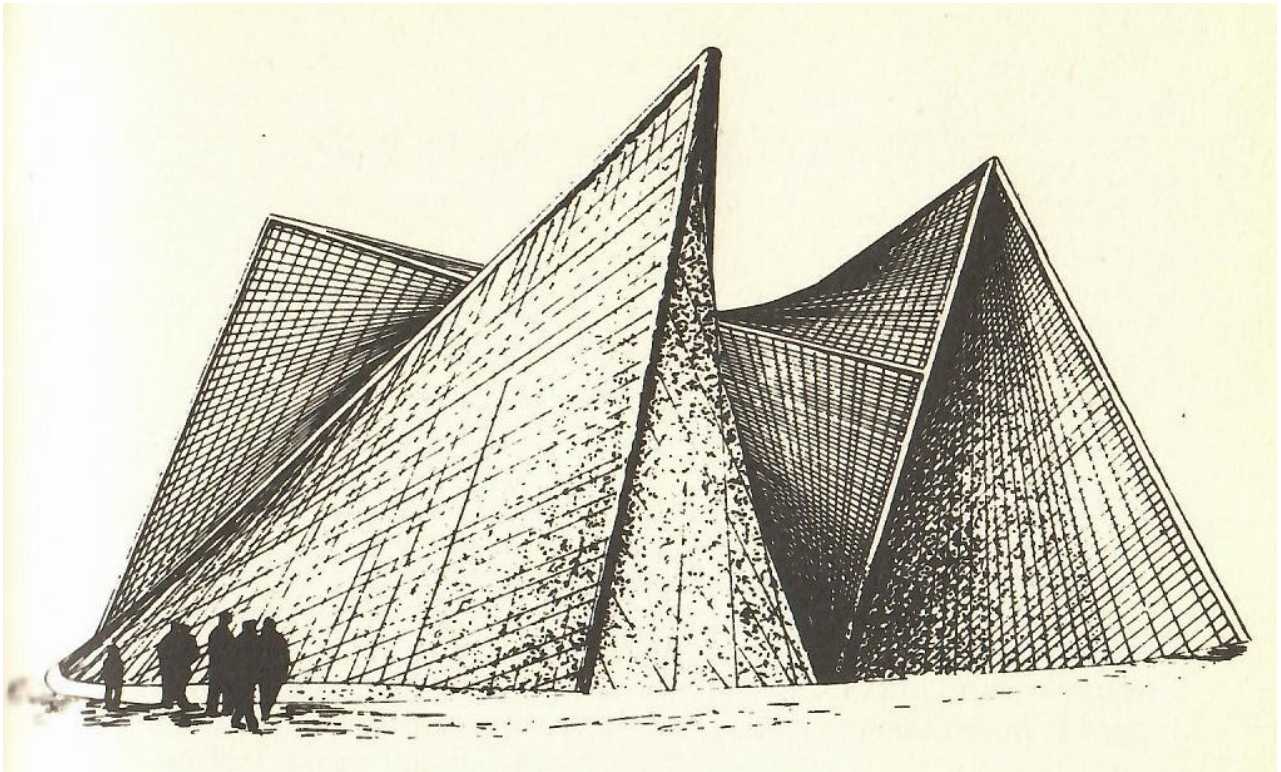


Figure 1.6. Xenakis, I. (1956-1957). Phillips Pavilion for the Universal Exposition in Brussels (Xenakis, 2003, cover page). Courtesy of Mâkhi Xenakis and Etienne Assous, Paris, 2022.

4. ADDRESSING TIMBRAL DRAMATURGIES

4.1. The reality, the act and the text

My approach to dramaturgy collects the ideas of reality, act, and text from architecture and theatre. These disciplines face, model, or reflect a phenomenon with the expressive means that characterize them. Architect Alejandro Aravena explains how reality is addressed, for example, by a project of architecture:

Gravity is a fact.

The water cannot avoid gravity, is another fact.

In the same way that the force of [the] gravity makes that water always find a way to reach the ground, accusing in its path the fissures of the construction, the divergence of the construction elements, thus the force of reality always ends up accusing the divergence between the project (what was imagined that it would happen) and life (what actually happens) (Aravena et al., 1999, p. 13, my translation).

Aravena's observation states a matter of fact - the draining of water as the result of gravity - whose manifestation reveals the conditions of a place where this draining happens. In a project, the interactions between materials, techniques, and behaviours try to nest what Aravena calls 'the force of reality' by focusing on what is actually happening in a physical place. Among other approaches, architecture undertakes this question with the notion of 'act':

During the traveling of space, a person performs many movements. In addition to moving, for example, this person slowly walks, hurries, stops, turns back, turns, goes down, goes up, starts again, walks in one direction and looks in another, gets tired and sits down, etc. All these movements are developed alone, in small groups, or moving in large masses, constituting different "acts" performed in space (Toro, 1997, p. 3, my translation).

Such definitions of reality and act fit with what my pieces address sonically (considering, as Aravena, the divergencies between the resulting composition and the reality nested by the project). Assuming its intrinsically physical dimension, the notion of the act appears to me also as language's construction: a statement or, more specifically, as a text: this is a fundamental step in shaping my notion of dramaturgy. No matter the level of abstraction or figurativeness of a text, whether it contains acts or is possible to deduce acts, we can obtain an idea of a movement, a gesture, or a behaviour. Theatre director Tadeusz Kantor expresses that a dynamic condition of a theatrical text emerges when interrogating the notion of finished form and fixed elements such as a climax or a finale, so the theatrical practice is an exercise of constant attempt that leaves the construction of a form and its content in the audience's hands. (Kobialka, 1986 p. 155). I could connect the openness of Kantor's approach and its idea of actors manipulating a text (Kobialka, 1986, p. 120) with the flexibility of my expansion principle. Kantor also outlines that manipulation of texts and actions is an essential element of theatre:

In my last production (*The Madman and the Nun*) a dramatic text is not presented but discussed, commented upon; the actors speak the lines, reject them, return to them, and repeat them; the parts are not assigned thus, the actors do not identify with the text. The performance turns into a mill grinding the text (...) In order not to destroy the text during this process, the text and the action must be exposed. This seems to be impossible to achieve from the perspective of life's practical requirements. In art - and in this case in theatre - as a result of our action, we will create a reality whose elements will be loosely connected; which will be easy to mold. This act of nullification of actions, of placing them in the state of weightlessness, of juggling with them, allows us to intertwine them with pure theatrical activities, which are elements of theatre (Kobialka, 1986, p. 120).

A reread, transformed, or recurrent journey through the text addresses what Kantor points out as 'life' and can substantially correspond to what I identify as an act, or what Aravena points out as 'the force of reality'. The corpus of knowledge of theatre, architecture, or music operates upon this life, either to nest it, amplify it, or even reject it, in order to visit a new reality (upper case and italic letters are in the quotation):

Theatre is an activity that occurs if life is pushed to its where all categories and concepts lose their meaning and right where madness, fever, hysteria, and hallucinations are the last barricades of life before the approaching TROOPS OF DEATH and death's GRAND THEATRE. This is my definition of theatre, which is poetic and mystical. But this is the only way one can think and talk theatre. This is why my theatrical activities cannot be classified according to any rational or pragmatic categories that are used to describe naive or academic exercises in theatre activities. True theatre activity is *creation* which is deeply rooted in the "world beyond" (Kobialka, 1986, p. 170).

4.2. Dramaturgy through the ruins

One of the crucial elements of my compositional thinking is the characterization of sound events as points with infinite origins and projections, as Lachenmann stated (Szendi, 1993, p.5). Therefore, my projects investigate multidimensional, dynamic, or even chaotic realities, with a kaleidoscopic view where my timbral construction tends to demolition. Alongside Lachenmann, a referential figure for me is dramaturgist Romeo Castellucci, who treats theatrical elements as a landscape in ruins. Also defined as iconoclastic due to its intense

provocations, his practice addresses body, text, sound, and narrative elements by decomposing performances to disorganize the audience's expectations, so the process of ruining is a way of interrupting the laws of theatrical representation and questioning what theatre should communicate (De Laet & Cassiers, 2015, pp. 19, 20). Castellucci engages this question from the perspective of ruin:

In this sense, Castellucci's ostensible ruination of body, language, sound and so forth does not herald the obsolescence of theatre as a medium, but rather reinvents its constitutive elements in order to achieve what is arguably the most ancient and everlasting aim of theatrical practices: to make an alternative reality present to the beholder's eye (De Laet & Cassiers, 2015, p. 21).

As fragmentation of materials and structures, ruination appears in music as well. Helmut Lachenmann's *Salut für Caudwell* (1977) is a guitar duo described as a case of ruination in an article by Mark Dyer. Among other aspects, Dyer defines *Salut* as an example in which the musical language of the piece appears obscured, distorted, rhythmically fragmented, and dynamically contrasted, generating a tension between its experimental nature and its roots in historical traditions such as blues or flamenco (Dyer, 2016, p. 36). Furthermore, Dyer points out that the manipulation of the text in *Salut* (which is declaimed by the performers) constitutes a ruin in which the instrumental techniques deal with the condition of familiarity and distance from the perception, either of the listener or the performer:

Lachenmann forces the performer to confront the spoken word in an unnatural fashion which parallels the unfamiliar instrumental techniques (...) The ruin as a technique is always engendered through the listener's sense of both familiarity and estrangement, as well as the varying parameters used to achieve these. While one parameter might create the allusion of the original material, another is used to undermine it (Dyer, 2016, p. 46).

One can argue that Lachenmann's approach in *Salut* is ruination in the sense of addressing 'reality' by the action of underlining, characterizing, or hitting material. However, for

Lachenmann, the musical material pre-exists, even to the composer's intentions, having an a priori context and an expressive characterization anchored on reality. (Bernal, 2005).

Another case of music engagement with dramaturgy is composer Georges Aperghis (b. 1945), who has developed a practice linked to musical theatre, opera, and other scenic and interdisciplinary pieces. As in the case of Kantor, Castellucci, and Lachenmann, the proposal of Aperghis appears as an exercise of deformation that affects his artistic language consisting of theatrical, visual, and musical elements. In his doctoral dissertation devoted to Aperghis, Professor Daniel Durney argues that deformation embodies a vocal approach based on air notes and various kinds of declamation that head a psychological environment, where the composer's intention is "express through the music more strongly, but less precisely, what a text clearly says" (Durney, 1996, p 5).

In Aperghis' practice, Durney observes that texts and their constant superpositions and deformations constitute elements not only with literary value and dramatic development: through the sonic field, these texts enrich an affective understanding and a psychological environment, reinforcing the portrayal of characters (Durney, 1996, p. 78). However, the apparent 'denial of meaning' as Aperghis himself describes the deformation of sonic, scenic, and literary elements, is an attempt to reach new principles of formal organization and is identified by Durney as one of the most original aspects of the music theatre in Aperghis:

Even in musical theatre, which indeed leaves more margin of freedom, it appears that, what matters overall, is the invention of original structures, the making of a series of relevant elements suitable for receiving a thorough formal elaboration. The constructivist aspect prevails, even there, over the enterprise of negation of meaning. The effort of organization, or rather, of playful reorganization of the linguistic material, thus constitutes the step's finality, and this is what justifies the preliminary upheavals (Durney, 1996, p. 422, my translation).

It is worth observing my approach to timbral dramaturgies through a radical definition provided by Sciarrino. The Italian composer not only works from his flow charts as a structural guide to create music (as explained in point 3.2 of this chapter) but proposes a strong connection between theatre and music by defining his practice not as composition but more like as a way of dealing with theatre:

More than composition, I would speak of my way of understanding theatre, which has a post-cinematographic slant. It is not theatre in the traditional sense but is made up of small space-time shots; it follows the rhythm of the music and dialogues with the same cuts. It is not a widespread setting, but it gives the work precise and rigorous formal scanning. (Pettracci, 2017, my translation).

CHAPTER TWO

COMMENTARY ON COMPOSITIONS

I. ASWALAQ, ZOOS HUMANOS, A THEATRE OF VOICES



Figure 2. González, A. (2018). *Aswalaq, Zoos Humanos*. World premiere in Valparaíso, December 2018.

1. INTRODUCTION

1.1. Issue

Between 1879 and 1889, a group of men, women, and children from native people of Patagonia were deceived and taken from their homes to become part of human exhibitions or 'Human Zoos' (Mülchi, 2017). This composition narrates their painful experience crossing the Atlantic Ocean, the captivity in which they became an attraction in Europe, until their illness and death, and, after 130 years, the rescue of their corpses by their descendants.

Aswalaq develops a timbral exploration in which dramaturgy involves a notion of funerary rituals. The compositional process connects musical elements with the visual and physical dimensions thanks to the use of large sheets of paper during the creation of the manuscript. The work unfolds a pathway of evocative textures and sonic places conceived to nest the act suggested by the text and the milestones of the Human Zoos story. These spaces have been delimited and hierarchised in timbral terms by contrasting orchestration processes. The idea of cartography works as a strategy to build containers where sonic and literary materials of the piece are poured, grouped, fragmented, and reconstituted.

1.2. Collaboration

Another connection with visual and physical dimensions is the collaboration with visual artists Laura Bisotti and Simeón LLicer, who developed an audio-visual device consisting of drawings and a video animation that makes some aspects of the text more explicit to the audience during performances. This device took two forms. Firstly, a video accompanying the performance in Valparaíso as a kind of subtitles. Secondly, a small exhibition with the original drawings placed before the concert on a table as a visual introduction and suggestive allusion to the Human Zoos story before spectators go to the concert hall in Genoa and Milan.³

Visual artists worked parallel to the writing process of the score, following some general guidelines on the texts' contents and the structure that the piece acquired during the creative process.

³ Laura Bisottis' drawings made part of the trailers of these concerts. See Portfolio n. 1.2



Figure 2.1 Bisotti, L (2018). *Aswalaq*. Drawings inspired by the text of the work.



Figure 2.2. Llicer, S. (2018). *Aswalaq*. Screenshot of the video for the premiere in Valparaíso.

2. THE TIMBRAL PALETTE

Aswalaq addresses timbral exploration through four kinds of materials: air sounds, spoken texts, rough sounds, and pitches.

2.1. Air sounds and hierarchy

Air sound is the central tactic for creating timbre and constitutes the principal hierarchical aspect of the piece. The various manifestations of air sounds come from the phonetics of Kawésqar and Selk'nam languages (see figure 2.4 and the link to the audio example) with their slapped and guttural phonemes handled by the compositional process. For example, the timbral exploration with air sounds involves different degrees of vocal opening, from the *bocca chiusa* to the mouth completely open. These variations of air sounds generate blocks, lines, and clouds throughout time, manifesting a dimension of geometry of my working methods.

Air sounds are the only resource that open the piece (Praeludium) and show various techniques of articulation by *glissandi* through the register (a higher or lower intonation of the sound, from the darkest to a brilliant colour of the voice). Similarly, air sounds are the preeminent resource in section 4.2, with a rich palette of trajectories, vocal openings, and oscillation of almost non-pitched sounds. For instance, the 'S' phoneme enriches the ethereal environment by manipulating the amount of saliva, giving a condition of sonic instability that belongs to the second source of the timbral palette: roughness.

Z

S 1
433
p
(Shi _____)

S 2
susurrando /whispering
pp
Ellos son más libres

S 3
p
(Shi)

S 4
susurrado /whispered
p
y a la puesta del sol

A. 1
433
p
osc.
(Shi _____)

A. 2
* mf
(S _____)

A. 3
susurrado /whispered
p
A la Luna
A cada paso

A. 4
susurrado /whispered
p
Después podremos hablarle
(S _____)

* "S" muy sonora, como "si" en Español, con un poco de saliva sobre la lengua. Es una combinación entre silbido y susurro. Pueden producirse sonidos armónicos.
"S" very sonorous, like "send" in English) made with a bit of saliva on the tongue.
Is a combination between whistle and whisper. Harmonic sounds could be produced.

Figure 2.3. *Aswalaq*. Air sounds derived from Kawésqar phonemes in section 4.2.

2.2. Roughness and density

The piece explores density in terms of how distant the events are from the listener. Such distance manifests in various strata of internal activity within the vocal techniques. If higher activity defines the perception of proximity, the stability or staticity in sound events reveals a greater distance between sound and listener. According to my working methods, when there is a short distance from events (so if the density grows), the high activity manifests as an aspect of roughness (or crinkliness) of sound events that appear with various velocities in oscillation and *vibrato*.

An example of density treatment appears in section 2.1, where pitches with *non-vibrato* and *molto vibrato* reinforce their condition of roughness by exploring the use of hands and fingers at various distances by the mouth like mutes, creating a sort of 'wah-wah' effect. Another example of roughness occurs in section 4.1, with percussive actions of the tongue under the palate combining *glissandi* and oscillations on the register.

2.3. The spoken texts and pathway

Declaimed and whispered texts represent the third source of the timbral palette in *Aswalaq*. The narrative power of spoken text generates milestones to carry on the story of the Human Zoos through the sonic places, generating variations in geometry and density in each part and, depending on the position in the score, playing a structural role as transitional spots within the piece. The interactions between spoken texts and the other resources of the work (air sounds, rough sounds, and pitches) articulate the general pathway of the listener in which the sonic environment contrasts with *parlato* and whispered fragments as a kind of subtitles from which the story of the Human Zoos emerges.

2.4. Pitch and geometry

The pitch material of *Aswalaq* takes inspiration from examples of children's dances of the Kawésqar people, collected in Patagonia during the first half of the 20th century. In the project, these and other examples lead to a pitch treatment that form motifs and sequences and their consequent permutations, transpositions, and contrasting distribution within the ensemble. The following examples show two transcriptions of traditional Alacalufe songs (another denomination for the Kawésqar people) in which gradual movements through a small vocal register prevail:

Ej. 11

Juego cantado (1971) "Jugando redondo"

The image shows a musical score for a song titled "Juego cantado (1971) 'Jugando redondo'". The score is written on three staves of music. The first staff begins with a tempo marking of quarter note = 90. The lyrics are written below the notes. The first line of lyrics is: "Ké-na-ja-na-yo-wa, ké-na-ja-na-yo-wa kuar-ku-a-ya-wa kuarkua-yo-wa. Ké-na-ja-na-yo-wa". The second line of lyrics is: "ké-la ké-na-ja-na ké-na [ja-na] kuar kua-ya-wa, kuarkua-ya-wa, ké-na-ja-na-yo-wa ké-na-ja-na-yo-wa kuar". The third line of lyrics is: "kua-ya-wa ké-la ké-na-ja-na ké-la késte késte ké-na-ja-na ké-la késte koris korkua korko-la-ka kor korkuayawa korkuay". The score includes various musical notations such as notes, rests, and dynamic markings like 'p' and 'f'. The piece ends with "etc." and a double bar line.

Figure 2.4. Grebe, M. E. (2018). Juego Cantado (1971) "Jugando Redondo". In Grebe, M. E. *La música alacalufe: aculturación y cambio estilístico*. *Revista Musical Chilena*, 28, 80 - 111 (p.100). Facultad de Artes, Universidad de Chile. Courtesy of the Publisher. A recording of the example can be found in the interactive version of this article: <https://bit.ly/3H4dS8w>

Observing the trajectory and the intervallic structure of the Alacalufe's music examples, I have decided to work with small modules with Major and Minor Seconds. The following schema shows the pitch treatment for Part I in *Aswalaq*. I wrote three basic materials for

sections 1.1, 1.2, and 1.3 using 4, 5, and 6 notes, respectively. Each base material permutes four times, generating eight sequences assigned for voices in pairs: sequences 'i', 'ii', and 'iii' for S1 and S2; sequences 'iv', 'v', and 'vi' for S3 and S4; sequences 'vii' and 'viii' for A1 and A2. Each pair of voices repeats sequences as a loop until the end of part 1.

First group. Part 1, section 1.1

Base material

S1, S2

sequence i

Basic module

S3, S4

sequence iv

Canon

Second group. Part 1, section 1.2

base material

S1, S2

sequence ii

Basic module

S3, S4

sequence v

Canon

A1, A2

sequence vii

Canon

Third group. Part 1, section 1.3

Base material

S1, S2

sequence iii

Basic module

S3, S4

sequence vi

Canon

A1, A2

sequence viii

Canon

Figure 2.5. *Aswalaq*. Pitch material for the First part.

The same pitch material will increase until reaching eight notes. Unlike the rigorous criteria of the first part - and in coherence with my idea of treating pitch from its timbral dimension - parts II, III, IV, and Coda deal with pitch throughout the register, setting up to the demands of the texture and voices' ambit and therefore, treating pitch as a geometrical element.

Figures 2.6 and 2.7 show two manifestations of the geometry category. In the first example, horizontality evolves by a continuous texture of *glissandi*. Figure 2.7 is a fragment of the Coda in which an extreme horizontality in a comfortable register for the ensemble manifests as a long pedal on central G.

PARTE 3
SECCIÓN 3.1

O

276 (min. 13")

sempre
p

* Los del Infinito,
Me Entregaban el Poder

S 1

3/4

4/4

S 2

(min. 13")

no vib.
sempre
p

I... n...

S 3

(min. 13")

Molto vib.
sempre
p

gliss.

...ni...

S 4

(min. 13")

no vib.
sempre
p

gliss.

...fi...

A. 1

276 (min. 13")

A. 2

(min. 13")

no vib.
sempre
p

gliss.

I n...

A. 3

(min. 13")

sempre
p

* Los del Infinito,
Me Entregaban el Poder

Molto vib.
sempre
p

gliss.

...ni...

A. 4

(min. 13")

no vib.
sempre
p

gliss.

...fi...

Figure 2.6. *Aswalaq*. Pitch treatment as variations of geometries in part III.

CODA

DD

487

S 1

S 2

S 3

Figures 2.7. *Aswalaq*. Pitch treatment as variations of geometries at the Coda.

3. THE CARTOGRAPHIC APPROACH

3.1. Issue and pathway by combining geometry and density

Among the several documents that address the episodes of Human Zoos, I focused on the documentary *Calafate, Zoológicos Humanos* (2010) by Hans Mülchi (b. 1967), which presents the painful experience of 35 people belonging to Kawésqar, Selk’nam, Tehuelche and Mapuche communities. In his film, Mülchi describes four moments that I borrow as the narrative structure of *Aswalaq*: first, kidnapping and departure from Patagonia; second, journey through the Atlantic Ocean; third, exhibition, illness, and death within the human zoos; fourth, the search and rescue of their skeletal remains. My first structural process followed such narrative organization as four differentiated sonic places in terms of my categories of geometry and density. My project added two parts to Mülchi’s moments, becoming the Praeludium and the Coda. The resulting parts consist of six sonic places characterized as follows:

- The Praeludium, is a compact texture of air sounds with a strong horizontality and low density.
- Part I, in which the ensemble is divided into two textures: the first one is a series of vertical blocks with a high density of pitch sequences, while the second one is a subtle line of resonance with air sounds.
- Part II presents motifs in *cantabile* with long resonances. The extension of pauses gradually grows to transform horizontality into obliquity.
- Part III develops another transition between oblique geometries but this time by establishing a texture in *glissandi* that evolves to sound clouds of air sounds and variations in roughness.
- Part IV brings again the *glissandi* towards a pitch collapse of the harmonic field until the final unison in the Coda.

3.2. Cartography onto the paper

The necessity of coherence in a large-scale composition with a limited palette of timbral resources led me to think of cartography as a physical device embodied in the manuscript of the piece. My strategy focused on the paper's surface by modifying its regular scale of standard-size sheets (A3 or A4), and on the limit imposed by four or five bars for each page. To do this, I changed the paper area by pasting three, four, or five regular A3 pages (297 * 420mm) horizontally. The result was a large sheet paper between 1260 and 1680 mm. Therefore, I could place three of these large sheets on my desk, obtaining a surface of approximately 3780 and 5040 mm.



Figure 2.8. *Aswalaq*, cartography's fragment showing large sheets of the manuscript.

This tactic expanded the creative process from the timbral field to the physicality of paper, undertaking the research question about how cartographies address other dimensions beyond timbre. As working with larger-scale models in architectural design, the scaling-up onto the manuscript of *Aswalaq* helped me to reach a different perspective of distances between events and their recurrence through the piece, their transformations, and their durations. The growth of the sheets made a continuous space of the paper minimizing the internal borders of sections. Managing large pages allowed me to jump through distant places of the work and reach a better control of the recurrence of the sound events through the score. Moreover, by laying the large sheets on my desk (fifteen regular A3 pages, grouped into four large sheets), a simultaneous vision of about six and seven minutes of music was possible. Another tactic for connecting timbre and paper's space is shown in Figure 2.9 with a temporary grid on the manuscript to orient the notation process using graphic-proportion criteria, integrating the *rubato* or long *fermate* to avoid the periodicity of the sound impulses. Working on portions of paper with similar sizes and a proportional time-grill generates similar durations for the various parts of the piece: 6:30 (Praeludium and part I); 6:40 (part II); 7:10 (part III); 6:50 (IV); 2:30 (Coda).

The image shows a handwritten musical score for a piece titled "Aswalaq". The score is arranged in a grid with measures numbered 2, 3, 2, 3 at the top and 5 through 28 at the bottom. The notation includes various dynamics such as *p*, *mp*, *mf*, *f*, and *pp*. There are also performance instructions like "covering and uncovering, with air" and "multo vib.". The score is written on multiple staves, with some staves containing lyrics like "Es ... toy" and "So ... la". The notation includes notes, rests, and slurs. A numbered temporary grid is visible at the bottom of the page, with numbers 5 through 28.

Figure 2.9. *Aswalaq*. A manuscript fragment of Part II (bars 152 to 156). In the fair copy, the numbered temporary grid in the lower part was removed, while pauses as fermata were added.

3.3. Multidimensionality

The imagination of timbre in *Aswalaq* emerges from the phonemes in vernacular languages and materializes in the timbral palette of air sounds, rough sounds, spoken texts, and pitches. Furthermore, the cartography (the paper's surface) guides the placement of the

timbral palette and its various events and textures to build sonic places with the help of visual relationships that arise when observing the large sheets of paper on the table.

Such imagination and placements of events have to do with multidimensionality because the construction of the piece occurs in the cartography by combining visual and spatial implications to constitute sonic places. Consequently, cartography generates an alternative hierarchy as the piece's structure belongs to a visual exercise that will nest acoustic relationships.

4. DRAMATURGY

The construction of dramaturgy in *Aswalaq* follows the elements outlined in the introductory chapter: first, the manipulation of a text; second, the reflection on the act that defines the work and the project's issue; third, the visualization of an alternative and ritualistic reality by dealing with familiarity or strangeness.

4.1. The texts and fragmentation

The selection and treatment of the texts is the first strategy to approach a dramaturgical idea within the project. To do this, I collected various Kawésqar and Selk'nam texts from linguistic and ethnological studies focused on their ways of life, worldview, and mythology. On one hand, I took the studies that Professor and linguist Oscar Aguilera (b. 1949) has done in Chile during the last four decades concerning the Kawésqar people. On the other hand, I took the Shamanic Songs of the Selk'nam people, which Professor Enrique Flores (b. 1958) published in México in 2009, based on the recordings of anthropologist Anne Chapman (b. 1922 – 2010) of the songs performed by Lola Kiepjia, the last Selk'nam shaman who died in 1966.

Although the semantic meaning of the text helps to outline the sonic places of the piece, the text in *Aswalaq* is barely understandable. In the following example, the words *Tálak* and *Lejos* ('far away' in Kawésqar and Spanish, respectively) is fragmented and distributed in the form of semi-improvised blocks and declamations in different registers. The result is a texture of air sounds, partially pitched notes, rhythmic patterns overlapped, and rough sounds. As a block of fragmented material, the example demonstrates how the text creates a sonic event in which the orchestration of original phonemes in Spanish and Kawésqar generates interactions in a new context of instability and strangeness.

The image displays a musical score for an excerpt from part II of *Aswalaq*. It consists of eight staves, labeled S 1 through S 4 and A. 1 through A. 4. The vocal parts (S 1, S 2, S 3, S 4) and some instrumental parts (A. 1, A. 3, A. 4) feature lyrics in Spanish: "Tá lak", "Cel ko", and "hói". The instrumental parts A. 2 and A. 4 include lyrics in Kawésqar: "Le ios". The score includes various musical notations such as dynamics (*p*, *pp*, *mp*), articulation (accents, slurs), and performance instructions like "rit. acell." and "moviéndose / moving". The time signature changes from 4/4 to 3/4 and back to 4/4. A measure number "264" is indicated at the beginning of the first staff.

Figure 2.10 An excerpt from part II of *Aswalaq* shows the fragmentation of words in Spanish and Kawésqar language.

4.2. Acts as expressions of mourning in the funeral rites

The reflection on the act nested by *Aswalaq* is the second tactic for dramaturgical construction in the project.

El Mundo Espiritual de los Selk'nam ('The Spiritual World of the Selk'nam', in Spanish) is a book published in 1931 that collects the fieldwork in Patagonia of the ethnologist Martín Gusinde (b. 1886 – 1969). The study gives an extensive investigation of the funeral ceremonies and the expressions of mourning in the aboriginal settlements. Among these rites, Gusinde described the mourning expressions with long howls, tearful wails, moans, and sighs realized by the family and close friends of the deceased. Together with howls, Gusinde observed self-tortures, haircuts, and face paint. In this context, the ethnologist discovered that the howl duration became progressively briefer, according to the physical capacity and the consequent exhaustion of those implied in such expression. A stimulating element to the imagination of the timbral palette in *Aswalaq* is the relationship between collective and individual behaviours in the ritual, as the following quotation of Gusinde shows:

The strange thing about the meeting is that everyone behaves as if they were alone. [Each one] screams and moans, starts and ends, with a pain-clouded gaze, staring into the fire or in front of it as if no one was around. There is no communication with the neighbour, and despite the numerous rounds, each one is alone with his thoughts. Occasionally one voice is somewhat more intense and lively. Soon the whole chorus grows in intensity to decrease gradually according to the feelings. After two or three hours, one by one, cease moaning. Finally, it is only a woman who –with long pauses– moans. Now there is total silence again. People separate when the night starts, serious and silent (Gusinde, 2018, p.153, my translation).

Gusinde's descriptions illustrate what kind of act inspires the sound places in *Aswalaq*: the 'lament'. Its various manifestations stimulate different nuances of the piece's sound textures. Lament can be a collective or personal expression; a sudden growth or a slow

fade-off; a meditative gesture or a choral explosion; a dry, brilliant, subtle, saturated, or distant echo.

The expressions of mourning will construct the pathway of the piece toward a sort of climax which narrates the death of the Fuegians of the human zoos at the end of part III, as figure 2.11 shows. At bar 360, a cloud of sounds combines all the elements of the timbral palette: pitches going towards semi-pitched air sounds, effects with fingers and hands doing *glissando*, and declaimed text with rapid changes in the register. Each gesture is duplicated by another voice, creating a higher density of each technique performed even if the global effect follows Gusinde's description of loneliness in funerary rituals to conceive individual gestures. The example is part of a chain of sound clouds that progressively became distant (though time) between themselves by a long *fermata*.

T

Molto vib.
mp

359

S 1 Mue rta

S 2 *mf* *Wa-wa* Gre te

S 3 *o < ff > o* *mf* *Wa-wa* Lle go

S 4 *p* *ff* Gre te lle gó Mue rta

Molto vib.
mp

359

A. 1 Mue rta

A. 2 *p* *ff* Gre te lle gó Mue rta

A. 3 *mf* *Wa-wa* Gre. te

A. 4 *mf* *Wa-wa* Lle go

Ja há nar

Figure 2.11. *Aswalaq*. Martin Gusinde's description of the death of Fuegians motivated the creation of sound clouds with duplicated events in part III.

4.3. Familiarity, strangeness, and ritualism

My working method considers sound material to shape sonic places that nestle acts and situations travelled by the listener. As in architecture, the places are modelled by limits that separate or connect each other.

In *Aswalaq*, I developed contrasting textures in terms of homogeneity and heterogeneity. While heterogeneity prevails within sections, homogeneous situations appear as limits or boundaries and clarify differences between parts. Such passages constitute transitional spots at the beginning or at the end of my sheets of paper. Various textures and events inform transitional spots and appear as follows:

- Praeludium: (bars 1 – 44). Air sounds.
- First transitional spot: between Part I and II (bar 127). Spoken text.
- Second transitional spot: between Parts II and III (bars 257 – 275). Synchronic blocks with air notes and pitches (using semi-improvised boxes).
- Third transitional spot: between Parts III and IV (bars 380 – 393). Spoken and whispered text.
- Coda: pedal on G with air sound and spoken phonemes.

V

379 *ff* > o (min. 12")

S 1 Choucha De pronto todo E ra si len cio

S 2 Choucha Silencio De pron to To do e ra

S 3 Choucha De pronto Todo era silencio

S 4 Choucha Todo era Silencio To do.E ra

A.1 Choucha Todo era Silencio

A.2 Choucha De pronto todo era silencio Si len cio

A.3 Choucha Era silencio De pron to to do

A.4 Choucha De pron to to doE ra si len cio

** Repetir cada frase en loop hasta completar la duración de cada evento./
Repeat each phrase in a loop until completing the event's duration.

Figure 2.12. Transitional spot at the end of part III of *Aswalaq*, with a homogeneous texture of spoken and whispered texts.

383 *sfz* *mp* *o <mp> o*

S 1 *Hámmo lajfk kakous jehánar-k* Todos

S 2 *Hámmo lajfk kakous jehánar-k* *Ejéqas-hójok* Todos murieron

S 3 He aquí que entonces *Ejéqas-hójok* Todos murieron

S 4 *sfz* *mp* *o <mp> o*
Hámmo lajfk kakous jehánar-k Murieron

A.1 383 *mp* *o <mp> o*
Hámmo lajfk kakous jehánar-k *Ejéqas-hójok* He aquí que entonces

A.2 *sfz* *mp* *parlato* *mp*
Ejéqas-hójok *Hámmo lajfk kakous jehánar-k* *Ejéqas-hójok*

A.3 *sfz* *mp* *mp*
 Todos murieron He aquí, que entonces todos murieron

A.4 *sfz* *parlato* *o <mp> o* *mp* *parlato*
 Murieron *Ejéqas-hójok* Hámmo...

** Repetir cada frase en loop hasta completar la duración de cada evento.
 Repeat each phrase in a loop until completing the event's duration.

Figure 2.12 Continued.

Compared with the other textures in the piece, the distinctive aspect of the transitional spots lies in their homogeneity: all the voices perform the same technique as a collective texture and takes listeners out of the heterogeneous environment constructed within the parts. The condition of familiarity or strangeness embodies a dramaturgical idea pursued by *Aswalaq*, even if the sound events of the piece are similar within or between the parts. The regrouping, reinvention, and orchestration of the sonic places and their constitutive elements (the timbral palette of air sounds, rough sounds, pitches, and the spoken texts) contribute to inform the pathway of the work.

Furthermore, transition zones have a dramaturgical dimension addressed to ritualism. In particular, I take some elements that describe the 'rites of passage' in aboriginal cultures investigated by anthropology since the beginning of the 20th century with the studies of Arnold van Gennep (b. 1873 – 1957) and Victor Turner (b. 1920 – 1983). Gennep focused on the rites of passage and their liminal condition: a milestone in the life of communities and their individuals to mark the transition from childhood and adult age, from single to married, or between life and death, where liminal structures involve rites of passage with a tripartite organization in which there is a separation ritual, a transition ritual, and an incorporation ritual (Thomassen, 2014, pp 36, 37). Victor Turner reached further developments of the concept of liminality, applying it to performance studies, particularly in the theatre, where he saw a vestige of the ritual structures (Maxwell, 2018, p. 68). The following explanation shows the universal character of liminality and the ritual of passages and suggests its applicability in different fields:

Throughout the inhabited world, in all times and under every circumstance, rites of passage have flourished, theatrically enacting the myths and legends that render human lives meaningful and bring us from one place to another. Life and death, day and night, light and dark, girl and woman, novice and expert: liminality emerges in the in-between of a *passage*. While on the one hand the term can and must be given an extremely narrow and technical

delimitation as belonging to the middle stage in concretely acted out ritual passages, on the other hand, it is also evident that liminality lends itself to a wider application, as the term captures something essential (Thomassen, 2014, p. 2).

Thomassen describes the power of the transitional moments in human life, arguing that “Liminality is a universal concept: cultures and human lives cannot exist without moments of transition, and those brief and important spaces where we live through the in-between. Such transitions mark us, they stamp our personalities, and that is the way it will always be.” (Thomassen, 2014, page 4).

One can imagine the role of transitional spots in *Aswalaq* as reinventing the energy that articulates the listener pathway. The rituality results, from the general structure and the topography of its parts, as an aspect of the dramaturgy. In other words, the timbral dramaturgy emerges here as an orientation exercise (or a cartographic one) through the sonic places that nest the act of lament.

One last element linked to the rituality and the liminality arrives from the piece's title. The word *Aswalaq* defines something which exists in the middle or in-between. In Kawésqar language, the word means ‘the day that is not today’ (Aguilera, 1997, p. 271) referring to something that brings together the concepts of ‘yesterday’ and ‘tomorrow’ outlining something nontemporal in a metaphor of what, as Thomassen has said, is universal and essential.

My approach in *Aswalaq* does not intend to reach an objective outcome from my exploration of cultural or anthropological aspects. Rather than this is a personal proposal that allows alternative elaborations and results that could emerge from other emphases of the project.

II. DDÜWÉWÉ, A SYNESTHETIC INVASION

1. INTRODUCTION: THE GEOMETRY OF MAPUCHE RITUAL OBJECTS

Ddüwéwé is a Mapudungun word that means ‘the warp, the thread with which weaves’ (Alonqueo Piutrín, 2018, p. 74). This project develops collaborative processes involving music composition, visual installation, and theatrical performance, addressing some aspects of the Mapuche people: an indigenous culture in southern Chile and Argentina. Part of the creative process focused on two Mapuche ritual objects that embody its worldviews, manifesting in geometrical associations to propose the experience of inhabiting the performative space at the Richard Steinitz Building, University of Huddersfield. My observations of this space revealed what the inhabitant does inside, or in other words, what is the act that defines the atrium of this building: an approaching action by watching and walking. Furthermore, collaboration with actor Cristina Fuentes allowed the dramaturgical construction by defining complementary acts based on the texts in the score.

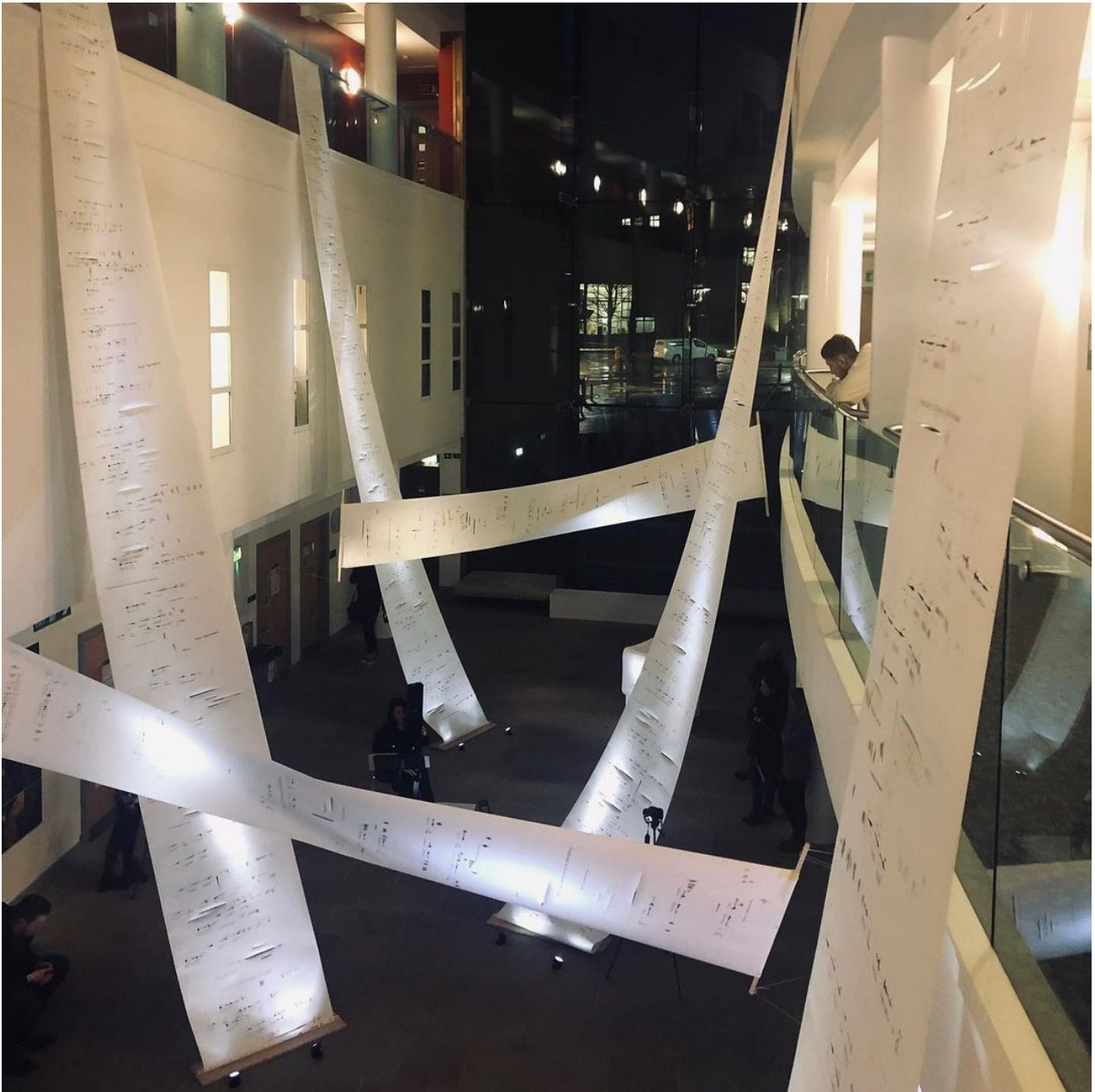


Figure 2.13. Cassidy, A. (2020). *Ddūwewé*. World premiere at the University of Huddersfield.

As in the case of *Aswalaq*, this project explores densities by observing the distance between the listener/observer and the sonic/physical objects. Moreover, in *Ddūwewé*, the exploration expands to various field depths within the architectonic space, addressing dramaturgy by connecting actions with various perspectival foreshortening⁴.

⁴ I borrow this term from the field of painting to refer to how elements of various natures and materialities – sonic, visual, spatial – can configure events that gradually show their different angles and perspectives as if they were spinning in front of a spectator/auditor.

The physical characteristic of the following ritual objects prompted me to approach the project from the category of geometry. Firstly, the 'Chemamüll', a kind of anthropomorphic totem or funerary post made with wood; Secondly, The 'Kultrún', a ritual semi-spheric drum with a patch containing lines that form a cross and divide the circular surface into four parts.

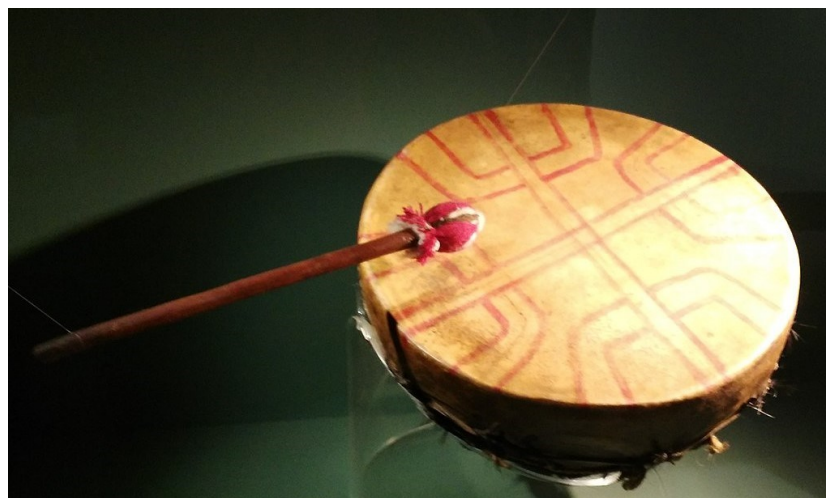


Figure 2.14 (left). Contreras, M. (2019) Chemamüll exhibition at the Pre-Columbian Museum in Santiago.

Figure 2.15 (right). Gmagno. (2016). Kultrún MNHN [jpg]. Wikipedia commons.

https://commons.wikimedia.org/wiki/File:Kultrun_MNHN.jpg November 2022.

One of my first associations was between the verticality of Chemamüll, the silhouette of the Paetzold recorder, and the dominant geometry of the Richard Steinitz Building atrium. Soon after, I observed the patch of the Kultrún where a cross on its surface suggests the idea of crossing lines that I related to a perpendicular geometry manifested in the installation as a deformed cross.

2. THE TIMBRAL PALETTE

The construction of the timbral palette addresses the idea of field depth and takes airflows as the hierarchical factor that stimulates the selection of the sonic events and their interactions by overlapping instrumental techniques in order to generate an amplified perception of the sonic material.

2.1. Field depth and density

Observing the Richard Steinitz Building constitutes a zoom-in and zoom-out exercise and lead me to compare field depth from its visual and sonic implications. The eye and the body scan the farthest or closest elements within physical space as the ear perceives sound densities as farthest or closest distances. On one hand, the idea of distance or acoustic field depth has to do with silence in terms of leaving things the necessary time to appear and, on the other, responds to the number of elements appearing simultaneously through various strata. Therefore, one could say that distances between listener/ observer and objects/ sounds suggest the expansion principle between space and sound by the category of density. From section III, densities define the resulting texture that the recordist will construct by the following keywords that accompany the score: 'full', 'empty', 'continue' and 'discontinue'.

2.2. Air Flow and hierarchy

Considering the instrumental forces of *Ddūwewé* (Paetzold recorder and Helder recorder), it was clear that my timbral construction would take root in the quantity and quality of the air passing through the instruments. In this way, the instrumental techniques followed the airflow as a timbral key, informing the composition hierarchically from this aspect. Increasing, decreasing, unexpected, gradual, erratic, or stable airflows appeared in the

score through graphic suggestions configuring a rectangle at the centre of the page. The concatenation of airflows constitutes the navigation tool that the recordist used from section III to decide which instrumental technique connects better with each graphic symbol of airflows.

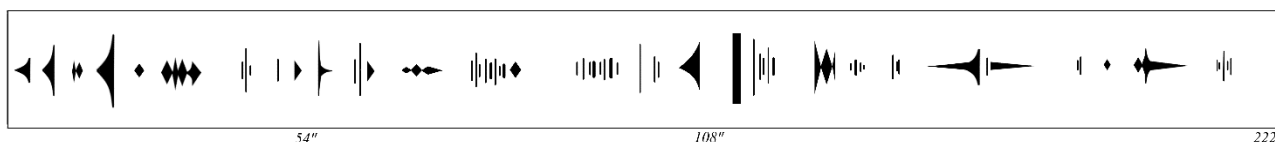


Figure 2.16. Detail of section III in *Ddūwewé*, where a rectangle with symbols at the centre of the page outlines airflow graphically. The average duration of the section and two time subdivisions are indicated in seconds at the bottom of the tape.

2.3. Instrumental techniques and expansion principle: pathway

The construction of the pathway is partially unpredictable as the performer chooses the instrumental techniques suitable for each airflow. The sound places result from three main sonic aspects and their basic instrumental techniques. First, the exploration through register: erratic glissando (including the voice), multiphonics, harmonic glissando (slapping or spitting sound), whistle tones, and microtonal oscillations. Second, the roughness and velocity: *accelerando* and *ritardando*, double tonguing, various opening levels of labium and window of the Paetzold. Third, colour variations: alternating pitch and air-pitched sound, variations in embouchure distance and rotation concerning the mouth, variations in the amount of air, and sung phonemes.

The ritual connotation of Kultrún and Chemamüll inspired me to give a calm character to the project that manifested as working on sonic events inscribed in long spaces of silence and low dynamics. The spectator's journey through the piece should come across various perspectival foreshortening that shows the richness of the timbre in a relatively ethereal context. Moreover, *Ddūwewé* involves a single recordist who uses the Helder Tenor in the

first section and the Paetzold in sections II to VI. Although this project involves large spaces for the performance with recorders, conventional amplification with speakers is optional. Such conditions could leave the sound in a vulnerable situation. Working from density by addressing field depths through the distances between the listener/observer and sonic/visual objects led me to think about how to make these objects seem bigger or closer than they are. The outcome of such reflection was create a sense of polyphony to give greater intensity and corporeity to the sound. Density's expansion by this polyphony stimulated me to create boxes in which instrumental techniques appeared combined: air sound with variations regarding the embouchure rotation (see the box F); *glissando* with irregular *accelerando* and *ritardando* and gradual covering of the Paetzold's window (see the box E); harmonic *glissando* covering and uncovering window rapidly (see the box E'); whistle tone with microtonal oscillation (see the box D).

Figure 2.17 consists of four boxes, each containing musical notation and symbols. Box F (top left) shows a bass clef staff with a diamond-shaped note on the second line and a diamond-shaped symbol above it. Box E (top right) shows a bass clef staff with a glissando line, a square symbol, and markings for 'acell.' and 'rit.'. Box E' (middle) shows a bass clef staff with a dotted line above it and a diamond-shaped symbol. Box D (bottom) shows a bass clef staff with a wavy line and the text 'WT and oscillation'.

Figure 2.17. Boxes with combined instrumental techniques in section IV of *Ddūwewé*.

3. THE CARTOGRAPHIC APPROACH

The concatenations of sonic places emerge from the performers' decisions on instrumental techniques and airflows. Therefore, the cartography in *Ddūwéwé* results in a combination of sonic, spatial, and visual elements, manifesting in music notation and the conception of the installation. In this way, cartography comes to light from synergies between the decisions of the recordist, the composer, and the visual artist.

3.1. Notation with boxes

The *Ddūwéwé*'s score is cartographic due to its origin in mapping a physical space and its graphical approach. Beyond the description of the instrumental techniques and their organization, the score presents air flows as the fixed and principal element in the hierarchy that interacts with other variable elements that allow flexibility to the performer's navigation.

Variable elements appear in boxes with various durations in seconds. In the first two sections (pages I and II of the score), these boxes have embedded graphic symbols to suggest the air flows involved in the events' production. Thorough the entire score, these boxes have the constitutive relationships reflected in their identification with letters (A, A', A'', a, and so on). Such relationships have to do with similarities or variations to give density to the sound through the aforementioned sense of polyphony.

The order of the boxes is up to the recordist, who can also repeat them. For instance, on page II, the recordist can repeat short boxes that appear at the bottom of the page. From pages III to VI, the air-flow rectangle allows box repetition in different places of the section.

A 13,4"

Interference effect. An irregular smorzato without tongue.

A'

Interference. Regular smorzato.

A''

Interference effect. As an irregular smorzato.

a *Kissing (inverted slap with key click)*

Figure 2.18. Similarities between boxes throughout the piece: A (pages II and IV), A' (page IV), A'' (page VI), and a (pages II and III).

Pages III and IV graphically separate the techniques nested in boxes from the airflows rectangles. The boxes are distributed on the pages, while the airflows appear at the centre of the page. Pages V and VI add graphics symbols under the airflow rectangle that suggests dragging movements of the performer's feet onto the floor. The last page of the score suppresses recorders, so the graphic symbols represent combined actions of the feet on the floor, breathing, and manipulations on a piece of paper that belongs to the installation.

3.2. Geometry: installation, portability, and economy

The elements that configure the physical place addressed by the installation emerge from the geometry identified in Mapuche objects and at the Richard Steinitz Building. The atrium of this space is a transitional place with a vertical geometry (see Figure 2.19). What kind of spatial intervention could fit with this observation? My answer remarked on the verticality of the atrium. Furthermore, the cross onto the Kultrun's patch and the idea of foreshortening pushed me to put in tension such verticality by crossing axes. The resulting geometry was a deformed and enlarged cross as a shadow of a regular one (see Figure 2.20).

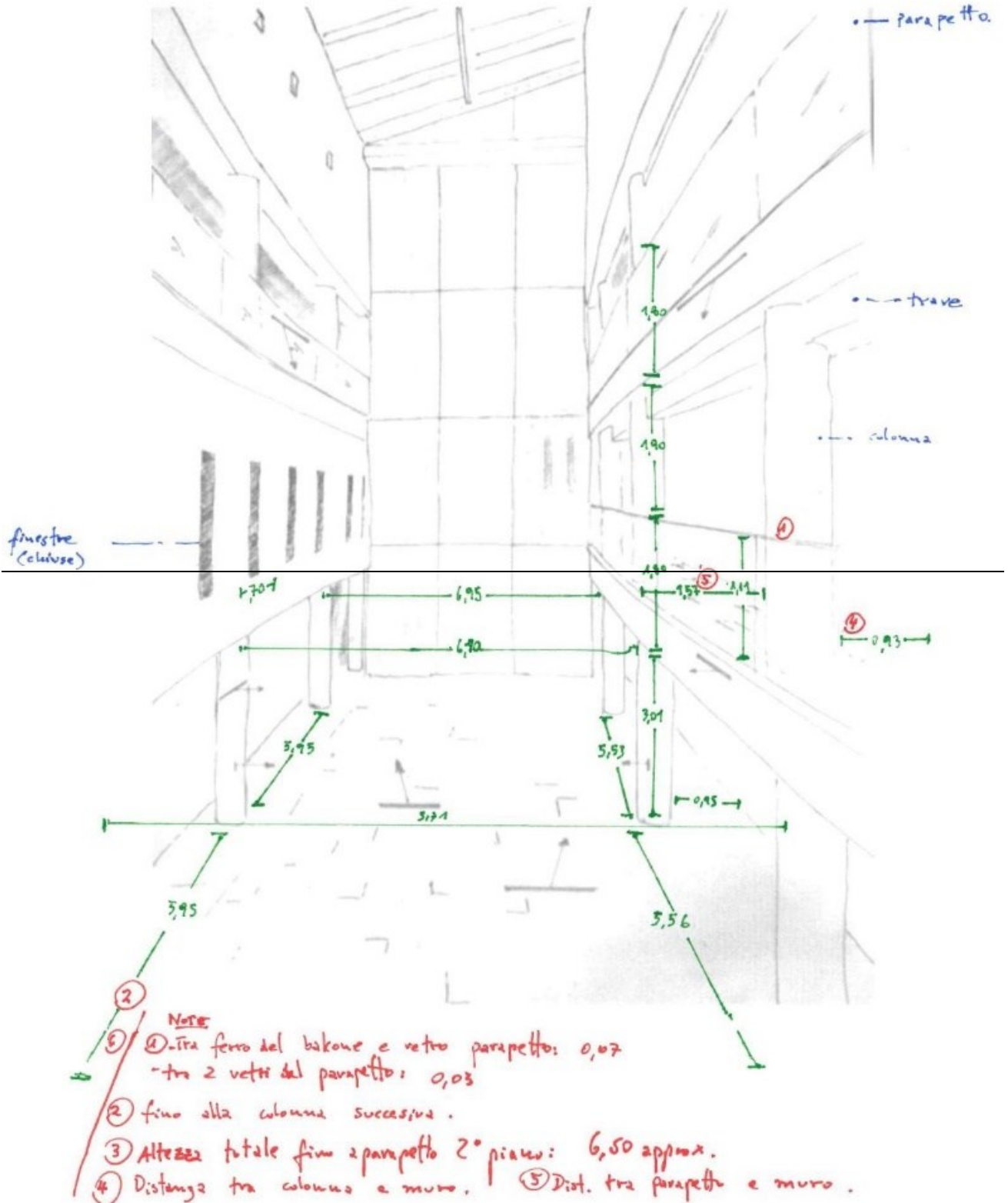


Figure 2.19. *Ddūwewé*. The first fieldwork at the Richard Steinitz Building analysed its vertical geometry with detailed measurements of distances, heights, and widths.

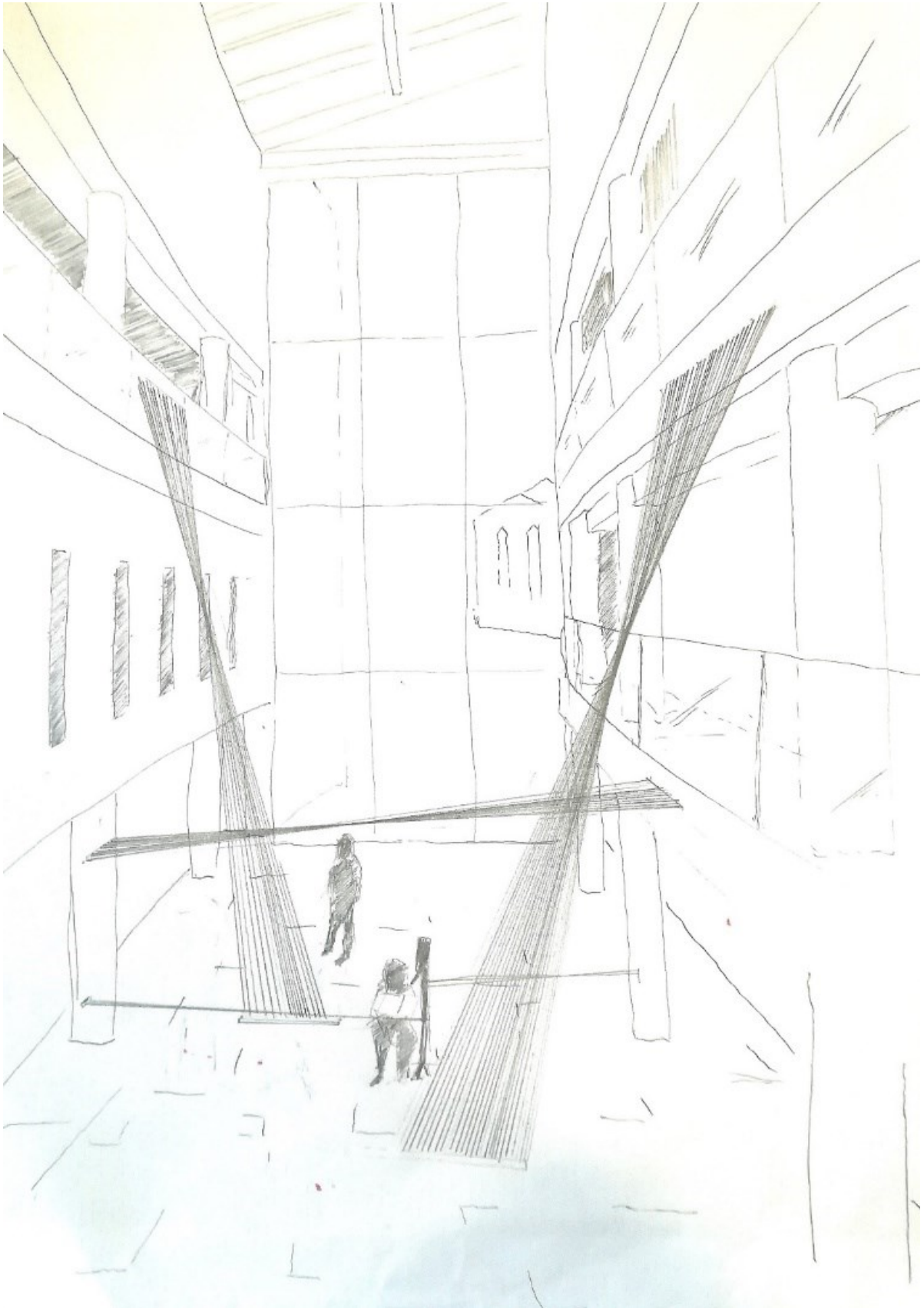


Figure 2.20. *Ddūwewé*. My initial proposal for the installation follows the idea of a deformed cross.

In the second version of the project, in Valparaíso, I found a horizontal geometry of the theatre given by a stage that is a black box in which limits tend to disappear. In this case, my approach generated a series of 'totems' that visually amplify the Paetzold and remind me of the Chemamüll exhibition of the pre-Columbian museum in Santiago:



Figure 2.21. Contreras, M. (2019). Chemamüll exhibition at the Pre-Columbian Museum in Santiago.

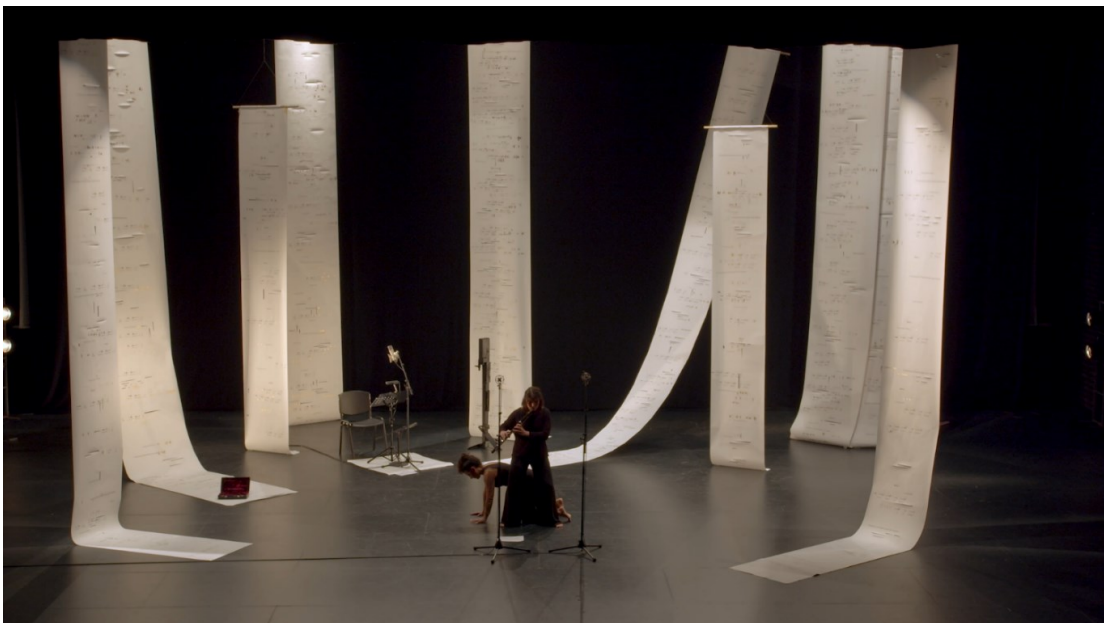


Figure 2.22. EstudioManero (2021). *Ddūwewé*. Step-up of the installation at the theatre of the Valparaíso Cultural Park.

The expansion principle with elementary tools emerged from the practical aspects of the project, forcing me to conceive an installation with simple, economical, and portable materials. Nothing could be nailed or glued to the walls, and the materials involved had to be set up and disassembled in a few hours involving as few people as possible. Furthermore, the installation had to be packable and transportable for future versions.

As Figure 2.20 shows, the first idea involved ropes and hyperbolic paraboloids. Soon after, I decided that the installation should have the same white colour as the atrium, while the building material should allow writing on itself as an expanded 'copybook'. Consequently, the visual artist proposed to use white paper to avoid the excessive visual weight of the intervention, so the installation invaded the performative space with a certain lightness, like a robe. The fragile aspect of the intervention manifests one of the first reflections of the creative process regarding the calm character of *Ddūwéwé*, in line with the ritual Mapuche objects that inspired the project (the Kultrún and the Chemamüll).

3.3. Collaboration: conceiving the visual language of the installation.

One of the manifestations of the synergistic character of *Ddūwéwé* is the conception of a visual language that emerged collaboratively and closely linked to the sound and architectural aspect of the project. The installation proposal arose from the bases of my first sketches (see Fig. 2.20) and from the first manuscripts of the musical composition. It is worth quoting the visual artist to illustrate her approach to creating the installation:

Among all the material I was collecting, I was particularly struck by [Manuel's] vision of some photos of his first manuscript of musical composition. I had the impression that this musical writing already had many of the characteristics of visual work: the pencil stroke, light, precise but at the same time trembling, capable of returning a hesitation of the hand and thought, writing in sequences that testify a spatial research, not yet completed. So I decided to set up the stage design project on Manuel's original drawings. I reproduced

them through screen printing on large rolls of paper. I then added two of my interventions: painting brushstrokes of gold and cutting some paper fragments. With gold, I wanted to leave small traces that embellished the composition, breaking the monotony of black and white and, at the same time, taking up the musical touches, short and cadenced over time, that would have distinguished the musical piece. With cuts - on the other hand - I tried to give shape and visual weight to the concept of air and the importance that this element has in the production of sound with the Paetzold. (L. Bisotti, personal communication with the author, January 10, 2020. By the kind permission of the Interviewee).

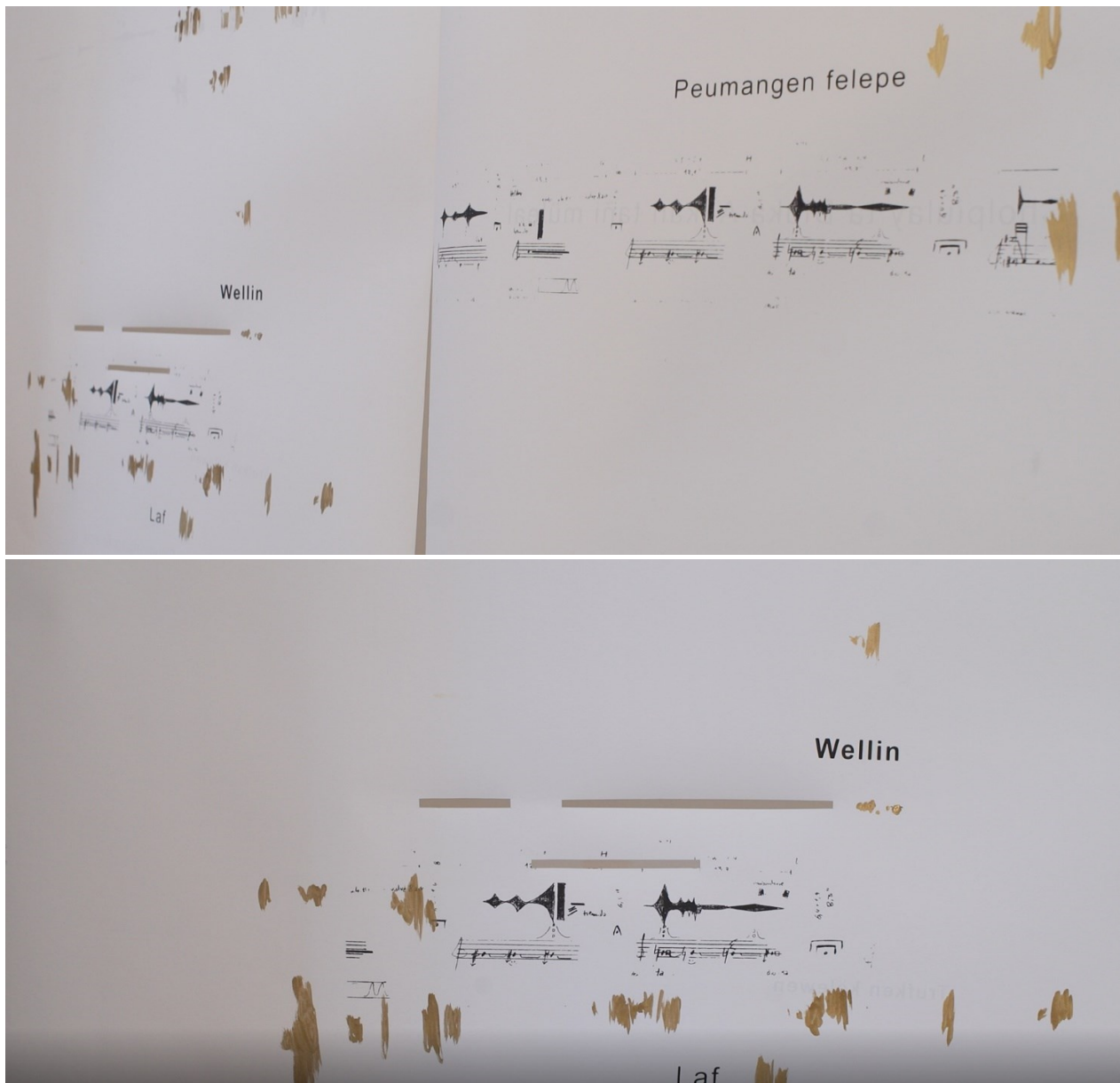


Figure 2.23. *Ddūwewé*. Details of Laura Bisotti's installation: Mapudungun texts, manuscript fragments of the score, cuts, and gold paint.

3.4. Repetition and multidimensionality

The visual artist acknowledges that one of her creative strategies was the repetition of score fragments in the installation. Furthermore, repetitions at various scales appeared unexpectedly: on one hand, the paper rolls - with their graphic, coloured, and cut interventions - occupy the space in a similar way that the tapes of air flows do in the score; on the other hand, repetitions appear in the spatial disposition of paper rolls that follow a kind of regularity to cover the atrium of the Richard Steinitz Building. One could see such repetitions and regularity as a multidimensional expansion of the score with these elementary tools. The cartography arises from the graphic field of the score to the physicality of the installation, so cartography is not only embedded in the flat dimension but becomes three - dimensional.

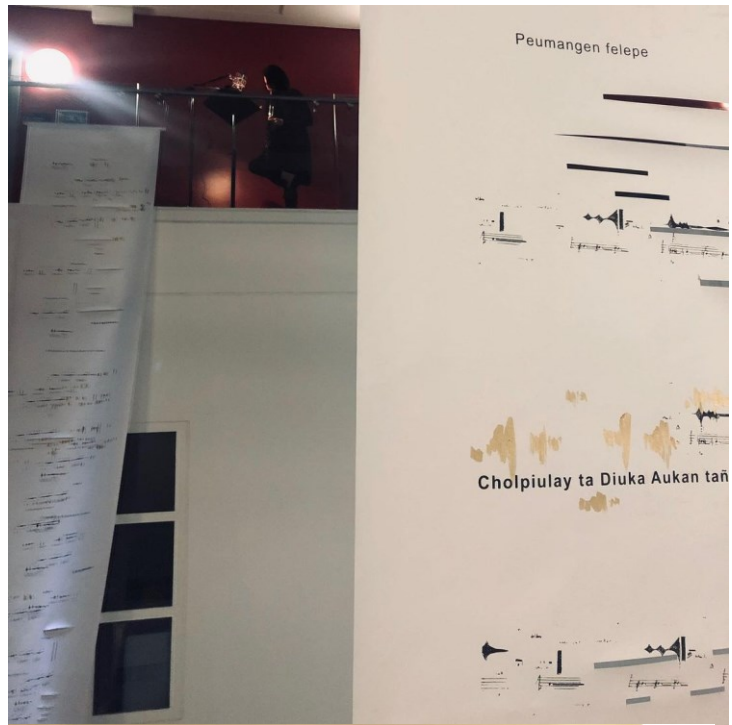
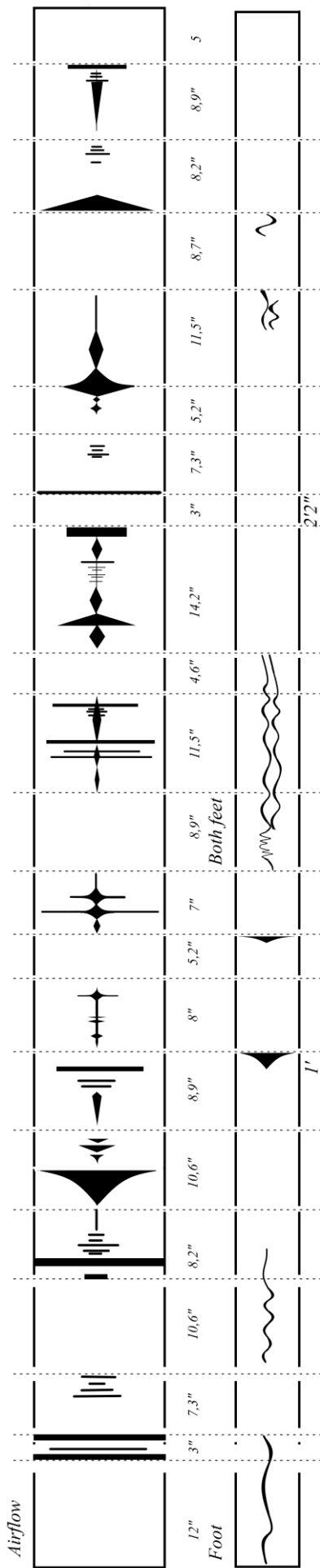


Figure 2.24. *Ddūwewé*. Visual parallelism between airflow in section V and paper strips of the installation. Photos by Laura Bisotti (below) and Aaron Cassidy (above).

4. COLLABORATIVE DRAMATURGY: ACTS

Navigating the timbral dramaturgy characterized the project through the notion of a calm character embodied in the ritual objects and the performer's freedom to choose the order of the boxes in the score. Together with that, it was during the second stage of the creative process when collaboration generated crossed reflections on the acts as a factor of timbral dramaturgy by concrete tactics on the performance, thanks to the contributions of the actor.

From this perspective, dramaturgy is a collective hermeneutic on the first version premiered at Huddersfield. One can see this process as a manifestation of manipulations on a text expressed by Tadeusz Kantor: something with the power of being discussed, rejected, and reread by performers (Kobialka, 1986, p. 120). Furthermore, the reconstruction from graphic and sound fragments illustrates how to propose realities from its fragmented ruins, in line with the approaches of Castellucci (De Laet & Cassiers, 2015, p. 21) and Lachenmann (Dyer, 2016, p. 46).

The first step of the dramaturgical construction of *Ddūwéwé* was the video production at Valparaíso. This process addressed the act that defines the project globally: an approaching action by watching and walking. This focus had implications related to the pandemic and restrictions to live events. The impossibility of hosting an audience stimulated the conception of video documentation based on this principal act, involving details of the installation, instruments, scores, shadows, and the performer's gestures, emphasizing the tactile architecture and proposing a pathway to the watcher.

A second step of dramaturgical construction emerged from the texts of the score, written in English, Spanish, and Mapudungun at the bottom of each page. With the actor, we reflected

on texts to generate scenic and choreographic expansions that involve graphics and sounds from the score and the installation. My collaboration established three complementary acts that manifest specific aspects of the principal act of *Ddūwéwé*: 1) an act that gives an idea of movement, represented by texts *lie down* (sec II), *become empty* (sec III), and *the seven goats are coming* (sec VI). 2) an act that outlines an idea of behaviour with the words *freedom* (sec IV) and *force* (sec VII). 3) an act that presents evocative expressions about the future with the texts: *when the Diuka stops singing, there will be War* (sec I), and *may everything happens to you as in the dream's happiness* (sec V).

4.1. Acts as movements

In the second section of the piece ('Lie down'), the observation of the boxes alongside the long oscillating sounds combined with fast slaps and harmonic *glissando* generated translations to the actor's movements with her legs, insisting on the interactions with light and shadow projected on the paper rolls of the installation.

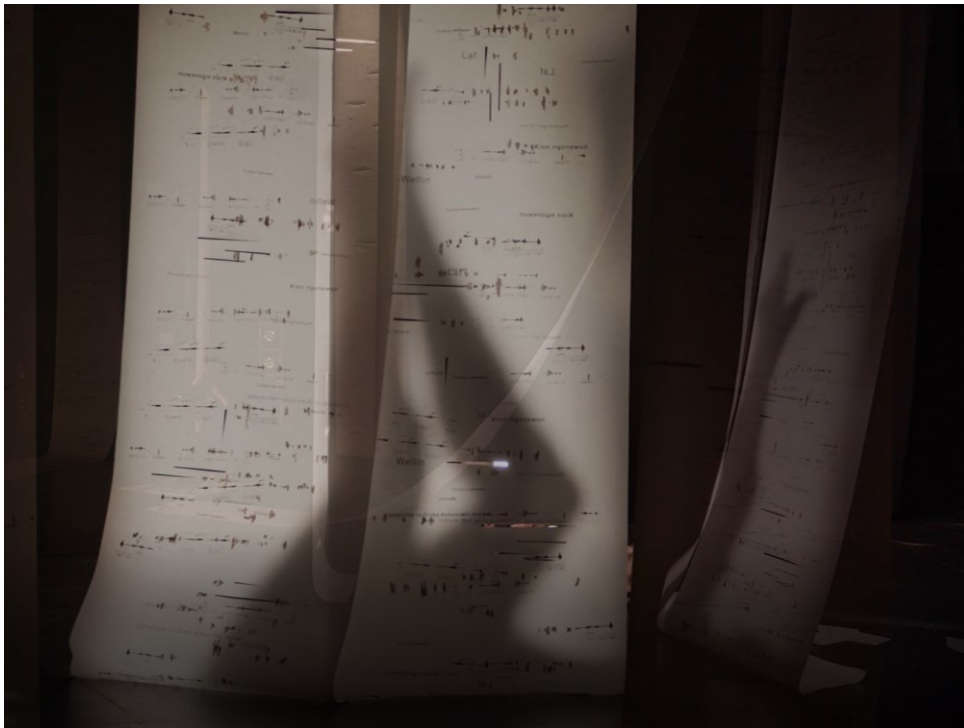


Figure 2.25. X. *Ddūwéwé*. Lights and shadows by the actor interacting with the installation.

In the section III, the actor conceived a palette of gasps, breaths, exhalations, and guttural sounds to amplify the phrase 'become empty', generating a kind of respiratory emptiness that interacts with various types of slaps and overtones of the Paetzold recorder.

'The seven goats are coming' is the text of section VI and is shaped by the actor through the manipulation and dragging of a fragment of paper taken from the installation rolls. The text of this section is a phrase that in the Mapuche world announces the arrival of the new year by observing the stars in the sky (the *Seven Goats* is the name of a constellation). One could see the detachment of this installation's fragment as a metaphor in which the physical space became a ruin, and such fragment will become the actor's place in section VII.

4.2. Acts as behaviours: freedom and force

The word 'freedom' informs *Ddūwewé* as a behaviour that allows for multiple decisions, movements, and directions due to the open concatenation of events by the recordist and the collaborative nature of the project as well. In section IV, the actor implemented this by exploring the recordist's possibilities to play and move on the stage, motivating her to play some passages without the score.



Figure 2.26. *Ddūwéwé*. The recordist performs the Paetzold standing and without a music stand.

‘Force’ is the word accompanying section VII (conceived without recorders). In the first version at Huddersfield, the recordist had to look back to the installation and drag her foot onto the floor, previously covered with fragments of the score.

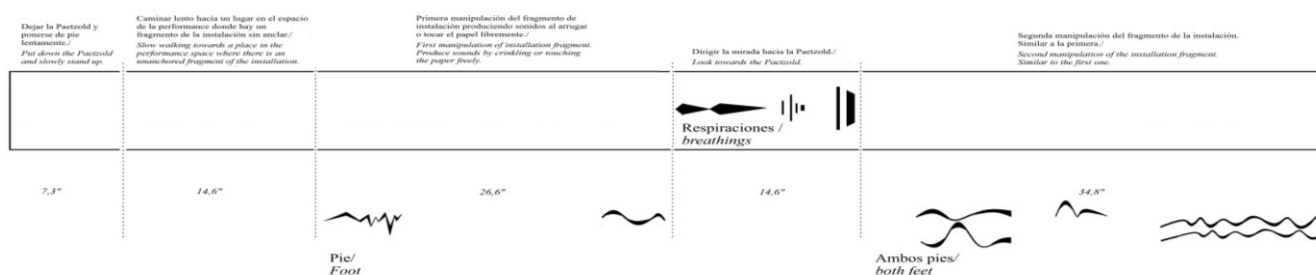


Figure 2.27. *Ddūwéwé*. Gesture and foot movements in section VII, performed by the recordist in the Huddersfield premiere.

For the second version at Valparaíso, the actor generated a kind of dramaturgic coda by building a refuge made of removed paper from the installation. In both versions of the project, ‘Force’ permeates this section as a nullification behaviour where all gestures disappear gradually, giving place to a final image with the actor finding a place to stay.

In general terms, the word force summarizes the entire project by relating the navigation proposed to the spectator as a matter of energy and attraction. The global intention of *Ddūwéwé* is a synesthetic invasion or, in other words, the occupation of the space in various dimensions. One could see the power of the project and its multidimensional cartography as an effort to capture the audience.

4.3. Acts and density as an expression of future

In section I, the text 'when the Diuka stops singing, there will be War', motivated the construction of choreographic duets by the actress and the recordist that appeared in synchronic (both performers doing similar things), or in static frames as in the case in which the recordist sits on the actress' back. Other movements of the actress involving arms and hands represented choreographic expansions of sonic events of the Helder recorder.



Figure 2.28. *Ddūwéwé*. Movements in duets by actress and recordist in section I.



Figure 2.28 Continued.

On pages I and V of the score, the high quantity of graphic elements stimulated further research by the performers on translations between choreographic movements and the high density of notation in these sections. Their texts contain expressions about the future that the project treated as relationships between space and time embodying the idea of the temporal Doppler effect. This concept states that people perceive events in the future differently than in the past or in the present, therefore, “this asymmetry arises because the subjective experience of movement through time (whereby future events approach and past events recede) is analogous to the physical experience of movement through space” (Caruso et al., 2013, p. 530). The difference in time perception has to do with feeling the future events closer compared to past or present events, or in other words, “just as people mobilize resources to prepare for approaching sights and sounds, they apparently have a more general tendency to prepare for the (approaching) future by reducing its psychological distance from the here and now” (Caruso et al., 2013, p. 535).

In addition, the expectation about something that will occur influenced the decisions about the performers' positions in the space. The first section nests a text about an act that expresses something in the future that depends on a condition (a bird's song). In the first version of the project at Huddersfield, such expectation motivated the recordist's placement on one of the balconies of the atrium in order to force the audience to look up, exploring the installation, and searching for where the sound comes from while the centre of the corridor of the atrium remained empty.

Figure 2.29 stimulates a final consideration of time and space. Page V constitutes the highest density of the work, where the text 'may everything happens to you as in a dream's happiness' alludes to the idea of approaching the future. The score indication 'discontinuous – full' emphasizes density with a high timbral contrast among the fourteen events on the page (twelve boxes, airflows, and foot movements).

Discontinuo - Lleno / Discontinuous - Full

Flauta Paetzold. Respirar libremente.

Las casillas y la cinta de Flujo de aire se comportan como en la sección IV. Las duraciones de eventos y pausas se indican debajo de la cinta, junto con gráficos que sugieren sonidos producidos por el arrastre los pies sobre el piso.

Paetzold recorder. Breathe freely.

Boxes and Airflow tape behave as in section IV. The durations for events and pauses are indicated above the tape alongside graphics suggesting sounds produced by dragging the feet on the floor.

The score consists of a central staff with musical notation and a series of boxes containing alternative notations. Above the staff are various graphical symbols representing sounds like 'Pic / Foot', 'Ambos pies / Both feet', and 'I\''. Durations in seconds are listed below the staff. The score includes lyrics: 'Peu ma gen', 'Fe le pe', and 'Fe le pe'.

PEUMAGEN FELEPE

V Que todo te suceda como en la felicidad de un sueño. May everything happens to you as in a dream's happiness.

Tiempo parcial / partial time: 2'57"

Figure 2.29. Ddūwéwé. Page V of the score.

III. LA FURIA DEL ERMITAÑO, A THEATRE OF SOUNDS ABOUT MADNESS

1. INTRODUCTION

La Furia del Ermitaño ('The Hermit's Fury' in Spanish) is a theatre of sounds that addresses the issue of madness and its dimension of psychological fragmentation. The work investigates the story of Luis Gonzáles, also known as 'Juanito', who spent a large part of his life isolated as a hermit in the *Las Chilcas* valley, a central region of Chile. For about 30 years, Juanito has had little contact with the rest of the world, limiting his interactions by receiving food, gifts, and to occasional visits by those who spotted him on the side of the Pan-American Highway or between the rocks of the landscape where he lived. His almost unbreakable silence filled the mystery of his life, stimulating the rise of many local legends, including his mental illness as the cause that led him to live in extreme isolation (Jesús, 2017). The Hermit's Fury is the name of a climbing circuit that opened in the mid-nineties in the Las Chilcas Valley. The name of the site recalls some episodes of hard encounters and aggressive reactions of Juanito against climbers who began to travel in that place.

2. THE TIMBRE

2.1. Mapping at home

The project began during the first lockdown at the time of the pandemic. In the course of my isolation, I started to conceive the musical language of *La Furia* as the result of experimentation with the elements available at my home: my own voice, instruments (a violin and a guitar), and above all, daily objects such as metallic bars, toilet rolls tubes, cans, rings, or my daughter's set of toy instruments (triangle, xylophone, tambourine, and

flutes). This context of limitations and scarcity led me to think that the elements involved in the construction of sonic places in *La Furia* worked as a peripheral operation: a soundscape of discarded components, casual gestures, or residual materials. The sonic world of the piece emerged from this fragmented, rough, accidental, and partially uncontrollable sounds. I considered such sounds in connection with ruination (as in Castellucci's practice) and mental disorder as psychological fragmentation.

Through mapping these small clicks, taps, pressures and slides, scratches, random reverberations, and blown sounds that behave like textures produced by a percussion set, I came to think about Lachenmann's statement about one of the essential elements of composition that he defines as the construction of an instrument:

This thesis addresses the necessity of establishing a new system of categories in every single new work, and it constitutes the central focus of Helmut Lachenmann's investigations. Lachenmann conceives the very essence of composing as a scanning, a mapping of diverse possibilities that are drawn together by structural similarity or functional convergences. To compose is to find, discover or to invent such similarities and convergences. By so doing the composer is "building" a new instrument (De Assis, 2012, pp. 5, 6).



Figure 2.30. Experimentation with small instruments at the beginning of the creative process of *La Furia del Ermitaño*.

2.2. Preserved ruins

My process of mapping at home ⁵ with its soundscape expanded toward the available forces of the ensemble. Such expansion material operates as ruins that have been preserved or that have survived from the first stages of my explorations to appear as the timbral palette in the completed work. The preserved ruins are as follows: 1) percussive gestures with tambourines, triangles, and metallic drumsticks hanging from a thread; 2) roughness signs by dragging rings on the surfaces of percussion instruments or on the floor; 3) elastic contact by keys bouncing randomly onto instruments or surfaces; 4) inaccurate vocality by my own explorations on overtones and air sounds.

2.3. The timbral palette

The preserved ruins and their contextualization generated the musical language of *La Furia*. The intensity of these sounds is low, so the highest densities of the piece depend on the interactions, the quantity, and the internal activity of sonic events. The following list shows the main elements of the timbral palette interacting in the piece to generate ruins and their sonic context.

Percussive sounds

- Key clicks, tongue ram, snap tongue, beating tongue, double tonguing (woodwinds).
- Percussion with fingertips, nails, or palms; tapping or sliding (string and inside the piano).
- Hitting with a bunch of keys (percussion, inside the piano).
- Wah-wah effect with a cymbal on the tom/ timpano surface.
- Fast pressing of the pedal (piano).
- Pendular and up-down movement with tambourines, triangles, and jumble of keys (percussion, inside the piano).
- *Battuto col legno/ crini* (strings).

⁵ A brief documentation of the experimentation process on percussive gestures can be found here: <https://youtu.be/zongEcMb7sU?t=25>

- Dragging rings and triangles onto the floor, (percussion, woodwinds).

Air sounds

- Fast attacks: jet whistle, blowing, and palm-swiping inside the piano.
- Phonemes inside the instruments (woodwinds, piano).
- Air–pitch gradation: embouchure’s position (woodwinds); pressure levels, contact points (strings).

Rough sounds

- *Bisbigliando*, roar, tongue roller (woodwinds).
- Sweep of natural harmonics (clarinet).
- Mute with hand, *spazzolato*, half-pressure arpeggio (strings).
- Spoken text pronouncing only its consonants (voices).

Explorations through pitch and register

- Waterphone with bow or crotales with a bow on timpano.
- Glissandi on timpano.
- Microtones and pitch oscillations (woodwinds, voices, strings).
- Erratic and irregular glissandi (voices, strings).
- Extreme high/ low pitches (voices, strings).
- E-bow (piano).
- Vocal sounds: phonemes (*f, s, sh, sho, ih, oh, ah*); explorations through the register by glissandi, oscillations, tingling sounds, and *sforzato*; whispered and spoken text; overtones.

In addition, the preserved ruins’ geometry and the sonic context where they emerge characterize the construction of sonic places, their limits, and their functionality.

3. THE CARTOGRAPHIC APPROACH

My cartographic approach is an orientation and navigation process that results from the interaction between the various dimensions involved in the project. In *La Furia*, This exercise unfolds with the elements of the timbral palette operating on two levels. At the first level, sound events acquire a tripartite structure, which addresses the non-musical issue of the work to model sonic textures and their behaviours. On a second level, the cartographic approach addresses the characterization of the sound textures to configure the three parts of the piece and the structural relationships between them.

3.1. Hierarchy: synapse and tripartite structure

Schizophrenia is one of the illnesses that could explain the behaviour of the Hermit of Las Chilcas. The disorder is probably the result of dysfunctions of the nervous system and its mechanism of the impulse transmission between neurons, known as the synapse (Izuo & Nitta, 2021, p. 1). My compositional approach to the issue of mental disorders starts from this process, so synapse is the principal element of hierarchy in this project.

I offer a very simplified summary of the synapse here: a net of terminals of the neuron called dendrites receives the impulse from another (pre-synaptic) neuron, then travels through the neuron body called axon, where it accelerates until jumping from the axon terminals through neurotransmitters, reaching the next (post-synaptic) neuron's dendrites and restarting the process (Zhang, 2019, p. 3, 12). This simplified cycle of three moments: reception (pre-synaptic), acceleration, and jump (post-synaptic), will constitute the principal structural hierarchy that the composition addresses to create the global and local organization of sonic textures.

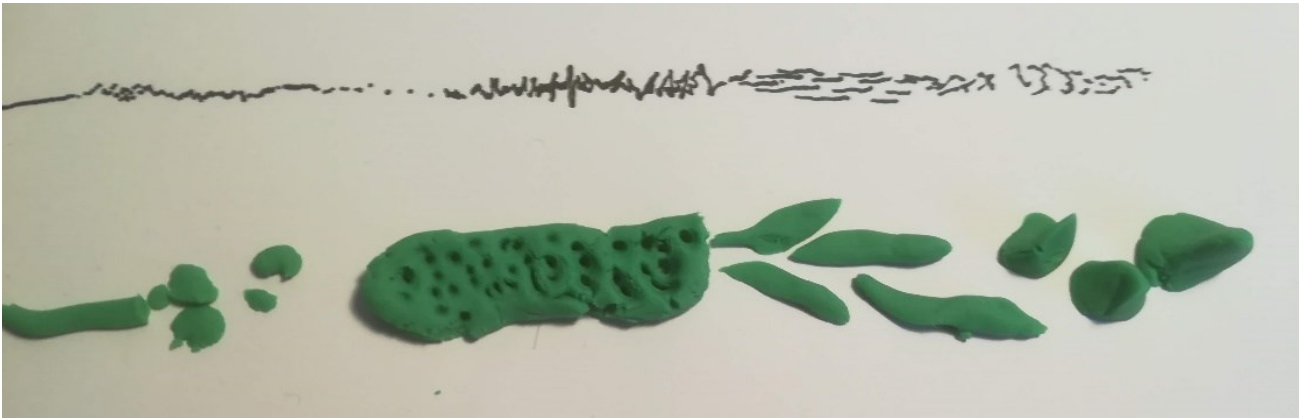


Figure 2.31. My representation of synapses using ink pencil and plasticine: on the left, the reception (pre-synaptic), moment in which the impulses regroup; on the centre, the acceleration moment appears as a single perforated volume with the nervous impulses already grouped; on the right, the jump (post-synaptic) moment appears as fragments that are elongating and projected towards a new cycle.

Figure 2.32 shows elements of the timbral palette interacting to allude to the tripartite structure of the synopsis process: first, the reception moment shows the piano with a percussive event taking advantage of resonance by hitting the pedal; second, after a stable air sound of the violin, the cello's bow increases its movements through the fingerboard, figuring the acceleration moment; third, the piano uses another kind of resonance by projecting breath sounds enriched with harmonics and echoes as a manifestation of the jump moment.

Figure 2.32. Tripartite structure as a figuration of synapse process at bar 8 of *La Furia*.

Other interactions between sonic events creating tripartite structures appear in the central part of the piece. Figure 2.33 shows harmonic cells (notes G, B, and C) by voices, flute, and violin, alluding to the reception moment of stability that pushes forward the texture to the next bar that insists on woodwinds' roughness and an incisive piano attack. The acceleration moment (bar 211) appears as increasing activity by vocal glissandi and muted pitch arpeggio on strings. The jump moment (bar 215) opens the texture with whispered voices, strings *gettati*, and a blow inside the piano.

N

Poda 4/ Pruning 4

♩ = 50

Libero

Respirar libremente/ Free breathing.

A Fl *mp*
Bisbigliando de posiciones /
Fingerings' bisbigliando.

Ci B *Susurrando/ Whispering*
Repeat... / Repeating...
mp

Perc. *mp*
Con las yemas o uñas. Superficie con anillos /
With fingertips or nails. Surface with rings.

Pno *mp*
Susurrando/ Whispering
Repeat... / Repeating...

Ped

S1 **Libero**
Buscando sonoridad de overtones /
Searching for an overtone sonority.
Respirar libremente/ Free breathing.
mf
Noh... grad. → [h] [Oh]

S2 *Buscando sonoridad de overtones /*
Searching for an overtone sonority.
Respirar libremente/ Free breathing.
mf
Noh... grad. → [h] [Uh]

Vln III *Criai*
MSP → grad. → ORD → grad. → MSP → grad. → ST
Casi tocando la mano izquierda /
Almost touching the left hand.
pp < mp > pp < mp > pp < etc.

Vla *Susurrando/ Whispering*
Repeat... / Repeating...
mp

Vc *Susurrando/ Whispering*
Repeat... / Repeating...
mp

Tpi 4 *Me susurran desenlaces que pudieron ser*

4 **3**
4 **4**

Example 2.33. X. Tripartite structure at the central part of *La Furia* (bar 209 – 215): harmonic cells, repeated bar, and a combination of *glissandi* and *arpeggios*.

O ♩ = 100

x2 x5

A Fl *Prepararse para arrastrar anillos/
Preparing to drag rings.* *Susurrando/ Whispering* *pp < f > pp* T 16 ¿Y si yo soy la piedra?

Cl B *Susurrando/ Whispering* *pp < f > pp* T 16 ¿Y si yo soy la piedra?

Perc. *Susurrando/ Whispering* *pp < f > pp* T 16 ¿Y si yo soy la piedra?

Pno. *Susurrando/ Whispering* *pp < f > pp* *volar / blowing* *p < fff*

Ped. 3 5 7

S1 *Susurrando/ Whispering* *mf* T 16 ¿Y Yo La ...dra?

S2 *Susurrando/ Whispering* *mf* T 16 Si Soy Pie...

Vln. *Arcada siempre libre/ Always free bowing.* *pp* *CLB* *gett.* *ORD* *MST* *EST* *pp* *p*

Vla. *Arcada siempre libre/ Always free bowing.* *pp* *CLB* *gett.* *ORD* *MST* *EST* *pp* *p*

Vc. *Arcada siempre libre/ Always free bowing.* *pp* *CLB* *gett.* *ORD* *MST* *EST* *pp* *p*

Figure 2.33 Continued.

3.2. Characterization of the sound textures: parts

The second level with which the cartographic approach informs the piece uses the tripartite structure of the synapse to conceive three parts or sonic places in the entire composition. To do this, I combined this structure with three concepts that describe mental disorders: entropy, intertextuality, and pruning.

3.2.1. First part: entropy

I associated the first synaptic phase (the reception moment) with the entropy concept. Between its many definitions and implementations, I address entropy as follows: “It is a measure of the amount of information we hope to learn from an outcome (observations), and we can understand it as a measure of uniformity. The more uniform the distribution, the higher the uncertainty and the higher the entropy” (Delgado-Bonal, Marshak, 2019, p.5). In schizophrenic patients, entropy could describe the personality’s fragmentation manifested in “sensory inundation, excess irrelevant sensory information in the brain, resulting in abnormal information processing, selective attention, and cognitive deficits in patients” (Xiang et al., 2019, p.2).

My compositional approach to entropy generates irregular and erratic textures that address a more stable situation. Figure 2.34 is a passage of the entropy part where sonic events of different nature coexist in a kaleidoscopic and high-density texture in which each instrument makes a different sound without establishing particular preponderance: key clicks, *voilé*, finger percussions, harmonics *glissando*, whispered voice, phonemes alternation, *battuto coi crini*, *spazzolato*, and bowing parallel to the strings.

96

A Fl
mf
idm
Inspirando (sin altura) / Breathe in (no pitch),
Todo cerrado / All keys closed

Cl B
mp
p
idm
idm

Perc.
pp
Solo sobre el timbal / Only on timpano
pp

Pno
Fast
PPP
8^{va}

Ped.
PPP
8^{va}
APed

S1
5
3
4
3
Susurrado / Whispering
p
Me asomaba... al camino... para ver... si alguien dejaba regalos.
Yo evitaba la gente... Me acompañaban... Las Chilas.

S2
4
4
4
4
mf
Linea rasgos. Se aumenta la velocidad de los Algoritmos, como una aceleración. El resultado es una emisión muy inestable y nerviosa, como una sacudida de electricidad a borbotones.
Rough line. The speed of the phonomes is increased, like an acceleration. The result is a very unstable and nervous emission, like a kind of boiling or bubbling.
Alternancia libre e irregular de los fonemas indicados. Free and irregular alternating of specified phonomes.

Vln
ORD
ST
VCA
mf
BCC
6
6
5
5

Vla
ST
MST
VCA
Crini
Spezzolata (lento / slow)
Solo arco / Only bow
III
IV
grad.
Arco con inclinación normal! / Normal inclination of the bow.

Vc
ORD
ST
VCA
ORD
ST
VCA
Crini
Arco paralelo a las cuerdas! / Bow parallel to the strings.
Solo arco / Only bow
III
IV
grad.
BCC
5
5
5

Figure 2.34. At bar 96, the entropy part of *La Furia* presents a densified texture with no internal hierarchy.

3.2.2. Second part: intertextuality

The second section combines the tripartite synaptic structure with the concept of intertextuality. This idea influenced the cartographic approach in the second part of the piece, but on a global level, it conditioned the entire pathway of the sonic places in the work. Moreover, intertextuality as synergies between heterogeneous components helped me to articulate the text. I have taken intertextuality from a perspective of mutual influence that structures sound, text, and stage design. My approach takes the following definition of intertextuality:

Intertextuality envisages all texts as inextricably conditioned – in both their production and their reception – by other texts. It casts texts as radically porous entities, whose words and forms are derived from, and whose meanings are glimpsed through, the mediation of other texts. It is in its emphasis on the fundamental interrelatedness of all textual phenomena that much of intertextuality's appeal resides: the startling vista it adumbrates is one of boundless connectivity (Baron, 2019, p. 2).

The dominant texture of the intertextuality part presents repetitions and transposed events from parts I (entropy) and III (pruning). The outcome is that the intertextuality part has a topography with contrasting geometries and densities that generate new contexts for transposed events. Figure 2.35 shows a fragment of the entropy part framed in dotted lines and labelled as *iii* (bar 115). This fragment appears in the context of horizontal geometry of vocal events, woodwinds, and harmonics within the piano. After, fragment *iii* re-appears transposed in the intertextuality part (see figure 2.36, bar 252). The new context involves a vertical geometry of repeated blocks and a zone of emptiness and horizontality by indeterminate air sounds of stopped strings.

Inspirando (sin altura)
Breathe in (no pitch)
Tudo cerrado/ All keys closed

III

A Fl
 [oh] grad. [ah]
p *fff*

Cl B
Vallé - Soffiato
p *f* *p*

Perc.
mf
Ha-wa
Más lento/ Slower.

Pno
Residuos/ Cast iron plate.
mf
ppp

Ped.
 3

S1
III (.)
 4
Los visitantes... Husmean mi refugio

S2
mf
 F Sio

Vln
 (.)
 ORD
 ST
 VCA
 MSP
 MST
p

Vla
Solo arco / Only bow
Spazzato (irregular)
 Crini
 ST
 MST
 VCA
 III
 IV (.)
 III
 IV (.)
 III
 II 3

Vc
Solo arco / Only bow
Alterando diversas inclinaciones y presiones del arco/
Alternating different bow's pressures and inclinations.
 Crini
 I II III IV
 III (.) (.) (.) (.)
 ORD
 ST
 VCA
 MSP
 ORD
p

iii

Figure 2.35. The fragment *iii* in entropy part of *La Furia*.

116

A Fl

Cl B

Perc.

Pno

Ped.

S1

S2

Vln

Vla

Vc

116

pedal gliss.

ped.

Susurrando/Whispering
mf

Respirar libremente/Free breathing.

2

4

4

4

F

Sho

Dedicatear/Suaping
I II III IV

p

116

ORD

Ruggerio

Bato de lengua / Tongue roller.

ff

pp **mp** **pp**

Bastidores/ Cast iron plate.

mp

Ellos veían los camiones.
(Que debían "enganchar"... ¿qué sería eso?)
Bajando despacio, como cuncunas.

Fonema con oscilación libre y lenta de frecuencia./ Phoneme with free and slow oscillation of frequency

Figure 2.35 Continued.

S ♩ = 50

(iii)

The score is divided into measures 3, 4, 5, 3, and 5. The first section (measures 3-5) is marked with dynamics *ppp* and *p*. The second section (measures 3-5) is marked with *mf* and *p*. The score includes various performance instructions such as *Deslizar/Whispering*, *Susurrando/Whispering*, and *Crinid.*. The lyrics for the vocal parts are: S1: "Pe tri fi ca ción. na Nue va"; S2: "na Nue va"; S1: "T 7 [...] Mi refugio."; S1: "T 23 Afuera de la Tierra ¿Cómo es eso?"; S2: "T 22 Papá ¿Adónde se esconde el Sol?"; S1: "T 20 Miraba por el vidrio del auto.".

Figure 2.36. Fragment *iii* transposed to the intertextuality part of *La Furia*.

255

AFI

ClB

Perc.

Pno

Ped.

5 3

S1

4 4

S2

Vln

Repetir... / Repeating...

(.)

MSP

Crini

Arca de siempre libre / Always free bowing.

grad.

III II L...

3 3 3 3

Como arpeggio, media presión. / Like arpeggio, half pressure.

4 3 2 1 etc...

ORD

EST

Vla

Repetir... / Repeating...

MSP

Crini

Arca de siempre libre / Always free bowing.

grad.

I II III IV...

3 3 3 3

Como arpeggio, media presión. / Like arpeggio, half pressure.

4 3 2 1 etc...

ORD

EST

Vc

255

Repetir... / Repeating...

(.)

Figure 2.36 Continued.

3.2.3. Third part: pruning

The third part of *La Furia* combines the jump moment of the synapse process with the concept of pruning. This word denominates the phenomenon of removal of the unnecessary synapses of the nervous system:

Recent genetic studies have focused on the association between schizophrenia and the immune system, especially microglia–synapse interactions. Microglia [the resident immune cells in the central nervous system] physiologically eliminate unnecessary synapses during the developmental period. The overactivation of synaptic pruning by microglia is involved in the pathology of brain disease (Izuo & Nitta, 2021, p. 1).

My approach to modelling the pruning process in the composition tends to decrease the number and variety of events in opposition to the kaleidoscopic environment of the entropy part. Figure 2.37 shows a progressively fading process in the pruning part with the woodwind's sonorities (using the instruments as a resonator) and within the piano. The orchestration aims to leave a space for the intelligibility of the whispered texts of the Soprano 1. This gesture evanesces into harmonics and half-pressure sounds on the strings:

364 □ *Alternancia libre e irregular de los fenómenos indicados. / Free and irregular alternating of specified phenomena.*

A Fl

Cl B

Perc.

Pno

Ped.

S1

S2

Vln

Vla

Vc

Alternancia libre e irregular de los fenómenos indicados. / Free and irregular alternating of specified phenomena.

Respirar libremente/ Free breathing.

poco rit.

□ MSP ▣ ST □ MSP

IV ▣ ST □ MSP

Las alturas desaparecen/ Pitches disappear

□ SP ▣

Figure 2.37. Fading process at pruning part of *La Furia* (bar 364).

3.3. Hierarchy by notation: structure, articulation and versatility

The notation of *La Furia* has two characteristics. On one hand, flexibility as an aspect of the expansion principle influences the combination of graphic and standard notation, allowing the performer a balanced construction of the sonic events with space for more personal interpretations yet maintaining an overall sense of organization in a performance with nine musicians. On the other hand, the notation of *La Furia* is an expression of hierarchy because it follows a similar approach to *Ddūwéwé* regarding the use of boxes and graphism to distinguish structural and articulative aspects of sonic events.

In Figure 2.38, woodwinds and percussions share a similar notation in which the structural material of events appears within boxes. The articulation (durations, dynamics, and movements through the register) of such material appears in a one line-staff.

The image shows a musical score for three parts: A Fl (Alto Flute), Cl B (Clarinete B), and Perc (Percussion). The score is centered around bar 101. Each part has a staff with notes and rests. Above the A Fl staff, there is a box labeled 'Schiccio' containing a graphic representation of a sound event. Above the Cl B staff, there is a box labeled 'Vielé - Soffiato' containing a graphic representation of a sound event. Above the Perc staff, there is a box labeled 'Sólo sobre el timbal/ Only on timpano' containing a graphic representation of a sound event. The notation includes various dynamics (p, mp, pp), articulation marks (accents, slurs), and structural markers (boxes, vertical lines). The percussion part includes a graphic of a timpani drum.

Figure 2.38. *La Furia*. Mixed notation with boxes and conventional signs around bar 101.

Figure 2.39 shows another example of divisions between structure and articulation in a cello fragment. The conventional staff nests the event's structure with half-pressure pitches played by the left hand. Above, the right hand manages the articulation of the

event represented by bow pressure and changes in the contact points between bow and string (*sul tasto* and *molto sul ponticello*).

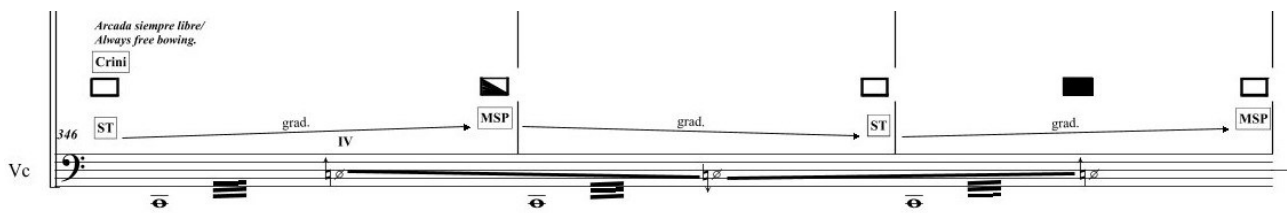


Figure 2.39. *La Furia*. Separation of structure and articulation on both hands at bar 346.

Figure 2.40 shows a section of the pruning part that proposes the navigation in a zone that requires performing freedom oriented to reach dramaturgical aspects. In this part, the position of the performers around the piano requires a notation that players can read at a greater distance than usual, probably placing sheets on the cast iron plate. To make the score readable, I've decided to use graphic notation. Such symbols are similar to the graphics of the air flows in *Ddūwéwé* but in this case with vocal sounds and whispered texts. The greater versatility and freedom of this notation lead me to use the same signs for the vocal gestures within the woodwinds' embouchures in the next section. Therefore, the graphic symbols respond to practical needs and facilitate the performance in a moment of particular dramaturgic charge.

III. Poda/ Pruning

III. 1. Soliloquio Nocturno/ Nocturnal Soliloquy

W **w1** [♩ = 60] *Los eventos indicados con gráficos se distribuyen proporcionalmente al interior de los compases. El pulso es aproximado./*
The events indicated with graphics are distributed proportionally within the bars. Tempo is approximate.

30" ca.

A Fl
 317
 Alternando fenómenos en el Arpa. Sin el instrumento./
 Alternating phenomena inside the piano. Without the instrument.

Cl B
 Arco / Bow.
 Bowado en crinola, apoyado en el borde del Tom de púa con llaves./
 Bowing on the crinola placed on the edge of the Floor tom with keys.
 L.s. sample.
 Explorar diferentes distorsiones y resonancias./
 Exploring different distortions and resonances.

Perc
 mf p mf p mf p

Pno
 5
 Ped
 317
 Alternando fenómenos en el Arpa./
 Alternating phenomena inside the piano.
 Peda! de resonancia. Manténgalo hasta el final de la obra./
 Resonance ped! blocked until the end of the work.

S 1
 4

S 2

Vln
 317
 Alternando fenómenos en el Arpa./
 Alternating phenomena inside the piano.

Vla
 317
 Alternando fenómenos en el Arpa./
 Alternating phenomena inside the piano.

Vc
 CCLP Arcada siempre libre! / Always free bowing.
 MSJ grad. VCA grad. CCLP grad. VMSJ grad. CCLP MSJ grad.

Figure 2.40. *La Furia*. Mixed notation with graphics for the performer's action inside the piano.

3.4. Pathway through limits and geometries

The limits of the sonic places in *La Furia* come to light from contrast, borders, and transition points between (external) and inside (internal) parts and sections. Limits have topographical elements that make part of geometry, particularly by horizontal and vertical manifestations in front of the oblique geometry that prevails outside limits. While the topography of limits emerges from geometry, the impact on the listener's perception demonstrates that geometry is the generator of the pathway.

3.4.1. Internal limits

The concept of intertextuality influences the construction of 'internal limits' (inside the parts) of the piece by transposing and repeating some fragments almost literally between sections. The repetitions of short passages and their vertical geometry (as constitute blocks of simultaneous events) generate attraction, emphasis, and stabilization in the central part of the piece. As indicated in point 3.2.2 of this analysis, transpositions generate windows that preserve some portions of former fragments and create different soundscapes by changing their context and expanding their duration by repetitions, as figure 2.14 resumes:

Fragment	Bars	Transposed to bars	Repetitions
i	141, 142	220, 221	2
ii	94, 95	228, 229	No
iii	115, 116	252	5
iv	71, 72	272	6

Figure 2.41. Transpositions and repetitions between entropy and intertextuality parts of *La Furia*.

Other internal limits as transpositions occur in passages conceived as belonging to the pruning part but emerge within the intertextuality part. These ‘small prunings’ or ‘intertextuality prunings’ establish the only moment where an organizational criterion of pitches appears in the piece. These passages have horizontal geometries through sustained pitches or pedals and, as a consequence, generate colour and geometric contrasts in front of blows and percussions that define the average timbral palette in the intertextuality part. The harmonic cells in these fragments were constructed as follows:

Pruning number	Bar	Pitches
1	134	F, A, D
2	183	E \flat , G, C
3	203	E, F
4	209	B, F
5	242	G \sharp , A, B
6	265	E, G \sharp , A, D \sharp
7	278 (repeated 2 times)	D

Figure 2.42. *La Furia*. Prunings in intertextuality sections with pitch material.

3.4.2. External limits

On the other hand, the ‘external limits’ are transitional spots between the parts of the piece. Among parts I and II (from bar 95), the piano combines a standard action on a key with a finger moving across the respective string inside the instrument. The result is a percussive and resonant sound that decays as a harmonic *glissando*. The gesture acquires presence within the fragmented environment of the entropy part and goes beyond the next one. At bar 159, percussions continue this gesture with springs, accompanied by a cymbal with keys and the palm acting inside the piano until bar 182, when this action starts to decrease. The transition point described, linear and horizontal,

represents a stabilization of the entropy part connecting it with the intertextuality part by placing a periodic rhythm or expanded breathing between the external limits of both sonic places.

Towards the end of the intertextuality part (bars 281 – 297), the woodwinds and the piano perform an obsessive gesture of rapid repetition on note A, installing a pedal zone with internal articulation that gives space to gestures on A and F with microtonal variations. Immediately after this zone (bar 298), 'The journey and the accident' section features an alien timbre emerging from the piano, where an e-bow makes the G#3 string vibrate. The new, almost electronic, and static beep is the final stage of the intertextuality part. The static sound of the e-bow alludes to a shocking situation where internal and scattered voices emerge as erratic fluctuations of phonemes and whispered texts by sopranos.

Both transition spots characterize the sonic journey delimiting the spaces, either by employing a progressive emanation from a stable and periodic gesture or by presenting a braking process of the sound flow.

3.5. Cartography and stage design



Figure 2.43. Contreras, Manuel (2022). Rehearsals with stage design for the premiere of *La Furia* in Santiago.

The stage design process faced many changes due to the pandemic and the constant cancellations of the première. The concept of entropy, alongside the idea of the psychological fragmentation, informed the construction of a scenic space as a landscape of fragments and ruins. The first proposal involved waste objects such as cans and other metallic and plastic pieces placed randomly on the stage. The idea was to build a kind of mega percussion set hanging from the ceiling of the stage giving the possibility of interacting with the performers.

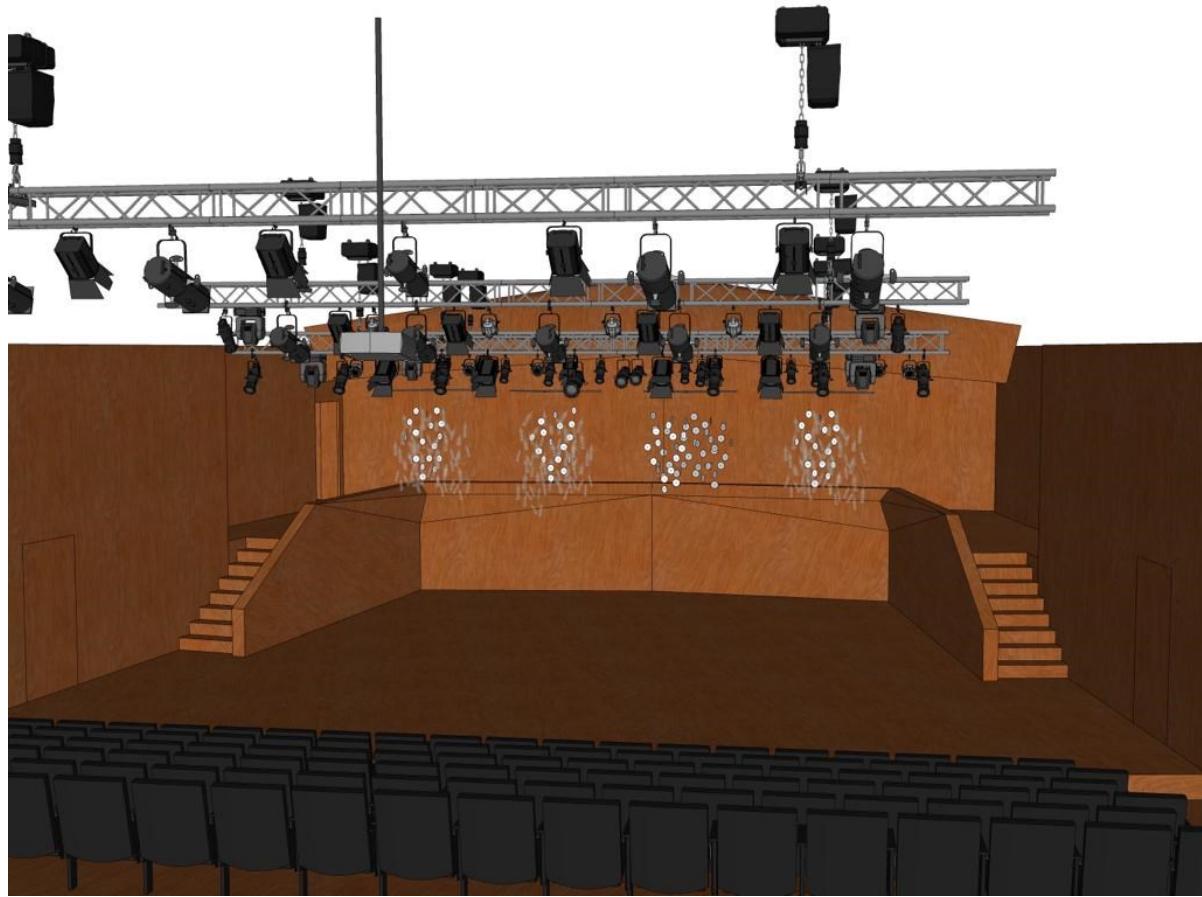


Figure 2.44. Sagredo, C. & Jiménez, E. (2022). Preliminary prospectus of stage design for *La Furia*, with hanging objects on the stage. The complexity of its installation and the risk of falls and injuries make the idea impracticable.

My final proposal considered the process of manuscript writing, where a series of small stamps suggested positions as milestones through the large pieces of paper where I was working. I used these stamps as landmarks to imagine the placement of sonic events and texts in the space-time of the performance, following a cartographic approach in similar terms to *Aswalaq*. Building the stage design project intuitively from this idea, I thought of a scenic installation rather than a conventional stage design. The proposal expanded the navigation exercise of my worktable toward the three-dimensional space of the theatre and is a manifestation of the cartographic approach in an interdisciplinary aspect of the project.

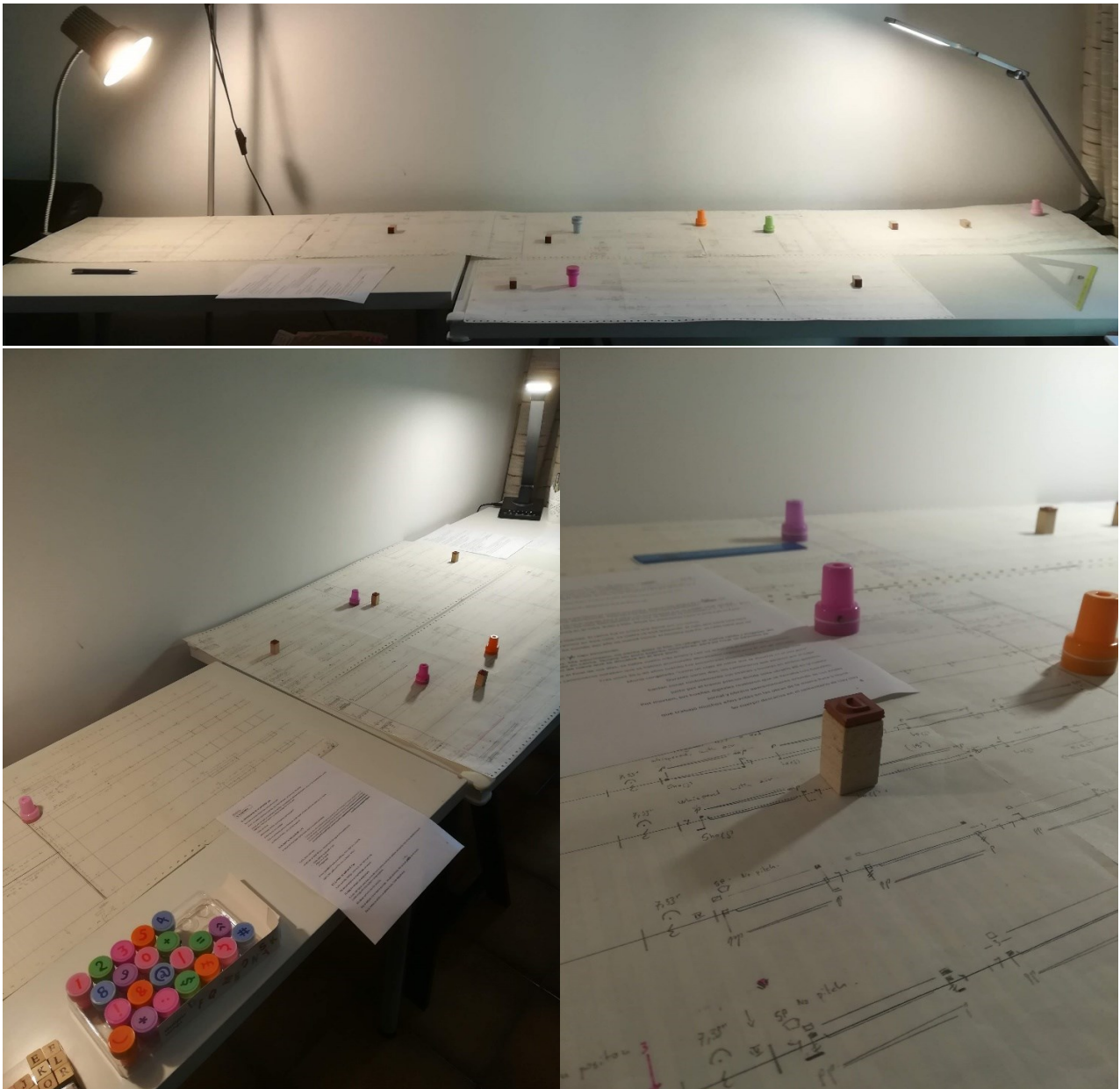


Figure 2.45. *La Furia*. Large sheets of the manuscript with small dice and other objects to define the position of some sound events in the piece.

The occupation of the paper surface inspired a stage design that invades the stage's floor and takes advantage of the elevated position of the seats, making this floor visible to the audience. The installation involved about two hundred pieces of white paper, folded like cards and placed vertically, horizontally, or resting creased on the ground. The card's sizes varied between A4, A5, and A6, and their white colour contrasted with the wood of the theatre. The generation of differently coloured zones gave a sense of structure to the

stage design without losing the fragmentary perspective of its constituent elements, addressing the effect of scattered debris thrown on the roadside.



Figure 2.46. Contreras, Manuel (2022).View of the installation from the top of the theatre. The inclination of the bleachers allows views of the stage's floor.

Each card contained a total or partial photograph of the Las Chilcas' hermit. The outcoming effect was a constellation of tiny faces and bodies emerging randomly between music stands and chairs. Small led lights (usually placed on music stands) illuminated some of the cards.



Figure 2.47. *La Furia*. Detail of stage design with cards and photographic fragments of Las Chilcas' hermit.

A backdrop completed the stage design. With poor and worn material, this device gives a handcrafted and ragged character to the space, contrasting with the white of the cards. Some text of the composition appeared projected onto the backdrop, as some passages of the score suggest. Toward the end of the piece, the backdrop shows a triptych of repeated photos of the hermit, accordingly to the tripartite structure which characterised the piece.

The installation considers geometry and colours to occupy the space. On one hand, white and ochre colours interact with the wood in the hall. On the other hand, stage design defines the horizontal geometry of cards onto the floor in opposition to the verticality of the background.



Figure 2.48. Finished stage design with led lights and the backdrop hanging at the back of the stage.

3.6. Unexpected issues and solutions

A few days before the premiere, the music director informed me that the ensemble had two instruments missing: the viola and the waterphone (a percussion acoustic idiophone). This problem led us to explore solutions without compromising the sonic result of the work.

The director proposed replacing the viola with recorders that reread the original part and integrate the sound resulting from the rehearsals through semi-improvised gestures. This change gave a different sound depth to the piece, thanks to the Paetzold recorder that reconstructed elements of the viola such as *gettato*, mute bowings, or percussive effects on the fingerboard. Recorders' elaborations involved techniques as overtones, double *staccatos*, *sforzato*, and key clicks. We kept the Helder recorder for the end of the piece (sections X and Y), where pressure tremolos and *spazzolati* of the viola became recorder tremolos with a lot of air, harmonics, multiphonics, and double staccato by manipulating the valve that controls the air channel of the Helder. Similar criteria of more profundity pushed the director to extend the use of bowing on cymbals beyond the beginning of section W (as asked in the score) to include them in section V and at the rest of W. I suggested replacing the waterphone in the final part of the piece with a single crotale bowed on the timpani.

4. DRAMATURGY - THE TEXT CONSTRUCTION

4.1. The origins and paraphrase of the text

The dramaturgy of the sounds in *La Furia* was born from a domestic exploration with simple resources and objects, representing a condition of scarcity and democracy in the creative process: anyone, musician or not, can produce these sounds. Similarly, the text and its vocality follow the ruined approach of the timbral palette by mapping and navigating randomness toward a kind of cleanness in the pruning part.

The text of *La Furia* is a series of statements that, following an intertextual principle, intends to invade the navigation of the listener with a storm of reflections on the issue of mental disorder and the hermit's remembrances. As the recovery and preservation of

sonic ruins, the text is repeated, reread, and commented on by other players of the ensemble (not singers). This gesture embodies the democratic condition discovered during my domestic exploration and reinforces the semantic meaning of the text.

The three parts of the work contain seven sections that reflect various perspectives of my literary research. Each section addresses an aspect of the issue by paraphrasing various sources: Japanese philosophy as the thought of Kitarō Nishida (b. 1870 – 1945); Zen traditional tales; studies on schizophrenia as the works of Gaetano Benedetti (b. 1920 – 2013); and quotations from psychiatric patients in Argentina (from the documentary *Visitando a Hendrix* by El pan que habla producciones). In addition, I included my childhood memories when traveling the landscape of the Las Chilcas Valley. Furthermore, I tried to articulate the main elements of the legend that accompanied the hermit's life, his madness, and death, by searching for testimonies, articles, interviews, and documentaries.

4.2. Acts

My text nests three types of acts: describing, remembering, and meditating.

- 'Describing' informs sections that evoke the landscape of Las Chicas in the entropy part: *Gravel and Slope*, and *Road*.

- 'Remembering' inspire the questions about what images of my childhood emerged and how people believe the hermit lived and went mad. This act influenced the sections of the intertextuality part: *Road construction*, *The bus and the sunset*, and *The journey and the accident*.

- 'Meditating' is the act that reflects on the condition of solitude, death, and the inheritance left by the hermit, motivating my work on sections of the pruning part: *Nocturnal soliloquy*, *Climbers and heritage*, and the *Finale*.

In the creative process, the text of *La Furia* reached its structure retrospectively. The decisions about where to place its various phrases resulted from observing the resulting sonic places created within the manuscript. Words and sentences were adjusted or modified (with the help of stamps on the pages) to reach better connections with timbre and the possibilities of voices to work with phonemes, fast declamations, or sung texts. Some semantic contents of the text reflect the timbral behaviour and evolution of sound textures. Consequently, one could see the construction of the text as a hermeneutical aspect of the cartography, associating the semantic meaning of words with the topography of the sound and the acts within each section. Once I completed the text, the piece reached its definitive form, and the cartography, as a navigation map of the project, was completed.

4.3. Large-scale directionality

The dominant geometry in *La Furia* is oblique, presenting sound events without establishing directions, just as the ideas of entropy and intertextuality suggested to me. Beyond the tripartite structure inspired by the synapse process, the sonic constellations are fundamentally directionless, although they accelerate, slow down, become crystalline or blurry, smooth or rough. However, from a large-scale perspective, the navigation in the piece leads to its central part (intertextuality), where an acceleration process gradually accumulates energy to push forward until the new soundscape of the third part. The transition points between zones and the transported (*i*, *ii*, *iii*, etc.) and repeated fragments generate convergent pathways toward the intertextual part. The movement of the

performers at the end of the intertextuality part represents a sort of scenic climax progressively prepared from the gestures of the rings and the pendulum movements with the percussion instruments.

4.4. Inverting sonic roles theatrically

At the end of the intertextuality part, the second transition point blocks the sound flow like a state of shock during the automobile accident that, according to the legend, made Juanito lose his mind. At this stage, three players move to the piano, presenting a vocal texture using the cast iron plate as a resonator (see Figure 2.40 in point 3.3 of this chapter). The elimination of the instrumental ambit opens the piece to a resonant chorus that, for almost 3 minutes, suggests a theatrical situation with four performers located around the piano. Therefore, a new choreographic and democratic dimension (as in the case of the players' spoken text) appears when the performers at the piano replace the scenic and timbral presence of sopranos. The non-professional voices of players take a protagonist position. Moreover, this area (called *nocturnal soliloquy* in the score) alludes to the internal, dissociated, and ghostly voices that inhabit the physique of the schizophrenic patient. Here, texts combine meditations on the nature of the disease that the hermit knows and understands, adding them to mental images about the landscape, the cold night, the loss of consciousness, and the frustration, manifested in the quotation from a psychiatric hospital: "What I would like to give life, what I never gave it" (El pan que habla producciones, 2013).



Figure 2.49. Estudio Manero (2022). The end of the 'journey and the accident' section of *La Furia* involves four players acting with the cast iron plate (screenshot of video documentation).

CHAPTER THREE

OTHER PIECES IN THIS PORTFOLIO

Along with the three works analysed in this commentary, the portfolio involves five pieces of different scales and forces. This chapter offers a brief presentation of each composition.

I. **plano de levantamiento**

1. A retrospective plot

A drawing of plans (the English translation of *plano de levantamiento*) is a retrospective architectural plot on an already constructed building. As a metaphor, this composition proposes a sort of retrospective map based on the fifty-two first pages of the poem *Amereida*, a book written in Chile in 1967 that addresses the question of being American as the equivocal awareness of discovering a new world with the experience of the unknown as a gift. The mention of the poem at the beginning of this thesis (see footnote 1 at the beginning of this commentary) reflects the significance of *Amereida* in my entire PhD as an exploration of the sonic cartographies inspired by the poetic journey that *Amereida* narrates. Specifically, in this piece, I took three ideas from the poem. First, the inhabiting of the continent's peripheries. Second, the unveiling of Latin America by traveling its interior sea (desert, pampa, and forest). Third, the inversion of navigational axes. These ideas are the project's hierarchy and inform the topography of sonic places in the work. If we observe the various zones of the piece with more detail, such topography appears as the result of two types of geometries. On the one hand, I call 'figures' a group of events with defined pitches and rhythmic profiles that creates horizontal situations with oscillating sequences. The construction of figures is partially possible by pitch organization, as shown in Figure 3, where the fundamental pitch material of *plano de levantamiento* comes from five harmonic spectra on C, G, D, A, and E (the open strings of the violin, viola, and cello). These scales are combined with the first twelve numbers of the

Fibonacci series, generating five sequences where each position of this series (0, 1, 2, 3, 5, etc.) is one of the partials of the harmonic spectrum (0= fundamental; 1= first partial; 2=second partial; 3= third partial; etc.).

The image shows a musical score for five strings: E, A, D, G, and C. Each string has a staff with notes corresponding to the Fibonacci series: 0, 1, 2, 3, 5, 8, 13, 21, 34, 55, 89, 144. The notes are written in bass clef for E, A, D, and G, and in treble clef for C. Harmonic spectra are indicated by dashed lines labeled 8^{va}, 15^{ma}, and 8^{va}.

Figure 3. Pitch material of *plano de levantamiento*. Harmonic spectra on open strings combined with the Fibonacci series.

On the other hand, there is a group of events with fuzzy profiles, unclear pitches, and erratic movements through the register. I call these elements ‘veils’ and refer to an oblique geometry by air sounds, keyclicks, harmonics-sweep, and whistle tones, among other techniques. Veils and figures are manifestations of the project’s hierarchy by free overlapping and interactions of their geometries rather than alternating structural and articulation roles throughout the piece.

The following example shows veils and figures overlapped in a passage of the central part of the work: keyclicks in woodwinds and glissandi in the piano strings represent the veil and accompany the figure presented by natural harmonics in the strings instruments with pitches D, E, F sharp, G, A, and B.

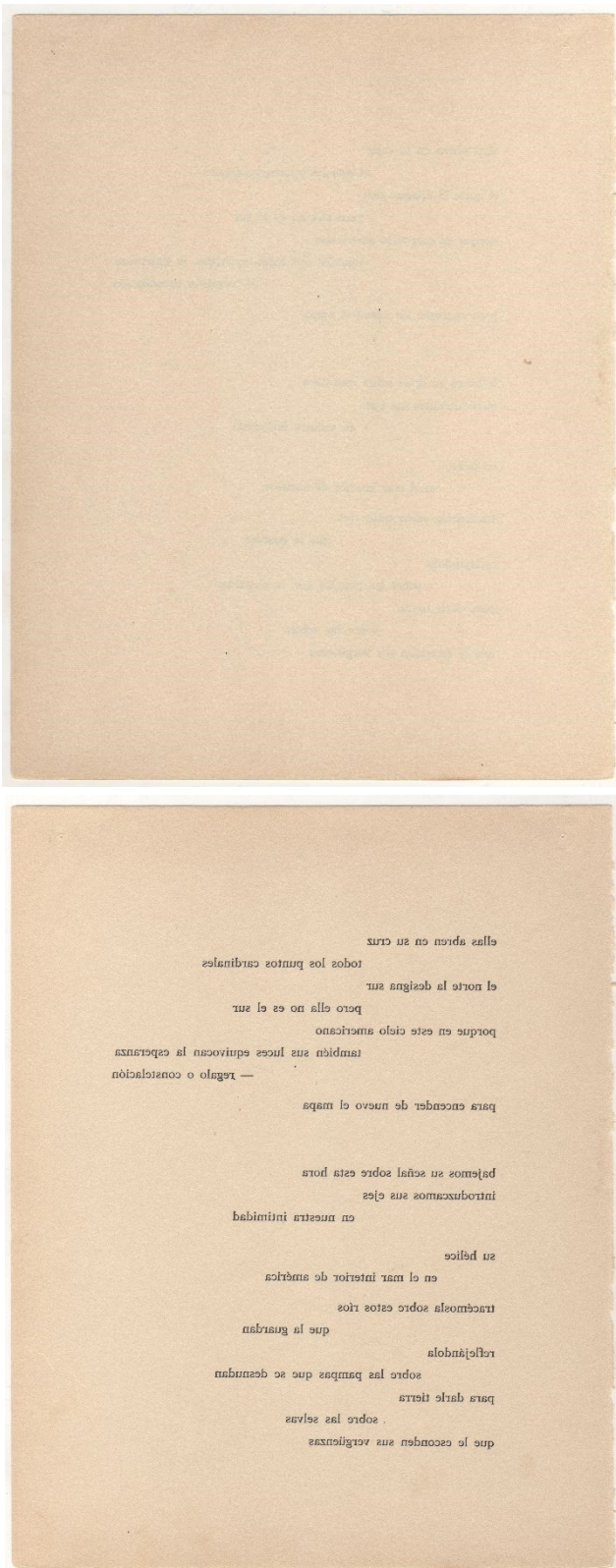


Figure 3.2. A fragment of the first edition of *Amereida* (pages 37, 38, and 39) shows an alternation between text, blank pages, and maps. It is worth noting how the elements of page 37 appear as a veiled graphic stratum on the blank page, manifesting the idea of veil and figure in the form of differentiated densities (Ediciones e[ad], 1967. Courtesy of the publisher, Valparaíso, 2022).

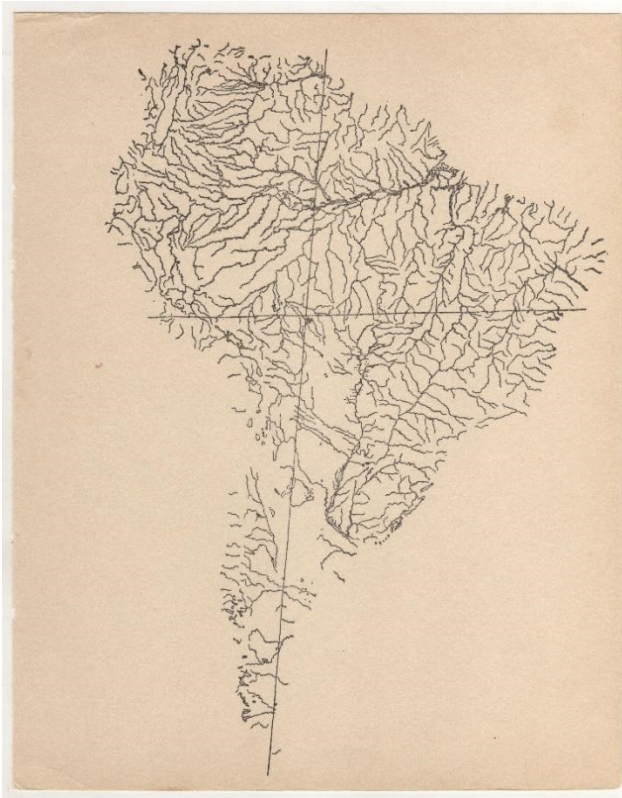


Figure 3.2 Continued.

The alternation of elements in Figure 3.2 influenced the organization of densities in the score. I associated sections of the piece with two terms to define such densities: 'readings' and 'maps'. With spoken texts in the score, the reading sections allude to the written pages of the poem and manifest as low-density zones in the piece. The map sections of the score have a higher level of activity and density: it consists of timbral translations of various graphic representations of the South American continent shown in the maps pages of *Amereida*: marine currents, cities, non-inhabitable territories, watercourses, mountains, the Southern Cross constellation, and the inverted map of Latin America (with the South at the top).

2. Cartographies

As Chapter One outlines (see point 3.3), my cartographic approach in *plano de levantamiento* is a mapping of formal schemes through the book *Amereida*. Such an

organization operates on two levels. The first one points to a global structure of the work, while the second level helps me define the timbral palette that informs the sonic places of the piece with more detail. The following examples illustrate how cartographies translate to the score.

Figure 3.3 shows the first level of mapping. The schematic overview presents the pages of *Amereida* that I borrowed as a formal organization of the score. I discovered that texts, maps, and blank pages alternate according to proportions that recall the Golden Ratio and the Fibonacci series (and that influenced the definition of pitch material, as shown in Figure 3). In the score, the 'readings' and 'maps' sections follow similar proportions manifested as their duration, mainly measured by the number of quarters.

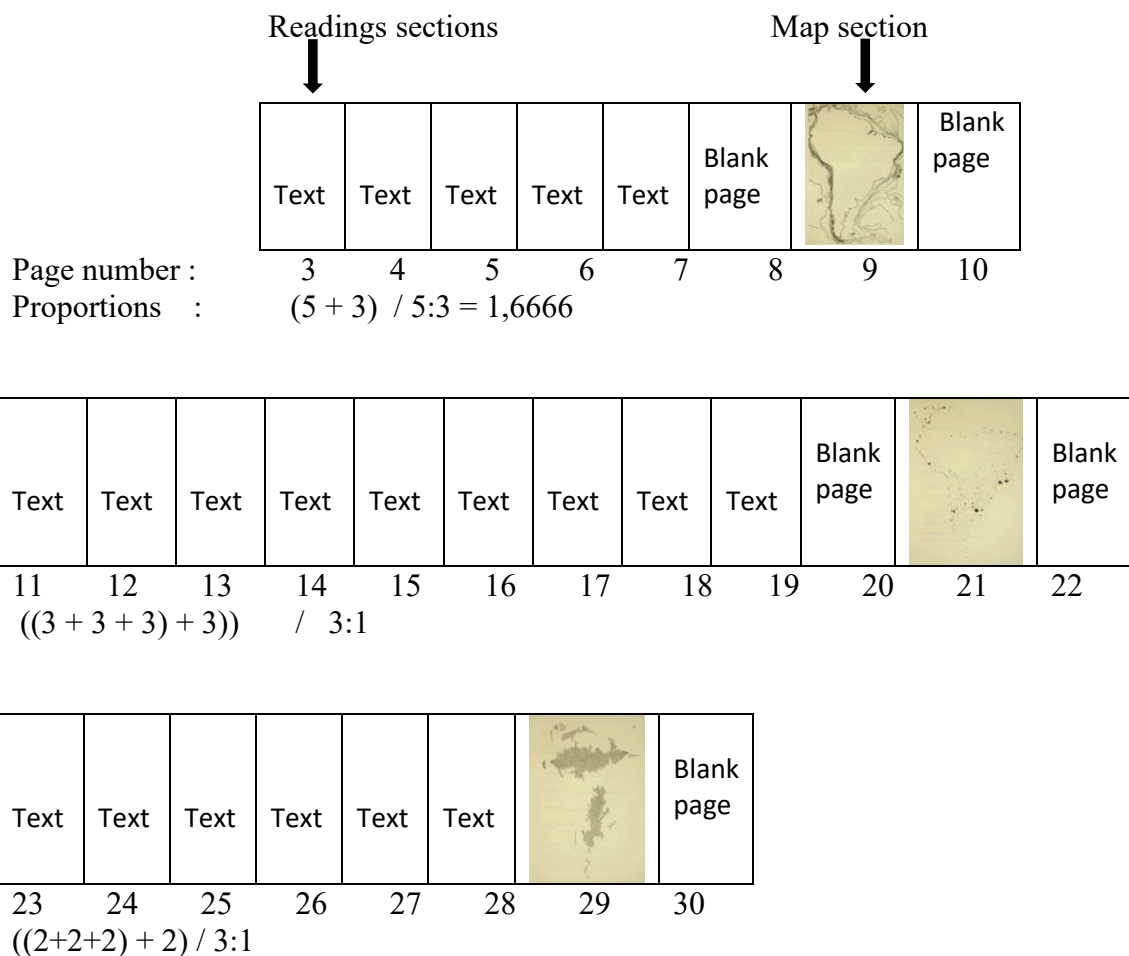


Figure 3.3. *plano de levantamiento*. Schema with proportional distribution of blank pages, maps, and text in the poem *Amereida* (maps taken from the book *Amereida*, Ediciones e[ad], 1967. Courtesy of the publisher, Valparaíso, 2022)

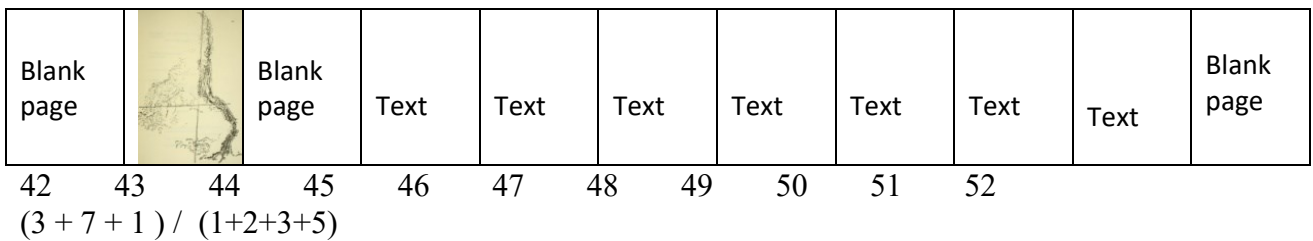
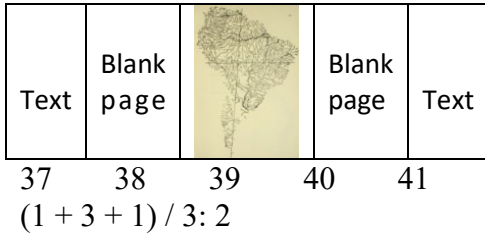
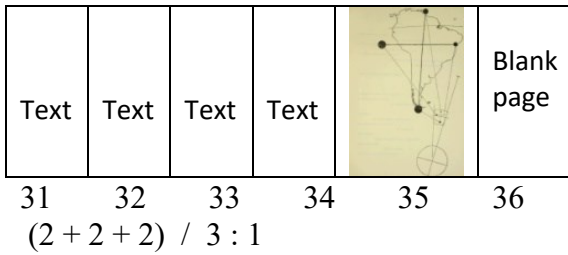


Figure 3.3 Continued.

The second level of mapping demonstrates a strategy to imagine the timbre and the placement of sonic events through the structure obtained from the first cartography. Figure 3.4 shows a schema that presents three working zones. In the upper area, a line with numbers and small maps indicates the general structure obtained from the first cartography described above, showing the approximate duration of the various sections (in pages). Below this zone and in the lower part of the schema, an area of signs represents instrumental techniques distributed according to the structure outlined in the upper part. The central part of the schema shows geometric forms that represent transformations, accumulations, and overlaps of sonic densities and geometries.

Pages Maps

Techniques

Geometries

Techniques

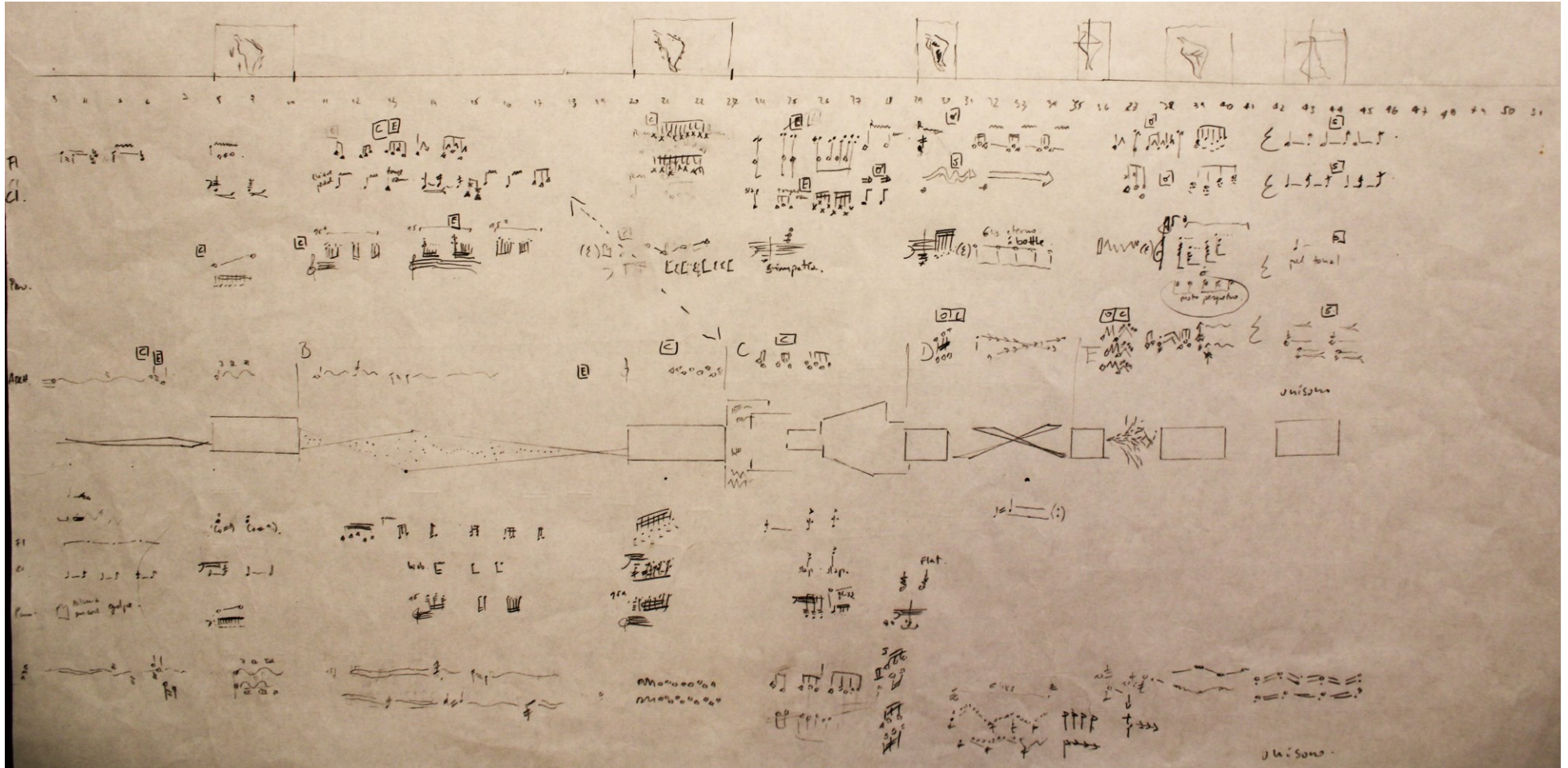


Figure 3.4. *plano de levantamiento*. Cartography's fragment with structural, timbral, and geometrical elements explored in the work.

3. Pathway

In this piece, the hierarchical relationships manifest through interactions between 'figures' and 'veils' and the alternation between 'readings' and 'maps'. The pathway of the work evolves from alternation to a juxtaposition of those elements around the last sections. Therefore, the final part of *plano de levantamiento* is a crossfading in which the *parlato* (a technique that the piece associates with 'readings') penetrates the instrumental texture to coexist in a unitarian soundscape. Furthermore, spoken events explore the dramaturgical consequences of vocality and texts in an instrumental environment.

II. SHUNYA

1. Autopoietic theory: about the relationships

In the late sixties, the neurobiologists Humberto Maturana (b. 1928 - 2021) and Francisco Varela (b. 1946 - 2001) defined living systems in the following terms: “unities, as networks of productions of components that recursively, through their interactions, continuously regenerate and realize the network of processes that produced them and constitute, in the space in which they exist, the boundaries of the network as components that participate in the realization of the network” (Chagas, 2005, p. 17). Such a definition was the basis of the autopoietic theory. Maturana and Varela considered the cell an autopoietic system with three kinds of relationship. First, ‘constitutive relations’ determine the type of system and, consequently, the physical limits and the physical proximity within the system. Second, ‘relations of specificity’ determine the identity or the proprieties of the components and, therefore, the system’s material feasibility. Third, ‘relations of order’ that determine the organization of the system and then, the concatenation of the relations within the system”. (Maturana & Varela, 1994, p. 80). Following this reasoning, *Shunya* is an orchestral work that explores the relationships between textures, register, velocities, and pitched and semi-pitched sounds. In the piece, the hierarchy category explores such relationships in a large-scale project from a cartographic approach conceived as navigating through orchestral textures.

Pitch material consists of a chromatic scale on D where the semitones gradually appear, generating local moments of harmonic attraction to the new pitch through the piece. Nevertheless, pitch treatment is always flexible to include notes suitable to the register and the nature of each instrument. As an articulation element (and not a structural one), pitch material is similar to a 'tablecloth': a background that hosts timbral explorations, register

contrast, and dynamics articulations without a defined schedule and following the statement of Rebecca Saunders in an interview with Aaron Cassidy, where she conceives pitch as colour (University of Huddersfield, 2018).

2. Geometry

Constitutive relationships in the autopoietic systems could be understood as topographies of the sonic textures organized in three basic geometries (see point 2 of Chapter One). Firstly, horizontality, informing elements as pedals and resonances. Secondly, verticality, generating blocks or chords. Thirdly, obliquity, combining vertical and horizontal geometries. These elements create relationships in the various sections of the piece. Geometries evolve in *Shunya* toward the dissolution of the sonic textures where the oblique disposition of the events prevails, as Figure 3.6 shows:

The image displays a musical score for the piece *Shunya*, specifically focusing on the string section from bar 118 onwards. The score is arranged in a standard orchestral format with staves for Violin I, Violin II, Viola I, Viola II, Violoncello I, Violoncello II, and Contrabasso I and II. The string parts are marked with various dynamics, including *ppp*, *pp*, *p*, and *mf*. Performance instructions such as "Damping strings. No picks!" and "Apostrophes caudales. Sin alitas" are present. The score features complex rhythmic patterns, including microtonal glissandos and seagull effects, which contribute to an oblique geometry in the sonic texture.

Figure 3.6. *Shunya*. At bar 118, one of the last passages on strings combines seagull effects, air sounds, and microtonal glissandos to generate an oblique geometry.

3. Pathway

In the piece, the pathway results from enchaining sonic places as a metaphor for order relationships in the autopoietic systems. These places present different treatments of the material of the work through orchestration techniques that contrast, recombine, merge,

lengthen, or compress the sound events. For example, two basic materials that I call ‘pedal’ (mainly represented by long notes and *tenuti*) and ‘shadow’ (fundamentally percussive or residual sounds) interact in the first sections of the work:

Figure 3.7. *Shunya*. Materials contraposed at bar 6. On one hand, horns present a ‘pedal’, while woodwind keyclicks with bassoons *staccato* generate a kind of ‘shadow’ of residual sounds.

Later, the materials begin to melt and compress:

Figure 3.8. *Shunya*. At bars 19 and 20, the violins section combines aspects of the ‘pedal’ (itches) with a fuzzy profile where the elements of the ‘shadow’ remain.

Another example of orchestration for the construction of pathways shows a chronological expansion of shadows and pedals to generate a static situation with internal vitality:

The image displays a musical score for the string sections of the piece *Shunya*, specifically around bar 29. The score is arranged in a standard orchestral format with staves for Violin I, Violin II, Viola I, Viola II, Violoncello I, Violoncello II, and Contrabass I and II. The music is characterized by dense, overlapping textures and complex rhythmic patterns. Dynamics range from *pp* (pianissimo) to *mf* (mezzo-forte). Articulations and performance instructions include 'ST', 'Crti', 'Gett', 'Lx', 'Is', and 'sempre'. The score shows a clear expansion of material over time, with various instruments and sections contributing to a rich, layered sound.

Figure 3.9. *Shunya*. Expansion of material through time on string sections around bar 29.

4. Density

This category reflects the balance between the forces and the sound masses in *Shunya* by addressing a dramaturgical element in an orchestral work. The theatrical perspective of dealing with densities comes from two sources. The first one is the ‘homeostasis’ in the autopoietic systems: a capacity to develop continuous compensations to face perturbations that may affect the system. (Maturana & Varela, 1994, p. 69) and stimulate constant compensation of the sound masses and the timbral densities. The second source concerns the overlaps and fusion of textures and their materials that in *Shunya* could be taken as an aspect of Aperghi’s approach in which, as explained in Chapter One, dramaturgical development could emerge in terms of deforming sonic elements as an exploration of new formal and ludic principles for reorganizing the sonic material (Durney, 1996, p. 422).

The following examples show how textures reorganize materials to explore constantly new possibilities as a sort of dramaturgy of orchestral textures. In Figure 3.10, a rough (or crinkled) texture evolves with internal articulations, generating a continuous flow of telluric movement. In opposition, Figure 3.11 shows a high-density block of static pitches that creates a compact mass of sound:

The musical score for Figure 3.10, titled 'Shunya', spans from bar 48 to the end of the piece. It features the following instruments and textures:

- H in F I, III:** Horns in F, I, and III. Textures include 'only air/ solo aire' (mf), 'only air/ solo aire' (mp), and 'with fingernails on the bell/ con uñas sobre la campana' (mp, f).
- H in F II, IV:** Horns in F, II, and IV. Textures include 'only air/ solo aire' (mf), 'only air/ solo aire' (mp), and 'with fingernails on the bell/ con uñas sobre la campana' (mp, f).
- C Tpt. 1, 2, 3:** Trumpets. Textures include 'Kissing' (p), 'only air/ solo aire' (mp), and 'with fingernails on the bell/ con uñas sobre la campana' (mp, pp).
- Tbn. 1, 2:** Trombones. Textures include 'with fingernails on the bell/ con uñas sobre la campana' (mp, pp, mf, f).
- Trbn 3:** Trombone 3. Texture: 'mf'.
- Tuba:** Texture: 'mf'.
- Timpani (Timp.):** Textures include 'dragging super ball mallet/ arrastrando baqueta de goma' (pp), 'slip mallet' (f), and 'centre, centre' (pp).
- Perc. I:** Percussion I. Textures include 'dragging fast, not percussive/ arrastrando rápido, no percussivo' (mp, f) and 'Tam tam' (p).
- Perc. II:** Percussion II. Textures include 'D - C - Bb - // Eb - F - G - Ab' (mf) and 'Tam tam soft mallet/ baqueta blanda' (ppp).
- Harp (Hp):** Texture: 'Tune high G to G1 / Afinar Sol agudo como Sol' (mf).
- Piano (Pno):** Texture: 'Ped' (ppp).

Figure 3.10. *Shunya*. At bar 48, percussions, harp, and piano generate rough textures interacting with brass (air sounds, kissing effects, fingernails percussions), and timpani (with a super-ball mallet dragged on its surface).

Figure 3.11. *Shunya*. Sustained block of pitches by brass and woodwinds in bar 86. Pitches placement follows a criterion of suitability to the registers of each instrument.

The image displays a musical score for bar 86 of the piece *Shunya*. The score is arranged in a vertical stack of staves, each labeled with an instrument. The instruments included are Flute 1, Flute 2, Flute 3, Oboe 1, Oboe 2, Oboe 3, Bass Clarinet 1, Bass Clarinet 2, Bass Clarinet 3/Bass Clarinet, Bassoon 1, Bassoon 2, Bass 3, Horn in F I, III, Horn in F II, IV, Trumpet 1, Trumpet 2, Trumpet 3, Trombone 1, Trombone 2, Trombone 3, and Tuba. The notation for each instrument shows a sustained block of pitches in bar 86. The pitches are distributed across the registers of each instrument, with higher notes for higher registers and lower notes for lower registers. Performance instructions such as 'plunger + no vib.' and 'ppp' are present for the trumpet and trombone parts. The horn parts are marked 'uniii'.

Figure 3.11. *Shunya*. Sustained block of pitches by brass and woodwinds in bar 86. Pitches placement follows a criterion of suitability to the registers of each instrument.

III. LOS OJOS DEL PUEBLO ACUSAN AL ESTADO TERRORISTA

1. A manifesto: hierarchy

Los Ojos del Pueblo acusan al Estado terrorista (“The Eyes of the People accuse the terrorist State”, in English) is a composition that constructs a sound dramaturgy as a place for nesting a ‘political act’. This approach led me to conceive the piece as a timbral dimension of a ‘manifesto’ that proposes a series of statements characterized by emphatic conciseness. These statements are a series of brief sound clouds separated by long pauses in a context of expectation and suspensive tranquillity. A consequence of this conception is the presence of silence as a meditative pause during the listening. Time distance is also a practical way of letting things appear, allowing performers to prepare and produce sound events. Some repetitions help to remark the idea of working on a concise timbral palette, emphasizing gestures such as the cello’s bow shaking in the air, the high notes of the piano, or the swiping on the piano’s strings.

The image shows a musical score for Piano (Pno) and Cello (Vc) starting at measure 38. The Piano part is in treble clef with a 4/4 time signature. It features a series of notes with a slur over them, followed by a measure with a 6" cu. (sixteenth note) and a dynamic marking of *sfz*. The Cello part is in bass clef with a 4/4 time signature. It has a measure with a dynamic marking of *ff* and a note with a bow-shaking gesture labeled "sacudir arco/ shake bow". This is followed by a measure with a 6" cu. (sixteenth note) and a dynamic marking of *ff*. The score ends with a measure containing a triplet of notes and a dynamic marking of *ff*.

Figure 3.12. *Los ojos del pueblo acusan al estado terrorista*. Sonic events interact within long pauses around bar 38.

*glissando con las llemas de los dedos sobre la cuerda implicada en teclado /
glissando with fingerprints on the string involved on keyboard*

Pno

Vc

42 5'' ca. 10'' ca.

f *mp* *ff*

Ped. δ^{nb} δ^{nb}

*bloquear pedal resonancia /
resonance pedal blocked*

Figure 3.12 continued.

2. Preserved ruins: cartography



Figure 3.13. *Chile resiste* by Javier Vergara (2019) is a picture showing street protest during the Chilean social outbreak in 2019. With the kind permission of the photographer.

The cartographic approach in *Los Ojos del Pueblo* emerges as navigation through the barricades remains, evoking the event that inspired the composition: the Chilean social outburst in 2019. The piece focused on two situations observed during the protest and the street in Santiago, preserving them as sonic ruins reflected in the piece.

The first ruin appears in the piece at bar 61 (section E), where the e-bow into the piano produces a pure, static sound. This technique reappears another two times in the piece, creating a cell on notes A, C, and Bb strings as a figuration of the acronym ACAB (“all cops are bastards”) written on protesters' shields during street battles (see figure 3.13). The crystalline harmonic cell of the e-bow inside the piano opposes the dominant landscape of the cello by erratic *glissandi*, scratches with heavy pressure of the bow together with the dragging of mallets on the cast-iron plate, *glissandi* with stopped strings, and hands swiping inside the piano.

The second preserved ruin is the whistle of the pianist inside the instrument. This subtle sound gives more density and roughness to the sound of the e-bow. Furthermore, the whistling technique introduces an element of ‘strangeness’ into the work, following some aspects of Lachenman’s approach to unfamiliar and unnatural elements (see point 4.2, Chapter Two). The pianist whistles allude to the warning signals that the protesters make to avoid the police and one can see this gesture as a warning call to escape from the familiarity of the sonic places created by the piece.

In this composition, the timbral dramaturgy emerges from the idea of distance and silence between the sonic places. The preserved ruins manifested on the e-bow pitches, while whistles reinforce the dramaturgical aspect by unfamiliarity. In other words, the timbral monotony of static and suspended ruins (whistle and e-bow pitches) opposes the

roughness and brilliance of sudden events such as fast *glissandi*, blows inside the piano, bow's shaking, or rapid variations in dynamic. Familiarity and estrangement appear in the piece fundamentally as an alternation of opposed moments. Furthermore, ruins can merge with other elements of the timbral palette to gain density, as Figure 3.14 shows:

E

The figure displays three systems of musical notation for piano (Pno) and violin (Vc) parts, spanning measures 70 to 77. The first system (measures 70-73) features a piano part with 'arco eléctrico/ebow' and a violin part with 'No separar el arco/Do not separate the bow' and 'ppp'. The second system (measures 74-76) includes 'silbar dentro del piano/whistle inside the piano' in the piano part and 'grad. a media presión del dedo/grad. to finger's half pressure' in the violin part. The third system (measures 77-78) shows 'sin altura, sólo ruido/no pitch, only noise' in the violin part and 'arcada libre/free bowing' in the piano part. Various performance techniques are indicated by boxes and arrows, including 'CLT', 'Crini', 'MSP', 'AST', 'bow press. trem.', and 'SP'. Dynamic markings range from *ppp* to *mf* and *mp*.

Figure 3.14. *Los ojos del pueblo*. Interactions of various events to generate timbral density between bars 70 and 77.

IV. LIDIO

The three meanings of the word *Lidio* inspired this tribute to musician Victor Jara (b. 1932 - 1973). First, 'Lidio' (from "Lydian Mode" in English) is a seven-tone musical scale from F to F or C to C, providing an initial idea of the pitch organization of the work. Second, Lidio comes from the verb *lidiar* ("to deal" or "struggle", in Spanish). Third, Lidio is the middle name of Victor Lidio Jara Martínez, Chilean songwriter, militant of Salvador Allende's Government, and brutally murdered by Pinochet's dictatorship in 1973 after terrible torments in a concentration camp. His last poem, written in captivity before his death, alongside the multiple substances of his name, has inspired me to address the dramaturgic aspect of the project, identifying the act of aggression and transformation of a devastated body into something ethereal, transcendent:

Canto, qué mal me sales
cuando tengo que cantar espanto.
Espanto como el que vivo, como el que muero, espanto.
De verme entre tantos y tantos momentos del infinito
en que el silencio y el grito son las metas de este canto.
Lo que nunca vi, lo que he sentido y lo que siento
hará brotar el momento...⁶
//
How hard it is to sing
when I must sing of horror.
Horror which I am living, horror which I am dying.
To see myself among so much and so many moments of infinity
in which silence and screams are the end of my song.
What I see, I have never seen what I have felt and what I feel
will give birth to the moment...⁷

⁶ Jara, V. (1973). *Somos cinco mil*. By kind permission of Archivo Víctor Jara, Santiago, 2022.

⁷ Translation taken from Public reading rooms. (n.d.). *How Victor Jara wrote his last song, Chile Stadium, in the midst of torture and mass slaughter*. <http://bit.ly/3hXya9d> November 2022.

1. Pathway

Short episodes with percussions, interferences, detuning, and distortions characterize the timbral palette of *Lidio*, generating the pathway of the piece with three main areas or sections. The first zone (pages 6 - 8 of the score) alludes to the aggression against a subtle element by alternating bowing on the strings with gestures by bottleneck acting in the *buca*. Figure 3.15 shows a distorted sound of bows with high pressure that leaves spaces to bottleneck gestures emerge:

The image displays a musical score for two guitars, labeled 'Guit 1' and 'Guit 2', with right-hand (R.H.) and left-hand (L.H.) parts. The score is divided into three measures by vertical bar lines. Above the first measure, a box labeled 'B' is present. The first measure features a 'Bottle neck' gesture with a 'CB' box and a 'Bottleneck' box. The second measure includes a 'Barré with finger' at the XII fret and a 'Bottleneck' gesture with an 'HH' box. The third measure features a 'Bottleneck' gesture with an 'HH' box and a 'Barré with finger' at the XIII fret. The score includes various musical notations such as dynamics (ff, mp, mf, f), articulation (accents), and performance instructions like 'molto rit.'. The left-hand parts show fretting techniques, including barrés and fingerings. The right-hand parts show complex rhythmic patterns and bowing techniques.

Figure 3.15. *Lidio*. Distorted sound interacting with bottleneck gestures that evoke Víctor Jara's songs around bar 6.

The second zone (pages 8– 11) presents a rich articulation of events. The bottleneck gestures of the first section transform into harmonics – plucking or combining with *glissandi* - to explore another perspective of the aggression act. In this central section, timbral interferences appear between harmonics and rough sounds that increase their density with two resources: 1) a plastic ruler in contact with the vibrating strings, and 2) bowing techniques (combined with right-hand fingers) and bow tremolos. This last technique requires a movement parallel to the fingerboard as the *spazzolato* effect on string instruments.

The musical score is divided into two systems, Guit 1 and Guit 2. Guit 1 starts with a tempo of 90 and a key signature of E. Its right-hand part (R.H.) features a sequence of notes with dynamics *pp*, *ff*, *pp*, *mf*, and *f*. The left-hand part (L.H.) includes a tremolo marked 'Trem. parallel to strings' and a glissando marked 'gliss.'. Guit 2 starts with a tempo of 45 and a key signature of F. Its R.H. part includes a plucked string marked 'Pluck Lv.' and interference effects. The L.H. part includes a plucked string marked 'Pluck Lv.' and a dynamic of *f*. The score is annotated with various performance instructions and technical markings.

Figure 3.16. Interferences and harmonics characterize the second zone of the piece.

In the third zone (pages 11 - 13), the pathway indicated by bowing incorporates microtonal glissandi by the action of detuning. Repeated bars emerge to emphasize the bowing resonance and increase the variety and quality of unexpected colours and partials. Furthermore, repetition is a way to outline a dramaturgic dimension of a vibrating and resonating sound as a metaphor for resistance against the violence expressed in Victor Jara's poem.

The image shows a musical score for two guitars, Guit 1 and Guit 2. The score is divided into two systems. The first system (measures 41-48) features Guit 1 with a right-hand part (R.H.) consisting of a sustained chord (5 8) and a left-hand part (L.H.) with a glissando marked 'Glissando by adjusting/detuning pins with left hand' and a circled '6'. Guit 2 has a right-hand part (R.H.) with a melodic line and a left-hand part (L.H.) with a tremolo marked 'L.v.'. The second system (measures 49-56) features Guit 1 with a right-hand part (R.H.) with a melodic line and a left-hand part (L.H.) with a tremolo marked '6'. Guit 2 has a right-hand part (R.H.) with a melodic line and a left-hand part (L.H.) with a tremolo marked '5' and '6'. The score includes various dynamic markings (mf, p, PPP), articulation marks (Crini, Crini XII), and performance instructions like 'Continuous bowing with right hand Do not separate bow from the strings' and 'Alternance between two strings'. A rehearsal mark 'M' is present at the beginning of the first system.

Figure 3.17. In the third section of *Lidio*, repeated bars emphasizes the aggression act and impulses resonances remarked by microtonal glissando and glissando with the finger's tremolo.

2. Cartography

The cartographic approach focused on navigating the timbral aggressions through the piece. Figure 3.18 shows the preliminary attempt to define the concatenation of the events organized around a clear pathway, considering an average duration of seven minutes. The boxes indicate the sonic places and give general indications on techniques such as percussive events (transformed in bottleneck gestures), interferences, harmonics, or bowing on the strings. The boxes follow each other through a line representing the pathway, composed of various bowing techniques. Upper case letters at the bottom of the graph outline subsections reflected in rehearsal marks of the score. The cartography is completed with other schemas about durations and extended techniques (see appendix).

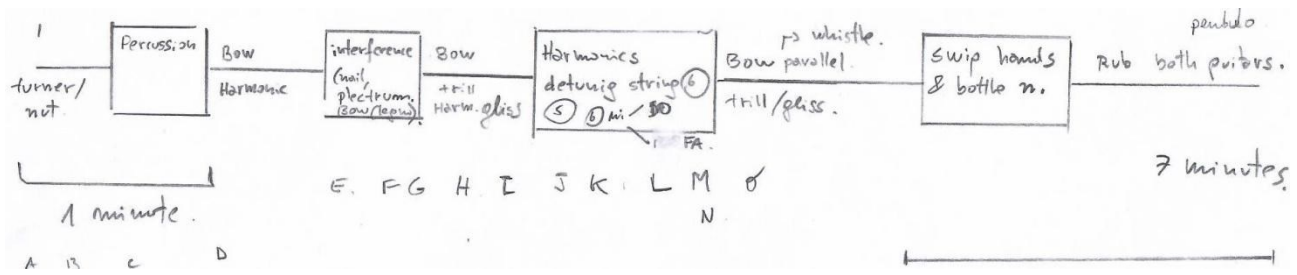


Figure 3.18. *Lidio*. Partial view of the cartography with a general schema.

3. Dramaturgy

Victor Jara's last poem is a meditation about the end of an era (the Allende's Government) through the force of weapons. My approach to this trauma considers instrumental ruins as a manifestation of broken things. Such ruins unfold through sound textures by lacerated and destroyed sounds that evoke something that resists a violent cut. Within these ruins remain an element of the project issue and the act of 'aggression'. The first preserved ruin is the bottleneck gesture alluding the Victor Jara's songs that appear disfigured in the composition by placing it on the guitar *buca*. The second preserved ruin has scenic implications and asks the performers to stand up, raising their guitars and making them oscillate to change the projection of the sound, alluding to a characteristic songwriter's farewell to the audience. Additionally, repeating bows are a timbral allusion to how something ethereal travel through the air with insistence and perseverance. This gesture is not only scenic but also an acoustic manifestation of the question about the legacy of Victor Jara: a man brutally murdered that became transcendent. The request to leave the guitars lying horizontally on the tables is a third preserved ruin. Such placement has a double function. Firstly, to facilitate the performance with bows and objects. Secondly, it evokes scenically the image of the hundreds of corps found at the *Estadio Chile*, the concentration camp where Victor Jara died, and whose body lay along with hundreds of victims (Díaz, 2019).

V. TAIKEN

This final piece of the portfolio is the only one that does not unfold from a Latin American issue. This work represents a synthesis of my research and outlines new projections of the three axes of my investigations: timbre, cartography, and dramaturgy.

1. The issue

The title *Taiken* (体験) is a Japanese translation of the German word 'Erlebins' and is composed of two signals: 'tai' (体), which means 'body', and 'ken' (験), in the sense of 'keiken' (経験), which means 'experience' (Nishida, 2019, p. 11). Such definitions appear in the thoughts of Japanese philosopher Kitarō Nishida as part of his conception of 'bodily lived experience' that visualizes the focal point of consciousness in the present, so the 'pure experience' coincides with the field of attention (Nishida, 2019, p. 242). This contemplative approach influenced my work by inverting my expansion principle to generate a kind of implosion in the present moment. The outcome of this contraction is a horizontal geometry of sound that manifests in a continuous line of events that addresses various orchestration processes with residual elements resulting from the exploration of the solo cello interacting with some objects (tuning fork, e-bow, aluminium foil, jingle bell, metallic rule, and a triangle mallet).

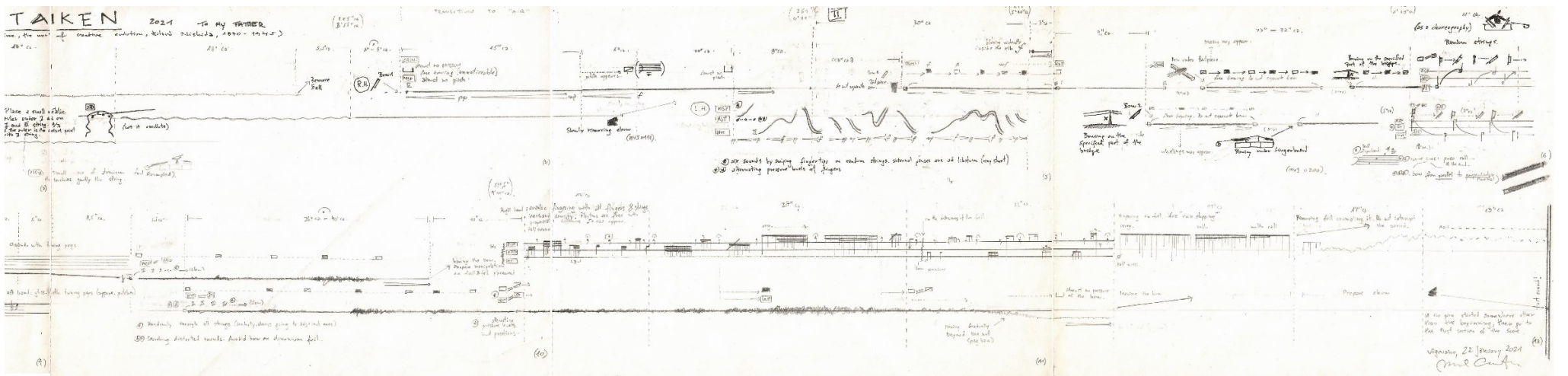
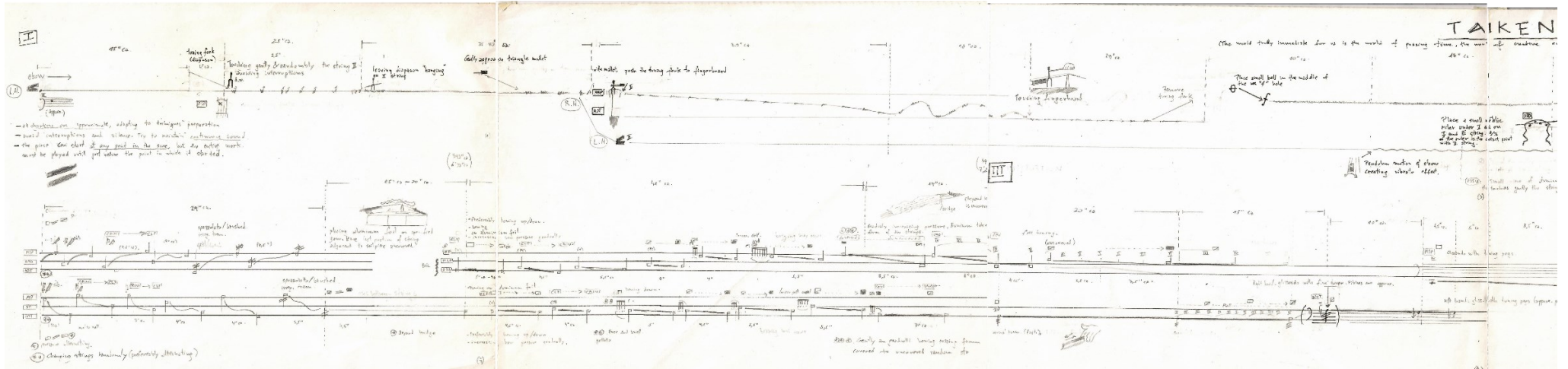
2. The timbral palette: a pathway to the present moment

The imagination of the timbre in *Taiken* revealed an increasing necessity of manipulating the materials and sources by myself to transmit my ideas in a collaborative relationship with players. The necessity for a deeper experimentation in close contact with the physicality of the instrument led me to work with my own (cheap) cello throughout the composition of the piece. Such perspective influenced a more free notation involving semi-

improvised aspects with a detailed definition of techniques. The timbral palette covers three elements of my investigations on the cello: the air sounds with or without pitches, the harmonic materials interfering with various objects, and the distortions due changes of contact points and bow positions. These elements generate a continuous pathway, constantly transformed and addressed to invite the listener to keep attention on every moment of the piece and to discover the sound world that unfolds without looking back. The only exception to this approach appears at the end of the work, where the performer takes the e-bow to make a subtle no-sonic allusion to a new beginning of the piece.

3. Cartographic approach and synergy

In *Taiken*, the cartography coincides with a physical device that imposes limits regarding the duration, transformation, and quantity of sound events. The device is the manuscript of the work: a single large sheet of paper measuring 167 x 21 centimetres. On this surface, the notation has to present the total duration of the piece (11 minutes), giving enough space for the preparation and transition among events that include various changes of techniques and objects. As a result, the hierarchy of *Taiken* contains the relationships between the events' concatenation (the pathway) and their physical articulation notated on the paper with its proportions, graphics, and written instructions. The cartographic approach proposes the equivalence between the imagination of timbre and the scan of the eye on paper. In other words, the listening, the watching, and the page interact synergically within the cartography.



4. Dramaturgy: continuity

The act focused on the present moment comes from Nishida's idea of 'pure experience' that manifests navigation in deep contact with sound sources, its physical conditions, and its fixations on one-shot cartography. The act addressed by dramaturgy is contemplative and manifests in careful observation and listening. Therefore, the act in *Taiken* is 'attention' that is nested by the events that offer an uninterrupted journey through the sound places of the work. Unlike other pieces such as *Aswalaq* or *La Furia*, the limits of the sound places in this piece are softened and hidden to maintain the illusion of the sound continuity. The listener navigates, turning his attention to every moment of the piece, to the present moment. In *Taiken*, the player's virtuosity has to do with the elegance in the construction of the transitions that make limits disappear and generate a fluid and weightless journey. One can see this approach in line with Tadeusz Kantor's position in defining the theatre as a "nullification of actions, of placing them in the state of weightlessness" (Kobialka, 1986, p. 120).

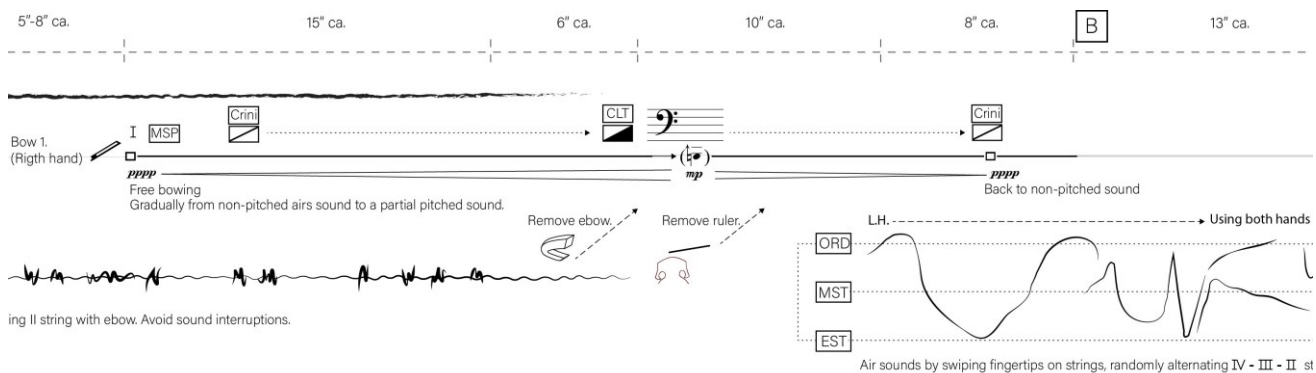


Figure 3.20. *Taiken*. Transitional spot between sections A and B. The Bowing with the right hand disappears gradually, while the left hand removes the e-bow and the metallic mallet to give place to a section with swiping fingertips on the strings.

CHAPTER FOUR

FURTHER CONSIDERATIONS

I. SYNERGY

This thesis demonstrates how I addressed a cartographic approach to conceive the timbre and the dramaturgy in my projects. Through the eight pieces of this portfolio, I have approached the most relevant elements of my proposal from different angles determined by the various circumstances and conditions of each composition. For example, I have explored the aspects that make-up the timbre in *Los Ojos del Pueblo* from a restricted palette of events in the context of silence to give space for the concatenation of sonic places. In *Shunya*, I have investigated how the sonic elements of my musical language address other dimensions beyond the timbre of orchestral textures by observing the relationships described in the autopoietic theory. Multidimensionality as navigating other fields outside music appears in *plano de levantamiento* with various schemas nesting the organization and the timbral imagination by observing a poem and its combination of maps, texts, and blank pages. The influence of architecture shaped my idea of a pathway proposed to the listener by my projects and generated the construction of converging trajectories to the central part of *La Furia del ermitaño*. My projects navigated toward the timbral dramaturgies by following the analysis of acts as a leading element, as in *Lidio* and its physical gestures with a theatrical implication that inspired the act of aggression. Questioning hierarchy by imagining its alternative implementations is one of the fundamental forces working in *Taiken*, where the relationships between events' concatenation and their articulation on a single sheet of paper dominate the hierarchy of the project. The interactions between sonic, visual, literary, theatrical, and spatial aspects emerged with a particular intensity in *Aswalaq* by investigating the ritual implications of the mourning expressions manifested in the sound clouds of heterogeneous techniques and through the transitional spots of compacted textures. The most interdisciplinary and

collaborative project of the portfolio – *Ddūwéwé* - demonstrates methodological connections between the inspiration in ritual objects, the architectonic observation, the analysis of the texts and acts to construct dramaturgy and the expansions from music notation onto the visual language of the installation.

The systematization proposed in this research involved working methods expressed as categories to inform my project's issues dealing with sonic, structural, and interdisciplinary aspects. I investigated connections and implementations of categories through four axes. First, the role of structural and articulatory components of pieces (Hierarchy); second, the concatenations of the sonic places and their implications on the listener's perception (Pathway); third, the development of textures and sonic places through time (Geometry); and fourth, the quantity, intensity, and distances among events (Density). Nevertheless, the inner core of this research is not the establishment of a rigid taxonomy, even if defining four categories is methodologically efficient. Accordingly, the elements of my timbral palettes tend to work in terms of some conditions such as rough sounds, air sounds, residual sounds, oscillation, distortion, homogeneity, and heterogeneity. Such aspects outline a timbral taxonomy, but I preferred not to formulate these tendencies as exact coordinates and to remain with the idea of the multidimensionality of the timbre as a "point belonging to an infinity of lines that lead to an infinite number of directions" (Szendi, 1993, p. 5), as expressed in the introductory chapter in accordance with Lachenmann's position.

For the same reason, my approach to notation avoids excessive details to keep a broad idea of cartography, not limited to a set of sketches and drawings automatically implemented on each project. Alternatively, I explored a schema of thought in which synergy generates hybrid processes characterized by difficulties, interferences, and negotiations between the various factors and actors of my projects. These problems are the fertile land where contributions emerge as manifestations of fortuitous or unexpected

conditions. Problematic and uncertain zones are stimulating because they represent answers that respond to the internal energies of the projects, not necessarily under my control. Two examples demonstrated this. Firstly, the rehearsal and staging phase in *Aswalaq* revealed improvements in performance and notation thanks to the singers' suggestions about the techniques involving hands or fingers to reach sound projection or timbral camouflage. Secondly, the absence of a violist before the premiere of *La Furia* forced us to find a replacement with another instrument. The substitution with recorders opened a rereading process of the viola's part with the improvement of the timbral profundity of the piece. In the same project, the economic and practical issues with the stage design pushed me to conceive solutions with different implementations not considered before my travel to Chile for the premiere. These last-minute problems embodied the necessary relationship between composition and the contingency of the concerts where players, conductors, and other practitioners have a relevant voice. It is worth quoting Liza Lim to remark on how the creative process could improve thanks to these exchanges between composer and performer through the various stages of the creative process and not only undertaking contingency:

The thing I'm always looking for when I'm working with a musician is some secret knowledge that that musician has, some very particular way they understand sound or that they touch the instrument, or the sense of colour that I want to know about, this absolutely personalized unique thing. And these are the kinds of colours and approaches that I really want to compose with (Pearls & Beans, 2020)

II. PROJECTIONS

The fulfilment of this Ph.D. represents a milestone on my trajectory, allowing me to deepen the cartographic approach and to project it through new initiatives and further implementations.

The following paragraphs explain my research projections in two directions. On one hand, future investigations will address interdisciplinary efforts. On the other hand, I will show the new projects as further expansions from the timbre to acts and structures.

1. The interdisciplinarity

The first incoming project is a commission by Virgo Vox Ensemble of Milan. It will explore the hierarchy of an interdisciplinary project by focusing on compositional processes where the vocal materials interact with self-made instruments. The project will interrogate the creative process by expanding its methods through a collaboration with the Chilean Poet Manuel Sanfuentes where the dramaturgical dimension considers the text as a ritualistic factor.

The vocality of *Aswalaq* - with its timbral exploration generated by manipulations of the tongue, the mouth, and the hands as mutes - represents a starting point to stimulate new expansions from these techniques to the construction of simple instruments with PVC tubes that will be used by the singers. The cartographic approach will investigate suitable notations for the vocal sounds, the self-made instruments, and the body gestures to configure scenic rituals based on Sanfuentes' poem.

2. Expansions from timbre

2.1. The timbre and the dramaturgy: types of acts

My research considered inhabiting as an act that happens within a place, so the treatment of acts is a tactic for modelling timbral dramaturgy and is an axe to undertake another upcoming project: a commission by Chilean Association Mismar and the Ernst von Siemens Music Foundation. In this new piece for string orchestra and oboe, I will investigate the notion of choreographing players' movements within the performative space. This project continues my explorations on types of actions outlined in *Aswalaq*, *Ddūwéwé*, and *La Furia* (see point 4 on each of these analyses, Chapter Two). For instance, space movements and gestures could interact with sonic aspects defining acts as graduations between extremes points as collective - individual, explicit - implicit, aleatoric – fully detailed acts, and so on. These extremes and the gaps in between would stimulate a cartographic approach with new theoretical and methodological coordinates to reflect (like a mirror) the extreme points of the acts, translated in terms of texture, notations, and organization.

2.2 New hierarchies of timbre: structure and articulation

A general tendency in this portfolio is to work with parts, sections, and transition spots that canalize timbral imagination to form pathways and sonic places. The flexibility of my working methods, especially regarding how the categories regulate the timbral aspect of the events and textures, could be a cue to define the articulations of the sonic places inside another kind of structure. This was the case of *Ddūwéwé*, where the research of the hierarchies separates the airflow from the instrumental techniques (see point 2.2 of *Ddūwéwé's* analysis, Chapter Two). The investigation of relationships between structure and articulation is a fundamental aspect of a new project commissioned by the Chilean Government. The piece involves baroque instruments such as the oboe *da caccia*, the viola *da gamba*, the lute, and the theorbo. The evocative power of this ensemble stimulates

two courses of action. Firstly, a timbral palette developed from 'archaic' materials. Secondly, the exploration of structural and articulative roles acting simultaneously in a piece. In this case, it could be worth investigating how to subvert or question these roles by studying the historical practice of these instruments. Working with a baroque ensemble and historical techniques such as canons, *cadenze*, or *faux bourdon* would inspire new hierarchies of timbral manipulation where semi-improvised approaches might allow the definition of alternative distinctions between structure and articulation.

III. WHAT REMAINS

This research carried my practice to reflect on connections between the various factors that configure my compositional approach and its potential to address future endeavours by developing new tools and strategies. My research of the 'novelty' is a consequence of new perspectives on problems and questions that each project presents. Therefore, the pieces of this portfolio followed the metaphor of navigation, where there must be a balance between the unexpected and the progressive improvement that produces something that remains gradually fixed on the navigation charts: something that persists.

In my opinion, the contribution of this research is the combination of interpretations and experimentations with elementary tools and with particular attention to the unexpected factors that appear. Such contribution investigates the timbre as the inner core of my practice to offer pathways to the listener (the inhabitant of my sonic places). In other words, the drawing-up of navigation charts is an effort to propose richer communication with the listeners and the performers, suggesting a soundscape that stimulates the perception with contrast, associations, and changes of perspective. The suggested expedition invites a reflection on the issues and metaphors from which the projects started, building a listening experience like the embodiment of the navigation exercise in our lives.

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APPENDIX: CARTOGRAPHIES

The following video shows the cartographies of the eight pieces of the portfolio. The order of each cartography follows the order in which they appear in the portfolio.

Although the video is a reconstruction of how I composed the works, it presents a veridical environment in which the creative process took place with its schemes, drawings, notes and objects.

To view the video, see the archive in the accompanying documents folder or click the following link:

<https://youtu.be/fHhsSTssmcA>