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# **Gesture as a bridge between visual art and music composition**

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A portfolio submitted to the University of Huddersfield  
in partial fulfilment of the requirements for the MA by  
Research in Music

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## Abstract

*This commentary of the pieces written during the academic course 2018-2019 explains the basis of my aesthetical orientations focused in a gestural approach. There is a significant influence from visual artists who affected directly to my compositions. From them I extract aesthetical concepts related to gesture, as is the case of fragility, imperfection, interaction, control and spontaneity. The commentary will also examine the composition technics used, explaining the notation used and exemplifying other composers who did similar approaches. As a result of the research five compositions have been done: Enso, Horizon, Coloratura, Papallona project and Bottom-up.*

## Introduction

As an undergraduate composer I was particularly interested in adopting a multidisciplinary approach which considered semantic meanings amongst the arts. Early pieces like *A silence of three parts* (2016), *Sympathy* (2016), *Sygaldry* (2016), *Llenç* (2017) and *Three impressions of Paul Klee* (2018) were influenced by visual concepts and by composers who draw upon visual art examples in their own practice.

Continuing my work as a composer, I wanted to formalise my orientation towards this kind of connection between the arts. I came to study the Master by research in music in Huddersfield with the idea of getting a wider view and better perception of the following question; how composers and artists create from these shared influences. The reason why I am interested in visual arts as an inspiration to make music is because I realised that my compositional way of thinking was strongly related to visual metaphors. As a consequence, I observed that the narrative of my compositional ideas was constructed upon visual concepts. From that, it was advantageous to explore the nature of these connections and how I can work with them.

A starting point to conceive one of the distinctions between both fields is the spatial or temporal dependence. As Hu says: "Music is more temporally dependent than visual art, as time must pass in order for a musical composition to be heard in full; on the other hand, visual art is more spatially dependent, as drawings, paintings, sculptures, and buildings must be conceived in two or three dimensions"<sup>1</sup>(Hu 2015). For this reason I found myself doing an exercise of translating those spatial concepts to different musical solutions related with the dimension of time. In the first place, it is necessary to clarify that I am not trying to directly emulate these visual elements. The relations between both areas may result from a more or less abstract view, a point that is going to be explained through this commentary. In addition, there are plenty of composers who were inspired by visual arts and sorted those influences with different solutions and, accordingly, some of these compositions will serve as examples of the influences I have received for writing my own pieces.

My interest for visual artists made me realize how important the gesture was to some of them. My first contact between this gestural interaction and the material was through the Abstract Expressionism and, in particular from the "action painters" - a concept introduced by Harold Rosenberg (1952)<sup>2</sup>- where we can find artists like Jackson Pollock, Franz Kline, Arzile Gorky and Willem the Kooning. In their works, they involved techniques like "gestural brushstrokes,

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<sup>1</sup> Hu, C. Z. (2015, March 4) The artistic space-time continuum. *The Harvard Crimson*. Retrieved

<sup>2</sup> Art News (2007) *Top Ten ARTnews Stories: 'No a Picture but an Event'*. Retrieved from <http://www.artnews.com/2007/11/01/top-ten-artnews-stories-not-a-picture-but-an-event/>

splashing and dripping paint onto canvas instead of applying it carefully".<sup>3</sup> I also expanded my research to the Chinese and Japanese calligraphy, especially with the discipline of Hitsuzendō (Zen calligraphy). These ancient practices enhance embodiment, expression, and gesture, focusing special attention to the present time and spontaneity. These qualities can be observed in some contemporary visual artists which have been directly or indirectly influenced by this kind of interaction with the material, such as the case of Jackson Pollock, Fabienne Verdier and John Franzen (among others). These last ones have been determinant for the conception of pieces *Enso* and the *Papallona project*. From these artists I drew some compositional ideas in which gesture acted as a bridge between visual arts and composition. Resuming, those ideas are fragility, imperfection, interaction, partial control and spontaneity.

A relevant fact for this research approach was to raise awareness of my body consciousness. My own musical practises as a performer and a conductor strongly draw attention to gesture. In addition, this fact propitiated not only a way of thinking on how to produce sounds, it also conditioned my perception when I was listening to music which had a component of body implication. In other words, it became a more gestural and physical way of listening to music. Fortunately, cognitive science is demonstrating the importance of these elements and reinforcing these facts that I exposed before. Considering embodiment and enactive as nuclear concepts in perception, it release the role of the human body in cognitive and complex processes like, for example, action, perception and the interaction with the physical environment (Varela et al. 1991; Noë 2004; cited in Refsum et al. 2010).<sup>4</sup>

It was not unusual that the relation between the compositional processes and the idea of researching them was something that could be done in two directions: in some instances the musical piece came first, and the research started in a retrospective way later on. The main goal was to find an appropriate way to express the idea and adapt it to my sensibility and the performer's characteristics. For that reason, some of the pieces were based in a very active feedback, where the experience and the inputs received from the musicians were considered very relevant. As a result of this viewpoint, the pieces are heterogeneous.

The musical tendencies derived from the main approach of this research will be exposed in the Chapter 1 "Musical approaches" where the aesthetical decisions of new acquisition and my previous background are going to be explained. After defining those compositional approaches, Chapter 2 "Compositions" will dive into the creative processes for each piece that I have composed during the Master's academic year. The pieces are presented chronologically, so it allows for an evolution of the ideas between the compositions to be

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<sup>3</sup> Tate Modern Museum (no date). *Action painters - Art term*. Retrieved from <https://www.tate.org.uk/art/art-terms/a/action-painters>

<sup>4</sup> Refsum Jensenius, A., Wanderley, M., Inge Godoy, R., & Leman, M. (2010) *Musical Gestures. Concepts and Methods in Research*. Inge Godoy, R. and Leman, M. (Ed) *Musical Gestures. Sound, movement and meaning* (pp. 12-35) New York, USA: Routledge



observed. However, this evolution shows how I have approached utilising gesture in different ways.

## 1. Musical approaches

From my childhood I developed absolute perfect pitch ear so my perception of music relied, in great measure, on identifying the pitches instantaneously. This skill can be very helpful as a musician, but that's not necessarily always advantageous. In my particular case, this ability turned pitches into the main centre of my listening experience, setting my attention apart from other interesting musical parameters. On top of that, the main Western musical education tends to emphasize pitch and rhythm as the main axes of the musical study. Consequently, my early compositional approach considered the disposition of the pitches as the main issue and the perception of the piece was strictly related to this as a result. After acquiring my undergraduate, I developed a more physical idea of the sound. This fact propitiated a wider perspective of composition which entailed a change of the aesthetical background. Furthermore, the interaction with other composers, performers and improvisers of the CeReNeM provided me new points of view of my research premises, expanding my perspective and also helping me to outline it. Taking into account the above, those ideas slowly shaped and morphed my compositional sensibility and were reflected in my pieces.

Learning from others whom have similar approaches caused a resignation of my former aesthetic and compositional sensibility, which developed an interest into gesture as a way of creating and perceiving music (see in 1.1 Gesture). This fact derived in two main ways of approaching gesture, which are the points "1.1.1 Gesture and physicality" and "1.1.2 Musical gesture". After addressing my orientations in gesture, I will discuss how visual arts influenced my compositions, as seen in "1.2. Visual art influences in the compositions". Consequently, other points of interest emerged from this exploration: "1.3 Fragility and imperfection" and "1.4 Interaction, control and spontaneity". In the last part of this chapter, "1.5 Notation", I will discuss about the notation used according to the ideas previously exposed.

### 1.1 Gesture

The use of gesture as a creation tool opens a wide range of possibilities, so it is only appropriate to address the concept for my own researching purposes. Iazzetta (2000) proposes these two definitions: "a movement that can express something" and also "an expressive movement that embodies a special meaning".<sup>5</sup> These propositions emphasize the ideas of

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<sup>5</sup> Iazzetta, F. (2000). Meaning in musical gesture. In M. M. Wanderley and M. Battier (Eds.) *Trends in Gestural Control of Music*. Paris: IRCAM, 71-78

meaning and expression behind the movement. Also, the movement may be an action non-directly related to a physical movement. It is easily relabelled to a cultural or social context, but it also brings up the more abstract point of view of the concept. For example, in music it is possible to speak about "musical gesture" which is not directly related to a physical movement. Despite of that, the idea of movement blurs into a wider semantic field that makes more malleable the concept of gesture.

A more common example not related to music is how humans use gestures to accompany oral speech, which emphasises the qualities of it. Physical gestures are an important part in communication, despite of the cultural differences. From here the relation between gesture and communication may be a support that emphasises the expression. Xu et al. (2009) place the gesture processing in brain areas such as Broca's and Wernicke's, where speech and sign language are mainly located.<sup>6</sup> That finding points out a natural and strong relation between physical movement and expression.

After this brief discussion about the concept, it is necessary to distinguish in a pragmatic way how gesture is going to be used in this research. I worked from two main categories explained in continuation, which are "1.1.1 Gesture and physicality" and "1.1.2 Musical gesture".

### **1.1.1. Gesture and physicality**

Refrum makes a fine distinction between "gesture" and "movement":

*"When speaking about the musical activity of musicians and dancers, it is tempting to call the involved embodiment "gestures" rather than "movements". The main reason for doing this is that the notion of gesture somehow blurs the distinction between movement and meaning. Movement denotes a physical displacement of an object in space, whereas meaning denotes the mental activation of an experience. (Refrum et al. 2010)<sup>7</sup>*

For example, a pianist deals with the articulation, the position, the gestures of the wrist, etc. Those are concepts deeply related with the physical part of the performance. The point of the reflection about this gestural approach is to bring consciousness of it as a compositional and a performative element. In some pieces of this research the physicality approach is seen in the emphasis of the role of the human body in the function of the gestures. As Leman says, "the human body is thereby understood as mediator between the musical mind and the physical environment, and the gestures can be conceived as the way in which this mediator deploys

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<sup>6</sup> Xu, J. et altri (2009) Symbolic gestures and spoken language are processed by a common neural system. *Proc Natl Acad Sci U S A*. 106(49), 20664-9

<sup>7</sup> Refsum Jensenius, A., Wanderley, M., Inge Godoy, R., & Leman, M. (2010) Musical Gestures. Concepts and Methods in Research. Inge Godoy, R. and Leman, M. (Ed) *Musical Gestures. Sound, movement and meaning* (pp. 12-34) New York, USA: Routledge

itself in space and time" (Leman, 2010)<sup>8</sup>. Therefore, the figure of the human body becomes relevant for each music performance, although sometimes it is not considered as such directly because the role it plays can be easily put in the background. Guerino Mazzola and Moreno Andreatta propose these definitions more orientated to spatial conceptions: "configuration of curves in space and time (...). A gesture is a digraph morphism from a "skeleton" of addressed points to a "body", a spatial digraph of a topological category (in the musical case: time, position and pitch" (Mazzola & Andreatta, 2007).

The above theoretical models had an influence on my own practice. Mazzola and Andreatta's model, for instance, had a big role in the conception of the notation of my piece *Enso*, where the performer is invited to learn the movements written and to be very conscious about the physical interactions with the instrument. Those are written according to this topological idea of Mazzola and Andreatta: in the score the performer finds different points connected on a simple representation of the surface of the instruments (a circle). The connections contain information like the direction of the movements, the pressure or the velocity.

Another different example of a piece that uses physical gestures is *Horizon*, where the performer is invited to make some movements without emitting any sound in order to guide the sonorous imagination of the audience (explained in 2.2). Another example can be found in the piece *Bottom-up*, in which the performer departs from a tablature score where he/she has to read what to do with the fingers and with the pressure of the lips. In both cases, what the human body does is to put itself in the centre of creation and performance.

A second kind of physicality that I wanted to consider is related to the physical nature of the instruments. For example, the two pieces commented previously (*Enso* and *Bottom-up*) contain gestures that expect a sound response from the instrument. Sometimes, the non-conventional or non-traditional approach to these instruments brings up a kind of rawness associated to the inherent physics of the instruments. In order to stand out, these sonic phenomena that appear spontaneously with this kind of interactions the pieces are consciously made with this margin of non-controlled -or partially controlled- sound events, accepting imperfection and fragility as part of the musical speech.

Finally, I am going to exemplify some relevant pieces for me which include these two kinds of physicality. The first one is the compendium of pieces for flute by Salvatore Sciarrino called *Opera per flauto*. In these compositions Sciarrino explore non-conventional techniques in which the flute reveals a wide range of possibilities. For accomplish that, Sciarrino exposes this kind of material with a refined treatment of the physical nature of the flute:

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<sup>8</sup> Leman, M. (2010) Music, Gesture, and the Formation of Embodied Meaning. Inge Godoy, R. and Leman, M. (Ed) *Musical Gestures. Sound, movement and meaning*. (pp. 126-153) New York, USA: Routledge

"In the literature for flute there is certainly a before Sciarrino and an after Sciarrino. This is certainly because of the way he handled and is still handling the flute. Regardless of the instrument the instrument itself, the flute itself, it has nothing to do with the nature of the flute with the pastoral style -like that of Debussy-, nor with the rather urban -Boulez sonatina- for example. Sciarrino discovered a range of the instrument unknown before and pulled it out of the instrument a new identity, which before Sciarrino the flute did not have. (...) Sciarrino has brought a new nature of the instrument. (...) (Caroli, 2011).<sup>9</sup>

Furthermore, an interesting piece to comment is *Pression* (1969) by Helmut Lachenmann. In this piece the composer explores pressure possibilities using the arrow through unusual places in the cello. From that action, Lachenmann obtains a very physical interaction with the instrument and also awakes a wide range of sound possibilities, which calls *Musique concrète instrumentale*:

(...) in which the sound events are chosen and organized so that the manner in which they are generated is at least as important as the resultant acoustic qualities themselves. Consequently those qualities, such as timbre, volume, etc., do not produce sounds for their own sake, but describe or denote the concrete situation: listening, you hear the conditions under which a sound- or noise-action is carried out, you hear what materials and energies are involved and what resistance is encountered. (Lachenmann cited in Slough Foundation, 2008)<sup>10</sup>

The last example of this section is *Feeling is obsolete* (2019) by Colin Frank.<sup>11</sup> In this piece for one player and two electric guitars the performer is invited to play both guitars one above the other making the strings vibrate towards the other guitar strings. All this entails new physical movements for the performer, who makes sound by moving the guitars. In addition, the sound that comes from the guitars appeal to the physical nature of these, creating a sense of rawness where all sounds are accepted and controlled from another perspective very related to interaction and partial control

### 1.1.2. Musical gesture

A musical gesture may be something more abstract than a physical gesture. Wanderley relates the musical gesture to something perceptive, experiential and also a way of thinking about music: "... a composer may use the term musical gestures to designate a sequence of events

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<sup>9</sup> [Tiziano Bole] (2011, December 27). *SALVATORE SCIARRINO - Mario Caroli: l'estetica nella musica per flauto di Salvatore Sciarrino*. [Interview video file] Retrieved from [https://www.youtube.com/watch?time\\_continue=32&v=fjsLHjUY\\_KE&feature=emb\\_logo](https://www.youtube.com/watch?time_continue=32&v=fjsLHjUY_KE&feature=emb_logo)

<sup>10</sup> Slough Foundation (2008, April 7) *Musique concrète instrumentale: Helmut Lachenmann, in conversation with Gene Coleman*. Retrieved from [https://slough.org/resources/musique\\_concrete\\_instrumentale](https://slough.org/resources/musique_concrete_instrumentale)

<sup>11</sup> [Colin Frank]. (2019, March 31). *Feeling is Obsolete* [video file]. Retrieved from <https://www.youtube.com/watch?v=6j3awLSfng>

within a space of musical parameters; sometimes it can also have some relation to a form of thinking (a movement of thought) (...) "(Wanderley, 2002)<sup>12</sup>. This definition also points out the notion of sequence, which perception unifies into a sense of wholeness.

Without an ambition to define precisely the concept, musical gestures share semantic fields with visual as well as physical metaphors. Hearing a quick ascendant musical movement with an entire orchestra may instigate a feeling of, for example, direction and purpose. The gesture becomes something bigger than the individual pitches or instruments that conform the sound. Most listeners will probably perceive a holistic unity which makes an "ascendant movement". In the words of the Gestalt psychologist Kurt Koffka, perception is described as "the whole is other than the sum of the parts" (cited in Hergenhahn, 2009).<sup>13</sup> Thomas Fay also relates the perception of a musical gesture to these principles: "A musical gesture is a musically and perceptually meaningful unit that is the result of a listener's segmentation process. A musical gesture thereby may exhibit properties known from Gestalt theory (e.g. completeness, distinctiveness, conciseness) yet the aspect of "movement", and of temporal-dynamic organisation is often of special importance" (Fay cited in Schneider 2010).<sup>14</sup>

I introduced these perceptive approaches in order to provide justification for some of the compositional decisions made regarding the pieces where I use musical gesture rather than physical gesture, as is the case of *Coloratura*. For example, in *Coloratura* the thought of using musical gestures comes from an intention of generating a sense of a figure-ground interaction, creating an inner movement even when the main result may be perceived as static. Those little gestures amplify a whole sense of internal dynamism regardless of the main staticity (explained in 2.3).

## 1.2 Visual art influences in the compositions

Morton Feldman is an example of a composer who was strongly influenced by his contemporary visual artists. As we can see in the following quote, Feldman realised about some similarities between his compositions and Jackson Pollock's paintings:

*"In thinking back to that time, I realize now how much the musical ideas I had in 1951 paralleled his mode of working. Pollock placed his canvass on the ground and painted as he walked around it. I put sheets of graph paper on the wall; each sheet framed the same time duration*

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<sup>12</sup> Wanderley, M. M. (2002) *Non-obvious Performer Gestures in Instrumental Music*. Paris, France: IRCAM

<sup>13</sup> Hergenhahn, B. R. (2009). *Introducción a la historia de la Psicología*. Madrid, España: Paraninfo

<sup>14</sup> Schneider, A. (2010) *Music and Gestures. A historical Introduction and Survey of Earlier Research*. Godoy, R. and Leman, M. (Ed) *Musical gestures. Sound, movement, and meaning* (pp. 69-100) New York, USA: Routledge

*and was, in effect, a visual rhythmic structure. What resembled Pollock was my 'all over' approach to the timecanvass. Rather than the usual left-to-right passage across the page, the horizontal squares of the graph paper represented the tempo - with each box equal to a pre-established ictus; and the vertical squares were the instrumentation of the composition."* (Feldman quoted in Deforce 2008)

In this explanation, Feldman delineates a way of translating these visual ideas into a temporal measure to create his own music. The relation relies mostly in the similarities of the method rather than a direct emulation. The first painting that I have worked with was also a work of Jackson Pollock called *Ink on Japanese paper* (1951), which provided me an initial idea for the piece *Enso*. The dripping brushstrokes technique had a gestural nature, placing at the centre of creation the physical interaction between the painter and the material. Pollock moved his brush in the air letting the physical agents (such as gravity) act dramatically in his paintings. Maybe the "drops" of ink were the elements that I appreciated the most: they are a random result imprinted on the painting, a visual reminiscence of the gestures, the lack of control and a preservation of spontaneity. The drops remain on the canvas and there is no way of getting that one-of-a-kind result, it becomes something unique. Consequently, analogies of musical performances and compositions appeared directly in my creational world. Is it possible to create a piece that captures this sense of randomly imprinted "drops"?

I observed some similarities between the artists who employed a gestural approach and found out that some of them were often directly, or indirectly, influenced by Eastern aesthetics. For example, it is known that the painter Mark Tobey studied in China and Japan, places where he learned about Zen, meditation and calligraphy, and from where he adopted these ideas and reflected them in his own works. Related to that we can find letters from Pollock to Tobey, where Pollock mentions that the paintings of Tobey influenced him.<sup>15</sup> Despite the direct or indirect relations to occidental art, Zen painting and calligraphy give off two concepts which very much interested me: a mind-physical particular approach to the creative action and, as a consequence of that, an awareness of the present moment. As Suzuki says, "The arts of Zen are not intended for utilitarian purposes, or for purely aesthetic enjoyment, but are meant to train the mind, indeed, to bring it to contact with ultimate reality" (Suzuki cited in Loori, 2004)<sup>16</sup>.

One example of an influence from Zen art to music is the piano piece *etre-temps* (2002) by the composer Bryn Harrison. In his very own words it is possible to find an interest for the gestural, paired with analogies to visual elements:

*"Rather like in Zen painting, with its limited palette of singular brushstrokes executed in such a considered manner, I wanted to focus on the very immediate, irretrievable consequence of*

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<sup>15</sup> Naifeh, S. and White Smith, G. (1989) *Jackson Pollock: an American saga*. NY, USA: Crown Publishers. pp. 525-526.

<sup>16</sup> Loori, J. D. (2004) *The Zen of creativity: cultivating your artistic life*. NY, USA: Ballantine Books

performing any singular action in time (in this case, gestures performed at the piano) and, for this reason, began the piece with a series of precisely measured, isolated chords followed by rests. This was to include an uncharacteristically loud and abrasive opening motif in the upper-register of the piano - a short burst of sounds followed by silence, comparable perhaps to, the act of painting, in Japanese calligraphic art, a black line in ink upon the white empty space of the paper." (Harrison, 2007)<sup>17</sup>

It is complicated to speak about Zen practices in general because it embraces different styles, developed and influenced through centuries and even in different countries. For example, in Japan, the art of *Wabi Sabi* had almost become a synonym of Zen aesthetic. *Wabi* is a sense of loneliness and solitude and *Sabi* is the suchness of ordinary objects, the unmistakable uniqueness of a thing in and of itself (Loori, 2004)<sup>18</sup>. The orientation of this art consists in a beauty that is considered imperfect, impermanent and incomplete (Leonard, 1994)<sup>19</sup>, all three concepts coming from the Buddhist principles called the *Three marks of existence*. I thought it would be really interesting to consider these principles in a musical way, so I have implied some of them in several compositions (see in 1.3 and 1.4).

Another artist who also expresses some ideas related to the art of Chinese and Japanese Calligraphy is Fabienne Verdier, from whose painting called *Polyphonie - Palimpseste* (2017)<sup>20</sup> I discovered the calligraphic concept of *Enso*"(explained in more detail in 2.1

A characteristic trait of her work is that she often uses really large brushes, where the control of the stroke is totally different -in comparison with the traditional size or technique- and results in an amplification of each physical gesture. With these resources, she expresses the "dynamism of forces of nature, the instantaneous and enduring, and incessant movement" (Von Drathen, 2012)<sup>21</sup>. Verdier creates those amplified movements where spontaneity and partial control are important agents; those giant brushes that she carries propitiate a non-conventional physical interaction with the body and a direct print of these gestures onto the canvass. Pollock's and Verdier's paintings were really inspiring for the creation of the percussion piece *Enso*, so to a great extent the compositional ideas were taken from their works.

When I introduced the concept of gesture used in music I made a main distinction: "gesture and physicality" and "musical gesture". When it came to my interest in visual art, a similar situation occurred. On one hand, I described some artists who used a physical involvement and

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<sup>17</sup> Harrison, B. (2007) *Cyclical Structures and the Organization of Time*. Huddersfield, England: University of Huddersfield

<sup>18</sup> Loori, J. D. (2004) *The Zen of creativity: cultivating your artistic life*. NY, USA: Ballantine Books

<sup>19</sup> Koren, L. (1994) *Wabi-Sabi for Artists, Designers, Poets and Philosophers*. Stone Bridge Press. Berkeley, USA: Stone Bridge Press

<sup>20</sup> Verdier, F. (no date) *Fabienne Verdier*. Retrieved from <https://fabienneverdier.com/db/painting/polyphonie-palimpseste/>

<sup>21</sup> Von Drathen, D. (2012). *Painting Space, Fabienne Verdier*. Milan, Italia: Edizioni Charta

interaction to their paintings. Regardless, the malleability of the concept "gesture" made me want to research in other fields where the relation may be more abstract, just as it happened with the concept of "musical gesture".

On the other hand, gesture relates to a sense of movement, more related to a perceptive outlook rather than an interaction through what is material. For instance, the artist Bridget Riley illuminates how repetition and rhythm can work in this sense of movement:

*"Rhythm and repetition are at the root of movement. They create a situation within which the most simple basic forms start to become visually active. By massing them and repeating them, they become more fully present. Repetition acts as a sort of amplifier for visual events which seen singly would hardly be visible. But to make these basic forms release the full visual energy within them, they have to breathe, as it were - to open and close, or to tighten up and then relax. A rhythm that's alive has to do with changing pace and feeling how the visual speed can expand and contract - sometimes go slower and sometimes go faster. The whole thing must live."<sup>22</sup>*

The idea of repetition as an amplifier of the details is particularly interesting. In music it may happen if you repeat a musical gesture several times: your ear will become more able to recognise the small differences because you compare between the several expositions of sound, therefore creating a kind of archetype. This concept opens a different approach when dealing with some of the ideas that I presented before. For example, imperfection can be related to the uniqueness of each musical gesture, highlighting the differences through repetition.

In my pieces I try to conceive the listener as an active agent who expects from the accumulation of their own experiences. For example, the piece *Horizon* tries to condition the listener with the repetition of the same musical gesture urging them to predict what comes next. Where this prediction is broken or there is a silence, I used physical gestures that make reference to the previous musical gestures with the hope to trigger a projection of this expectation and therefore stimulate the brain of the listener into completing these voids.

The *Papallona project* (see in 2.5) was initially inspired by paintings by John Franzen. This artist encapsulates the two main approaches to gesture that I consider in this section. In particular, a series of works called *Each line one breath*<sup>23</sup> in which uses a peculiar working method:

*Starting with a single straight line, each subsequent line seeks to imitate its predecessor. Each breath, and therefore each line, will vary slightly, which makes the pattern evolves uniquely for each piece. Depending on Franzen's constitution, each work obtains an individual motion, which distinguishes it from the others. Concentration and the repetitive act of inhaling and*

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<sup>22</sup> [ArtPatrolTV] (2008, March 9) *Bridget Riley speaks about her work*. [video file] Retrieved from <https://www.youtube.com/watch?v=G9eGzxQq2U>

<sup>23</sup> Franzen, J. (no date) *Each line one breath*. Retrieved from <http://www.johnfranzen.com/each-line-one-breath.html>



*exhaling between each line allows the whole to evolve naturally into logarithmic-like patterns and layers.*<sup>24</sup>

This artist uses attention, to spontaneity, imperfection and also an intention of focusing in the present moment. For Franzen, the breathing is an important factor in order to explain the microscopic variations on straight line. In his paintings, the distance between lines oscillates, "expands and contracts". This approach accepts and emphasizes imperfection as a creative parameter, placing the human condition related to a lack of control into the centre of creation. Furthermore, this exercise requires an attention to the body and an awareness for being able to react in the present time. The accumulation of reactions to the initial micro variations is going to shape the work, making each creation spontaneous and unique. Moreover, these forms could be related to the idea of the movement invoked by the rhythm and repetition introduced earlier by Riley. In addition, it's possible to observe a similar effect of movement in the paintings of Franzen.

Finally, I want to introduce the artist Agnes Martin, who used the concept of the grid in numerous of her works. Guggenheim Museum's comment to her work reads as follows: "Her grids were drawn with graphite and colored pencils on large painted canvases. By combining techniques, Martin created a dynamic effect. *The Tree* (1964), for instance, is made up of an overall linear grid. From far away, one sees gray horizontal bands, but up close these bands reveal themselves to be closely spaced, parallel pencil lines."<sup>25</sup> (Guggenheim Museum, 2018)

The interesting point of this description is the fact that the structure of the grid may be rigid in her wholeness, but when you look closer you can appreciate the details of her hand traces, highlighting the imperfections. The idea of repetition as an amplifier of the detail as mentioned earlier, in this case, promotes a contemplation of the little differences. The clarinet piece *Bottom-up* (2019) was composed from the idea of a sonorous grid. Even the score is quite similar to this visual concept. I use that repetition as a filter where it is possible to show the intimacies of the sound, the microscopic transitions. It allows the listener to re-experience it and listen to it differently each time. The musical speech is made by a delicate presentation of similarity and, at the same time, distinction. It may help to submerge the listener to these sounds; facilitating attention to what is different and also showing some constant characteristics, such as the rhythm not playing the main role and progressively situate it in the background of the experience while the timbral richness is highlighted, as an abstract analogy of Agnes Martin's grids.

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<sup>24</sup> Id.

<sup>25</sup> Guggenheim Museum (2018, January 6) *Grids*. Retrieved from <https://www.guggenheim.org/arts-curriculum/topic/grids>

### 1.3 Fragility and imperfection

Fragility and imperfection are two concepts that may naturally derive from the gestural approach. Regardless, I also take them into consideration as an aesthetic exploration, considering disciplines like the Japanese art called *Wabi-Sabi* (as seen in 1.2).

Different artists taking part in this kind of aesthetics can be found all through the 20th century, as is the case of John Cage, who largely influenced experimental music with some of the Zen teachings.

*"Art may be practiced in one way or another, so that it reinforces the ego in its likes and dislikes, or so that it opens that mind to the world outside, and outside inside. Since the forties and through the study with D. T. Suzuki of the philosophy of Zen Buddhism, I've thought of music as a means of changing the mind. I saw art not as something that consisted of a communication from the artist to an audience but rather as an activity of sounds in which the artist found a way to let the sounds be themselves. And, in being themselves, to open the minds of people who made them or listened to them to other possibilities than they had previously considered"* (Cage quoted in Kostelanetz, 2000)<sup>26</sup>

This paragraph and the ideas encapsulated within encourage a more open way of accepting sounds. It also unties the musicians from preconceived ideas; the concept of musical "genius" derived from the Romantic period relates to an oversized talent, complexity and recognition. Instead, this point of view instigated me to not over-control or look for results that can be more easily recognised and valued. All things considered, fragility and imperfection helped me to accept and explore sounds which were not common in my language and also to understand factors like interaction, control and spontaneity (as seen in 1.4).

Fragility is defined as the quality of being easily broken or damaged (Houven cited in Epstein, 2017)<sup>27</sup>. When applied to the description of sound it becomes something purely perceptual because the concept "breaking or damaging" is not typically related to that physical phenomenon. Nonetheless, there are many ways to create a sense of musical fragility. As Nomi Epstein says:

*"To accept the idea that sonic fragility depicts a state in which breakage is possible demands a simultaneous acceptance that – even if still only figuratively or metaphorically – there is something in sound to break or which can break. A fragile object or state lacks absolute stability and, by extension, so does a fragile sound or music. Stability in sound may be established when a component seems as if it should or will continue in some way, be it a more local element such as timbre, or a more global element such as structure."* (Epstein, 2017)<sup>28</sup>

As a result of the limitations in regards of the control that the performer has in some of the pieces, it is possible to create spontaneous sounds or propitiate instable situations. This happens in *Bottom-up* (2019), where the air pressure can probably change the register without

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<sup>26</sup> Kostelanetz, R. (2003) *Conversing with Cage*. NY, USA: Routledge

<sup>27</sup> Epstein, N. (2017) *Musical Fragility: a Phenomenological Examination*. Cambridge, UK: Cambridge University Press

<sup>28</sup> Id.

prediction. The main element that converts what is normally controlled into something non-easy predictable is the fact that the performer is thinking about the physical parameters and not directly about the sound. In the piece *Enso*, fragility is also considered in a structural way (as seen in 2.1).

Imperfection may also be understood from its opposite, perfection. For example, as I exposed in point 1.2, John Franzen and Agnes Martin place those differences in their paintings between repetitions, which are determinant for the final shape of the painting. These come from a sense of imperfection related to the human-condition. Otherwise, without these differences, the paintings may reflect a rigid structure.

#### **1.4 Interaction, control and spontaneity**

As was demonstrated in the earlier examples of painters who use a physical approach, sometimes the bridge between visual art and my compositional ideas is built from the interaction with the material. For example, in the piece *Enso*, the interaction with the surfaces of the instruments through the mallets is essential for a full experience of the gestures written. It also tries to draw special attention to the present moment -with some reminiscences derived from some calligraphic practices exposed in 1.2.-. In the case of *Horizon*, the performer has to deal with past musical gestures exposed through the piece, bringing them back by representing them as physical gestures. The interaction with these comes with a deformation and a relocation in each moment of the piece. In the *Papallona* pieces, there is a premise that encourages the musician to react instinctively to the stimuli, including an imperfection and attention to the intimacies of the sound.

Thinking about this interaction may become a way of deciding where the control resides within the piece. As I explained in point 1.2, I had a fascination for the Pollock's method that regards the lack of control as a premeditated and precise result. He focused in moving his brush in the air, causing it to drip and create a random result that allowed spontaneity and gesture to be part of the paintings. Spontaneity is also related to non-predictable reactions, which I conceive as an expression of the human condition. As I introduced in the last point, this human condition may be related to the idea of imperfection and lack of control. Action painters and the New York school strongly influenced their contemporary composers, as is the case of John Cage, Earle Brown, Christian Wolff or Morton Feldman. One big issue that they dealt with was the control on their pieces. In different ways, all the composers mentioned opened new ways of controlling or partially controlling the sound. They took distance from making such decisions, introducing aspects like chance:

*"From him (Cage), Feldman learned about using chance in composition, even controlling or at last limiting it; and about the importance of silence as positive Void (in eastern religious sense) rather than simply as negative space. Both of these concepts are equally applicable to painting*

and music." (Feldman, 1968)<sup>29</sup>

## 1.5 Notation

Notation has been the part of the academic course that required more dedication and attempts in order to perfect the research each time, particularly in the pieces *Enso* and *Bottom-up*. The differences between pieces required new solutions and perspectives.

First of all, notation in music can generally be used in two main ways: 1) to notate the sound as a result (pitches, rhythm, etc.) or 2) to notate what to do (tablatures, instructions, indications, etc.). Sometimes it is possible to find scores that mix both options. It is possible to see very briefly how the notation of each score in this research is thought out, as seen in the following list:

- Notation in *Enso*: graphical representation of the gesture with parameters like pressure, velocity, time and conventional rhythmical notation.
- Notation in *Coloratura*: Western traditional notation.
- Notation in *Horizon*: Western traditional notation and physical gesture indications.
- Notation in *Papallona*: audio-score where the musician reacts to the musical gestures in present time combined with Western traditional notation.
- Notation in *Bottom-up*: clarinet tablature with physical indications (lip pressure, air, etc.).

Tablatures are a good example of the second kind of notation, so I started my research there. The "gestural" approach allowed me to revisit traditional notation considering the way that the scores are designed and how I could redesign it for my own use. Previously, I made mention of my interest in some aspects of the Zen philosophy. Looking for examples of notation of Honkyoku (Zen music played by Zen Buddhist monks with the flute Shakuhachi) I found this example that mixes calligraphy and music:

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<sup>29</sup> Feldman, M., & Friedman, B. H. (2000). *Give my regards to Eighth Street: Collected writings of Morton Feldman*. Cambridge, MA: Exact Change.

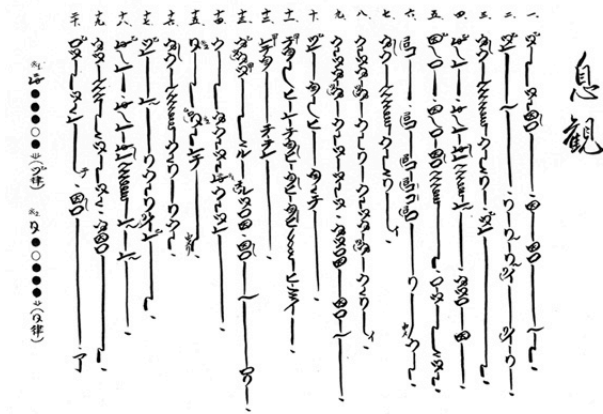


FIGURE 1. EXAMPLE OF NOTATION OF HONKYOKU (FLUTE SHAKUHACHI MUSIC)

These traces approximately translate the musical gesture that the performers can do with their instrument. Each character represents a pitch and also the position of the fingers. It is possible to make the same tune in different positions but with different sound qualities, as contemplated in this notation. Furthermore, the trajectory and the duration of the pitch are orientated by the prolongation of the characters. It is reasonable to believe this notation affects directly the way the music is conceived and maybe even causes richer inflexions in the prosody of the piece (possibly related to the oral speech sounds of the characters) and a large exploration in the qualities of the timber. The fact that each character is different translates into different sound properties for each individual one. This notational approach instigated some interesting possibilities when writing *Enso*.

Looking for a solution that implied traces and, at the same time, the possibility to narrow down the musical parameters, I found the piano piece *Güero* (1969)<sup>30</sup> by Helmut Lachenmann. *Güero* is represented in a score that exemplifies a good solution for notating gesture, where it is done through a clever graphical system that indicates the movement of the hands through the keyboard. In this solution, time is disposed in X axis using frames defined by bars –which represent the pulse–.

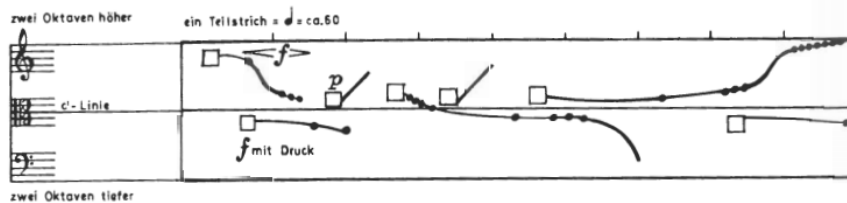


FIGURE 2. FIRST PART OF THE SCORE OF *GÜERO* (1970) BY HELMUT LACHENMANN

Another composer who uses a similar kind of notating gesture is Pierluigi Billone, as we can see

<sup>30</sup> Lachenmann, H. (1980) *Güero*. Germany; Breitkopf and Härtel (originally composed at 1969)

in the next fragment of his score, *Mani.Gonxha* (2010)<sup>31</sup>. Time evolves through the gaps as gestures are developed and written through them. Some need rhythm notation and others depend on the time length represented in the X axis; even then, it is very precise and allows the musician to think about the gestural aspects and embody the required movements.

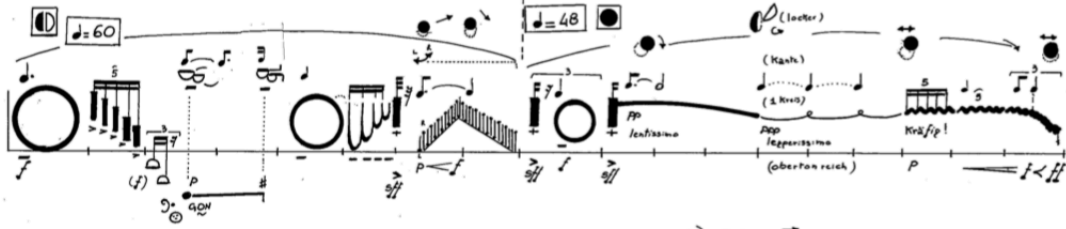


FIGURE 3. FRAGMENT OF *MANI.GONXHA* (2010) BY PIERLUIGI BILLONE

In my piece "Enso" there was a specific problem: I needed two dimensions (X,Y) in order to express gesture on the percussion surfaces, so time was a parameter which I had to find a solution for (not represented in a continuous X axis). Ultimately, I decided to use frames to indicate how many seconds lasted each gesture. When it was necessary, I notated traditional notation related to rhythm. In addition, the other notational elements were represented by means of with other solutions: pressure with a colour scale of intensity and speed as an approximate proportion of the wideness of the trace and the seconds given. This final solution attempts to create a clear, intuitive and pragmatic way of illustrating the gestures, inviting the performer to think in physical terms.

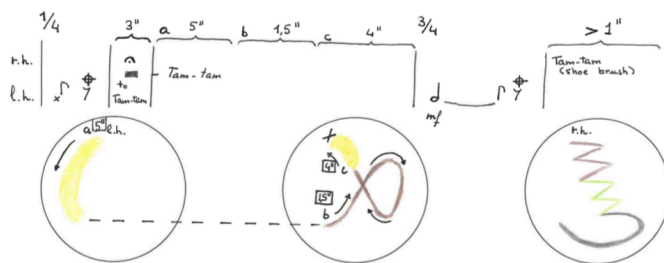


FIGURE 4. FRAGMENT OF THE SCORE OF *ENSO* (2019)

In the score of *Horizon* (2019) I thought about representing the gestures of the performer in a graphic way, but eventually I decided to write particular pitches and rhythms despite the performer not representing them sonically, but inviting them to think about these as musical gestures in order to instigate an experience in which the two voices are seen as having a dialogue with each other (regardless of the lack of sound in the second one).

<sup>31</sup> Billone, P. (2010) *Mani.Gonxha*. [musical score] Autopublished

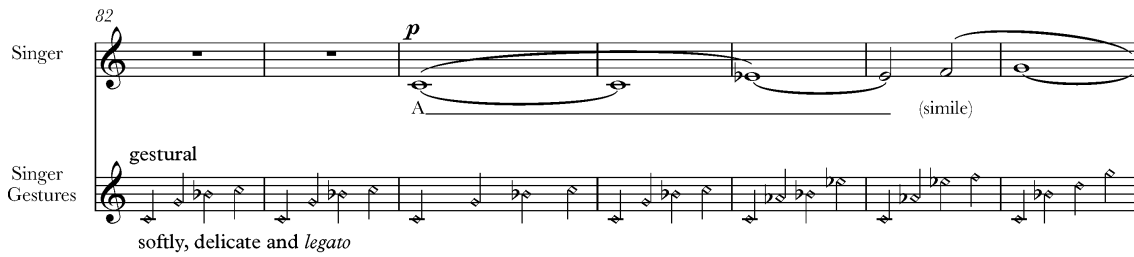


FIGURE 5. FRAGMENT OF THE SCORE *HORIZON* (2019)

While I was composing *Enso* I discovered some interesting percussion pieces like *Psappha* (1975) by Iannis Xenakis. The score has a peculiar grid where the instruments are distributed through the lines and the percussion hits are notated by points. At first glance reminded me of the notation of a guitar tablature. Using this kind of score, Xenakis achieves a very clear and intuitive transmission of the piece, where the performer distributes the sounds through an imaginary Y axis (vertical) and also unlocks a primary interaction with the instruments.

I did a simple exercise that consisted in playing some parts of *Psappha* with my clarinet. At the beginning, the idea of a tablature was intimately related to a guitar or any similar instrument, but then I realised that it could be used in any woodwind instrument. I conceived each finger hole as a percussion instrument. Interesting results appeared with my clarinet and some new perspectives of the instrument encouraged me to write the piece called *Bottom-up* for a clarinet solo. This experience reinforces that notation is a way of thinking about music whilst at the same time a way to express musical ideas. The important reflection is that this could help composers to think about music from different points of view. Below are shown two images that represent the similarities between the scores of *Psappha* and *Bottom-up*.



FIGURE 6. FIRST PAGE OF *PSAPPHA* (1975) BY IANNIS XENAKIS

FIGURE 7. FRAGMENT OF *BOTTOM-UP* (2019) FOR CLARINET

## 2. Compositions

### 2.1 *Enso* (2019) for solo percussion

As a matter of fact, Pollock's and Verdier's paintings -among other artists- helped my compositional research for delimit and exemplify concepts like the physicality of gesture, partial control, rawness, fragility and spontaneity, which are applied in this particular piece (explained in 1.2.).

The piece is named *Enso*, in Japanese (円相 <sup>ensō</sup>) – after a word that means "Circle". It is commonly related as a Zen Buddhist symbol, as read in this explanation by Yoshiko (2017):

*"The Enso is perhaps the most common subject of Zen calligraphy. It symbolizes enlightenment, power and the universe itself. It is a direct expression of the thusness or this-moment-as-it-is. Enso is considered to be one of the most profound Zenga (Zen-inspired paintings) and it is believed that the character of the artist is fully exposed in how she or he draws an Enso."*<sup>32</sup>

*Enso* ([link to the video](#))<sup>33</sup> was the first piece in which I started to work with the idea of the physical gesture as the main focus of the composition, thus the musical parameters were subjugated and shaped after this idea. After discovering Pierluigi Billone's percussion pieces such as *Mani.De Leonardis* (2004), *Mani.Mono* (2007), *Mani.Matta* (2008), *Mani.Δίκη* (2012),

<sup>32</sup> Yoshiko Seo, A. (2007). *Enso: Zen Circles of Enlightenment*. Boston, USA. Weatherhill.

<sup>33</sup> [Bernat giribet sellart] (2019, 31 January). "*Enso*" - Bernat Giribet (2019) performed by Serge Vuille. [Video file] Retrieved from <https://www.youtube.com/watch?v=8jiGk93jMzk>



*Mani.Gonxha* (2012)<sup>34</sup>, I was interested in a very physical and gestural involvement from the performer as well as an intention to explore not so-conventional sounds. Those were the simple basis of my approach. An example of Billone's ideas can be seen reflected in this quote about the piece *Mani. Δίκη* (2012):

*"The extreme concentration and reduction of the actions (in some moments expressed by a kind of abstract writing in sound and rhythm, consisting of circles and lines) makes the minute differences audible and draws attention to the "musical voice" of metal, which western culture has largely ignored and rarely recognized as sound."*<sup>35</sup>

At first I wanted to express gestures with a sense of direction and gravity. The first attempts were with several percussion instruments surrounding the performer, who was travelling through them with a sense of inertia. Focusing in the route through the instruments, the score indicated the performer in an abstract circle where to start and where to finish, continuously evoking a sense of acceleration and deceleration. The rhythm itself was not relevant as; it was subjugated to the main physical gesture. After trying different ways to perform the piece, I realised that the main idea was not the best way of achieving my initial purposes; a lack of physical approach discouraged me from it and I started a new path.

The final shape of the piece was thought as a map of gestures where the performer deals with parameters like pressure, speed, direction and resonance. The interaction with the instruments was very important for the construction of the piece and therefore was created in a sense of physical consciousness of the movements. The instrumentation of this percussion piece is composed by a Tam-tam, a tympani and a bass drum. The mallets selected for this interaction (shoe-brush, superball and hot rods) are mostly played by rubbing. Sound emerges from these gestures by appealing to the physical nature and characteristics of the bass drum, the timpani and the tam-tam. A sense of rawness and austerity are intrinsically attached to the way that sound is produced and the physical possibilities and limitations of the instrument played in this way. In addition, there is an intention of propitiating fragility and imperfection as a result of the partial control of the performer, who is invited to play the piece with mallets and surfaces where instability is predominant.

This fact entails spontaneity and reaction, concepts that invite the performer to interact with the unexpected and promotes an awareness of the present moment. Furthermore, the formal construction of the piece was done with a purpose of non-linearity, presenting some stimulus and the corresponding response, creating expectations by conditioning the listener but not accomplishing a directional sense of construction. There is no equal movement, each of them are singular. The homogeneity in sound properties allow a sense of coherence of the musical

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<sup>34</sup> Billone, P. (no date) *Compositions*. Sort. Retrieved from <https://www.pierluigibillone.com/en/compositions/?sort=9>

<sup>35</sup> Billone, P. (no date) *Mani. Δίκη*. Retrieved from [https://www.pierluigibillone.com/en/texts/mani\\_%CE%B4%CE%AF%CE%BA%CE%B7.html](https://www.pierluigibillone.com/en/texts/mani_%CE%B4%CE%AF%CE%BA%CE%B7.html)

speech when the listener is able to soak in these kind of sounds. It is then when it is possible to form an abstract grid of what is happening in the piece. The challenge was not only to create prediction by repetition but, at the same time, create expectation from hearing each gesture as unique and as a part of the bigger picture that is the main piece. There are many timbral transitions through the piece in order to re-direct the attention of the listener. The frustrated expectation allows a sense of ephemerality, non-permanence and non-hierarchy. It may come across as something similar, as the structural fragility concept that Nomi Epstein defines:

*"Structural fragility may result from a work based on fragmentation and discontinuity where the listener's sense of directionality or directed energy is diverted". (Epstein, 2017)<sup>36</sup>*

It proved to be difficult finding out a notation to make the score meet the aesthetic principles. The process required different attempts: from an open graphic score to an accurate notation of the rhythm. The collaboration of the percussionist Colin Frank provided a very clear and visual idea of the score which allowed the performer to embody the gestures. The final solution - among many possible - was to notate a kind of choreographic movements mixed with some "traditional rhythm notation". The description of the notation influences can be found in point 1.5.

After some sessions recording different gestures from Frank's improvisations, I had some compositional material with the intention of shaping the piece. The dialogue between the selected gestures was constructed like a question-answer dialogue, a conditioning process where the expectation plays an important role in creating a sense of fragmentation and ephemerality. Contrast was important for creating this sense of expectation and, at the same time, changing the perspective of attention. Even so, some prolonged parts allow the listener to dive into the sonic homogeneous timbre and hear the different details caused by fragility and instability. Silence plays an important role basically due to two structural features: the first one is my premeditated personal approach of the Zen calligraphy aesthetics of the void and, secondly, is that I wanted a temporal space for the performer to focus in following the gesture within this silence.

## **2.2 Horizon (2019) for soprano**

This piece was written with the collaboration of the soprano Patricia Castro. Her perfect pitch in intonation, agility to sing in a wide range of notes and her skills with sight reading encouraged me to take advantage of her capacities for this piece, where all these characteristics are fundamental.

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<sup>36</sup> Epstein, N. (2017) *Musical Fragility: a Phenomenological Examination*. Cambridge University Press

The origin of this composition comes from an interesting experience lived in a concert performed by the violoncellist Émilie Girard-Charest. It happened during a piece by Lucía Eva Drocchi called *Obra para violoncello* (2019). It is an open score where the performer is invited to make some performative decisions from a sort of symbols that are included in the performative notes. Drocchi explains: "each number of this alphabet of numbers will be traduced musically in the movement of execution that the musician should realize on the cello. It's convenient to imitate in a gestural sense the contour of each number when the performer operates the cello. It's possible to realise those movements with any kind of articulation, conventional or extended technique, with or without *arco*, and using any part of the instrument"(Drocchi, 2019)<sup>37</sup>. From that premise, Girard-Charest performed the final part of the piece by just making gestures with her hands (not emitting any sound). An interesting fact was that her hand gestures were similar to the musical gestures exposed before, so the mind of the listener was invited to bring back previous material. In my personal experience, I heard different sounds internally, sometimes synchronised with the kind of gesture that she did (tune, dynamics, attack, etc.). In some way, the performer was conducting the imagination of the audience and playing with their recent memory.

After thinking about the perceptual processes involved in that experience, I thought about creating a piece based on a dialogue between a musical speech and the gestural movements. For the construction of the piece I looked for a repetition of the similar musical gesture so as to condition the listener and create a sense of a pattern, prediction and expectation. Morton Feldman points that patterns are a material that allows avoiding hierarchy, perhaps because they cannot create a precedent above the other patterns (Feldman cited in Villars, 2006)<sup>38</sup>. From my point of view, it may be like creating the same thing over and over but always bearing a slightly different result.

This piece begins with a repeated musical gesture, which is a singed ascendant arpeggio. With an intention of conditioning the listener and creating expectation of repetition, the listener will hear the same musical gesture and is going to start to be aware of the continuous little changes inside the disposition of the pitches.

All things considered, the intonation continuously changes at a pitch level without affecting the shape of the musical gesture. The first approach occurred after discovering the *Ave Maria of Three Latin prayers* (1970) by Giacinto Scelsi, in which the performer sings a similar musical gesture where a mode is exposed and the pitches change continuously. This element of

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<sup>37</sup> Drocchi, L. (2019) *Obra para violoncello*. [translated from spanish] pp. 4-5 [musical score]

<sup>38</sup> Feldman, M., & Friedman, B. H. (2000). *Give my regards to Eighth Street: Collected writings of Morton Feldman*. Cambridge, MA: Exact Change.

repetition paired with differences allows the listener to expect where the melody is going and also makes the listener more aware of the little changes, all in all creating a contemplative and interesting speech altogether. Moreover, the rhythm is a parameter that is constantly changing ever so slightly, but the main structure of each phrase remains mostly intact.

The *Prelude in C major from the Book 1 of Well-tempered Clavier* (1722) by Johann Sebastian Bach repeats the same form in the arpeggio whilst changing the chords throughout the piece. The singer Bobby McFerrin did a performance where he sang this prelude and invited the public to sing the melody of *Ave Maria* (1853) by Charles Gounod over the prelude. The challenge of using the voice in such range and in a non-idiomatic or following common exigencies for the instrument paired with the perfect tuning of the intervals made me think about the interaction between McFerrin and his own instrument. This approach was also interesting once you have seen how he presses the microphone with the fingers during his performance, as if it were a keyboard, which he tunes his voice with. This kinetic or memory technique seemed to be very interesting for my research: the idea of feeling the pitches through the fingers to physically delineate the arpeggio and then tuning the voice accordingly shows how some musical minds can operate from gesture and physicality.

Based on the referenced composers and artists described previously, I started to think how to construct the piece. In order to create a sense of no directionality but, at the same time, a sense of regularity and prediction, I chose to use a musical mode. After different attempts of creating musical gestures in arpeggio I decided to find a way of separating my different approaches or my sensibility to each approach. This resolution was taken after seeing a sense of conventional directionality caused by my classical background in terms of the dispositions of the pitch.

After trying different processes of pitch arrangement I found a solution which satisfied my classical background and, at the same time, arranged the arpeggios in a non-hierarchic way. I decided to harmonize an old traditional song from Catalunya, named *El testament d'Amèlia*. In order to preserve the non-directional sense of the piece, the harmonizing process was carried out in a way that the colour of the mode remained homogeneous. For that reason, each chord is a quatried chord without tonal function, trying to keep and stabilise the modal colour.



FIGURE 8. MODAL HARMONIZATION OF *EL TESTAMENT D'AMÈLIA*

From that harmonic exercise, I obtained the arpeggios used for the final piece. Based on the vertical chords I arranged the pitches in an ascendant musical gesture, so the song remains fragmented in it.



This beginning has been influenced by *Color* (2001), by Marc-André Dalvabie. *Color* begins with a ground of a wide ranged D minor chord which remains in the ground. Sound events are thought as an extension of this chord, giving a rich sense of colour in orchestration. The fact that stood out the most, and also the one I am interested in, is how the composer accomplishes a sense of placing the sound events as they were emerging from the ground. The homogeneous ground allows the listener to differentiate the timbrical "color" of the sound events, like a perception of figure-ground. In this way, orchestration highlights the sound properties of timber using contrast and comparison. Another influence was György Ligeti's *Requiem* (1965), a piece where the choir is treated as a mass of sound which evolves progressively presenting different choir colours. In addition, the composer Bernat Vivancos explores similar choir's colours, mostly based in modal clusters. *Bubbles* (2010) and *Obriu-me els llavis senyor* (2000) are good examples of how he uses these colours, often related to echo effects.

Although the beginning of *Coloratura* is mainly static in a macro level, the piece evolves to a more gestural wholeness regardless of the small gestures of each voice. The first chord is progressively deformed, treating it as a mass of sound, which develops to other shapes. Slowly, the internal movement of the gestures of the singers reaches an effect of whole movement of the sonic ground.

After the first section, textures dissolve to more individual parts. Imitation and reaction to some musical gestures create some artificial effects of resonances of these gestures. Furthermore, there are some pitches with a linear graphic, in which the singer is invited to react spontaneously to the shape of the line. In specific parts of the score, many singers do this gesture. This entails differences between the interpretations of the line, even though similarities will remain. This resource is used in order to highlight the micro-variations in tuning and musical gesture.

The piece goes forward to a unification of gestures. After a modal cluster which uses a range of two octaves, the singers reach the same pitch through a glissando. The new section after this is created using a fragment of *Jauchzet gott in allen landen* (1730) by Johann Sebastian Bach. This is because I worked together with the coloratura soprano Patricia Castro. We looked for ways of getting a gestural way of singing including coloratura technic. In order to find a solution for writing gestural for a choir, we tried some coloratura arias and then we deformed them. We realised that working with a piece that the singer already knows makes it easier to distill the inherent gesture. For that reason, using this aria of J.S. Bach it's a way of facilitating this gestural approach for the choir rather than writing precisely difficult intonations and inflexions. In addition, this deformation of the piece allows a vague sense of tonality, so it helps in intonation and repose in the cadences (there are two audio examples of this proves with Patricia Castro attached to the portfolio). The last part of the piece is a chaotic fragmentation of this aria (singed in glissandi), until it reaches a "fortissimo" dynamic. The purpose here was to create a random and partially-controlled texture with deformed musical gestures. In a kind of way, a choir colour

composed by chaotic voice gestures. Finally, there is a dramatic silence and, after that and very low, the singers may choose a random pitch and then move the tuning until the choir reaches a stable chord and the conductor indicates the ending.

## **2.5 *Papallona* project (2019) pieces for different instruments and electronics**

Rather than just a particular piece, *Papallona* (2019) has become a compositional way of thinking and creating. The main idea tries to deal with concepts like spontaneity, reaction and accumulation. I had a piece in mind in which the little sound details that we normally do not notice were the protagonists. Furthermore, I wanted the performer to react and go deeper into these micro sound properties, using repetition as an amplifier. It was about interaction, making real time decisions and guiding the performance by the sensibility of the musician.

John Franzen series of pieces *Each line one breath* (see in 1.2) reminded me of the concept called "butterfly effect" (hence the name *Papallona*, the Catalan word for "butterfly"). Introduced by the meteorologist Edward Lorenz, the butterfly effect happens when "a very small change in initial conditions had created a significantly different outcome" (Lorenz, 1963)<sup>39</sup>. This concept, despite it being mathematic, has a popular relevance. The formulation "does the flap of a butterfly's wings in Brazil set off a tornado in Texas?" made by Lorenz can be oversimplified, misinterpreted or not even be related to maths or physics (Ghys, 2012)<sup>40</sup>. Being aware of that, the *Papallona* project do not try to make an exemplification or representation of the mathematical concept even though the principles based on the initial conditions and the significant outcome as a result of the accumulation are quite similar. The question then was how to create a musical gesture where little variations occur and still create a musical reaction. There is not a simple answer for that, so I have tried several approaches.

I first began by using a "looper". After different attempts to create a patch in MAX-msp where some random parameters were included, I decided not to continue the research down that road due to my limitations and because I wanted the results to be a consequence of human being factors. For that reason, I started using a pedal (Boss RC-30), where the sounds were repeated exactly as they were produced. The idea was simple: to look for a musical gesture where the performer -or performers- was capable of perceiving and reacting to the imperfections. In addition, a schema of musical gestures (including the first one) was given to the musician. Some examples of these prototype scores are included in this portfolio regardless they are not

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<sup>39</sup> Ghys, E. (July of 2012) *The butterfly effect*. Seoul, Korea: 12th International Congress of Mathematical Education.

<sup>40</sup> Id.

definitive scores.

From that point of view the research was mainly focused in finding unstable sounds for the conditions of the beginning of the pieces. The imprecision had to be clear and discernible, so it was possible to distinguish it from the main gesture. This could refer to timber, tuning, dynamics, etc., so the accumulation of such should be responses using the same parameter; trying to emulate the previous musical gesture with the next one.

After trying several approaches the results were not so convincing. The simple form of the piece -from a musical gesture to a massive accumulation of similar gestures by repetition- needed something more. Furthermore, there were difficulties when it came to react spontaneously to the previous musical gesture if it had not been very clear. I do not rule out this approach altogether, I simply set it aside for the time being as it needs more time and research invested as well as good performers that can find solutions to these obstacles.

After a bit of reflection on the nuclear ideas of the piece I realised that I tried to construct a "musical painting" which was static and repeated fragments until the sequence was complete. Setting aside the idea of a gradual creation of an amount of musical gestures, I saw another possibility that was more related to the idea of spontaneity: an instantaneous accumulation. From an audio-score point of view, I imagined several musicians reacting to a sonorous stimulus. Looking for technologic solutions to my aspirations, I discovered the project *Remote Control Human* (2017-2019) <sup>41</sup> created by the actress Outi Condit. Despite the project being mainly addressed to actors, there had been a performance of this project with Condit herself and the musical performers Maria Donohue, Brice Catherin and Colin Frank on the 18th of March 2019 which took place in Huddersfield. In this performance in particular the musicians/actors were "controlled" by a person who was in another room, dictating them what to do on stage. This process was done with technological elements like headphones and video cameras which allowed a real-time communication with the performers in the control room. At one particular moment of the performance, the person who was situated in the external room (Maria Donohue) sang some melodies -which reached the performers through the headphones- and the remaining performers reacted to it by imitating the melodies in real time. Then an interesting result happened: the imitation of the performers was uncoordinated, generating a chaotic reproduction of the musical gesture. This incoordination could have been a result of some of the following factors: the real time spontaneous reaction, the technological difficulties and lag in the network connection, the skills and characteristics of each performer, etc.

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<sup>41</sup> Condit, O. (2019, May 26) *REMOTE CONTROL HUMAN*. Retrieved from <http://www.outicondit.com/?portfolio=remote-control-human>



These particular turn of events made me think about a spatialized choir -distributed in a concert hall or a room- in which each singer has headphones and receives sounds that are invited to emulate in real time. Using one -or several- microphones, a performer (who we may call "the conductor") can be in an external room where he/she can sing or create the sounds that the choir is going to be receiving. The interesting fact about that is the use of devices for the management of the sound with which is possible to control the delay (creating waves of the same musical gesture), the tune (creating chords or clusters), make loops or even reproduce recordings.

This provided me means of creating something spontaneous, reactive to real time and allowing to be aware of a kind of audio-score. The idea of *Papallona* being done that way presented as really interesting: a conductor/performer in another room with one or more microphones and with an electronic control of the spatialization, the time of reception (delay), sound properties (tune, timber, intensity, etc.) and speed.

It is possible to make an analogy in visual terms of the two approaches of that piece. On one hand, John Franzen accomplished his pieces *Each line one breath* repeating traces and accumulating them until he finished the work. On the other hand, the artist James Austin Murray created similar textures using one stroke of a special long brush, which embraced all the canvass an through his gestures created the paintings. As Gilman Contemporary says:

*"Painter James Austin Murray works within self imposed rules that allow him to create engaging paintings in pure Ivory black oil on canvas. The unadulterated pigment allows for the texture and movement of the paint to come through. Murray's work evokes Zen sand gardens in the quiet raking of the paint. His work is meditative, and gestural, yet precise in his technique- the flat surface expands and contracts, ripples and pulses leaving the viewer with a clear sense of movement."* (Gilman Contemporary, no date)<sup>42</sup>

The final proposition for the *Papallona project* relates more to the compositional idea of James Austin Murray, creating the shape of the work through accumulation and repetition from a single gesture.

## **2.6 Bottom-up (2019) for clarinet**

In *Bottom-up* I decided to use a tablature notation which emphasises the gestural approach from a physical point of view (explained in 1.5). It relates also to the physical qualities of the clarinet paired with unorthodox positions of the fingers. The sounds that emerge in this piece are very difficult to notate just by using a pitch notation and, it was a limitation which had to be

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<sup>42</sup> Gilman Contemporary (n.d.) *James Austin Murray paintings*. Retrieved from <https://www.gilmancontemporary.com/artists/james-austin-murray/>

resolved. From here, the score overcomes these difficulties by focusing only in the physical action. This allows for different results depending on the instrument and the performer, which fundamentally marries with the main principles of imperfection and spontaneity.

The particular physics that conforms its sound helped me find some interesting material for the composition of the piece. For instance, the cylindrical shape produces harmonics disparities which in turn result in a really characteristic and recognisable timbre. This propitiates some clear and multi-phonic elements. This related to the qualities of the embouchure allowing a huge control of the dynamics. It is common for clarinet multi-phonic elements to have a sense of projection and control of the different stratus or pitches. As Almeida (2013) says:

*"The fingering determines the passive acoustic properties of the bore and thus the downstream acoustic impedance spectrum that loads the reed. In normal playing, the frequency of the note played using a particular fingering is close to the frequency of one of the strong peaks in this impedance spectrum. Because each impedance spectrum has several peaks, it is often possible to play more than one note on a given fingering, whether intentionally or accidentally"*<sup>43</sup>

This completely relates back to the fragility and spontaneity that may occur. Rather than forget about controlling the sounds in this piece, the performer is invited to actively play with this phenomenon, which is also linked to a partially-controlled interaction.

Notable composers influenced *Bottom-up*, from which I created my own personal perception of the possibilities for the clarinet while standing by my aesthetical principles. A description of how these composers exemplified some of these qualities is laid out as listed below. The piece *Dal niente (Interieur III)* (1970) by Helmut Lachenmann explores the wide range of dynamics of the clarinet. As the title points out, the clarinetist plays extreme volumes, sometimes almost imperceptible. This intimate approach of the instrument is explored lately in the *Accanto* (1975/76) for clarinet, orchestra and tape. In this piece, Lachenmann amplifies the clarinet, an action that works as a magnifying glass to those rich imperceptible and microscopic sounds. The treatment of the noise -both in the orchestra and in the clarinet- is also integrated in the musical speech. For example, the airy sound is orchestrated and refined and is usually found in the lower dynamics. From these intimate and unstable sounds, the listener can extrapolate a sense of fragility and imperfection. This becomes particularly clear when a tape of the passages of Mozart's *Clarinet Concerto K.622 in A Major* (1971) is incorporated through the piece. This contrast provides the listener a historical perspective of the actual piece, highlighting the differences between styles and presenting a comparison between the instrument's techniques and the orchestration's. Mozart's piece has a really full and compact sound, while Lachenman's is more disperse, fragile and detailed. All things considered, what stands out to me the most in

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<sup>43</sup> Almeida, A., George, D., Smith, J. & Wolfe, J. (2013) *The clarinet: How blowing pressure, lip force, lip position and reed "hardness" affect pitch, sound level, and spectrum. Acoustical Society of America, 134(3), 2247-2255*

*Accanto* is the low sounds that the clarinet produces; it really gives a new perspective of the clarinet, a more percussive, noisy and airy outlook.

Another piece that was relevant for me is *Let me die before I wake* (1982) by Salvatore Sciarrino. Using tremolos between pitches and multi-phonetic elements, Sciarrino shows how the physics of clarinet works in these low registers of volume. For example, the tremolo with multi-phonetic elements or "pitch blending" highlights the facility for this instrument to blend notes in an interesting rich sound. In addition, the changes in air pressure caused by the dynamics show how the same musical gesture emphasises different registries or pitches depending on the air pressure and the position of the fingers.

The last example that contributed on my own perspective of the clarinet is *Eyam i (it takes an ocean not to)* (2009/13) by Ann Cleare. This piece also comprises continuity between noisy air sound and pitches. Furthermore, the musical approach is very physical and gestural, introducing glissandos, sound transitions and a wide use of the world of the microtonal clarinet. Different from the first piece I mentioned, this one has quick changes in intensity; shifts in the register and a more dynamic sense of music gesture. As Cleare explains in the performance notes, the piece should be played "like traversing the details of an intricate fabric: whole, fluent, and stable within extreme fragility" (Cleare, 2009/13)<sup>44</sup>.

Unconventional positions of the instrument can produce multi-phonetic elements and a different pitch tuning. The complexity of the sounds that appear from those techniques makes it easier to design a tablature for these rather than to write a score (as is customary for this instrument). From this point of view, the performer is invited to think rhythmically what to do with the fingers, the lip pressure and the air pressure. Consequently, it allows the performer to focus on the interaction with the instrument based on the gestures (physical movement). The fact that the resulting sound is a consequence of this enables the performer to react by being aware of the sound they have created, providing them with agency and real-time, spontaneous decisions as well as a different interaction. Some of these approaches are exemplified by recordings of several parts of *Bottom-up* in the audio-examples attached to this portfolio.

The piece can be divided in four main sections. The first one is an exposition of similar musical gestures, which are thought with the parameters exposed previously. The second one explores the combination of some of the musical gestures exposed, revisiting them with variations and mutations. In addition, there is a fragmentation of the musical gestures, which may become shorter or randomly exposed. The third part is a section where the performer is invited to improvise using previous material or creating new musical gestures. The last part becomes more contemplative, bringing back gestures with a "less percussive character".

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<sup>44</sup> Cleare, A. (2009/13) *eyam i (takes an ocean not to)*. [musical score] autopublished.

### 3. Conclusions

The final result of this research is a series of pieces based in different gestural approaches. Most of the ideas related to this came from the visual artists, who exemplified and inspired distinctive ways to use gesture in their visual compositions. After a brief discussion in how I chose to interpret these influences, I described the problems and the solutions around my attempt to translate some of the visual parameters into musical parallels. One issue that absorbed most of the time during the research was to find an adequate way of notating the scores. Notation is a way of transmitting the ideas from the composer to the performer as is also a way of conceiving music. For that reason, it proved difficult for me to think about music in those various new ways of musical expression because I had never worked with them before. On a positive note, this exercise opened me to new ways of listening and composing, mostly more related to gesture, and a wider idea of the physical sound. In other words, it was a challenge for my aesthetic background and also for my sensibility.

This research has been heterogeneous and has pointed out interesting aesthetic dilemmas for me. Looking back, I tried to embrace many of the new different views and that proved to be difficult to explain or to develop sometimes. In some of the pieces I came across aesthetic ideas through trial and error, often acting an intuitive way of development. I had to find reason in the connections between concepts. That perhaps was an immensely challenging part of the research, most of all because I had to discard a large amount of initiatives, as it happened in the *Papallona project*.

Unfortunately, most of the pieces written during the academic year have not been performed yet. A great way to further this research would be to see how the compositions really work in a live concert situation. The workshop with Serge Vuille performing the piece *Enso* and the collaborations of Colin Frank and Patricia Castro were both very helpful. These interactions inquired more directly what I wanted from the performers. Nowadays it is common practice to work directly with the performers in order to shape the piece from their expertise and also provide the composer with possibilities that they may not have conceived. I think that in the future the approach that I am consolidating through my compositional methods will be more productive and efficient with a more active collaboration from the performers, mostly for the pieces where the body-physical approach is conceived.

I eventually plan to complete the *Papallona project*, for which I require technological guidance. I consider that the premises are clear, but it is not a piece set on stone. For now it serves as a way of improvising and composing other pieces using the reactions to audible stimulus. Is for that reason that the score from the final idea is a set of text instructions rather than a score with strict notation. Currently it is a text score, but in the future I expect to experiment with the idea using the adequate equipment and developing pieces from the gathered results.

Another future project is to refine the notation that I have used in *Enso*. I think that the scores could use an improvement regarding the graphic design, probably computerised by means of a computer. I also plan to write another piece, probably for a drum kit next. Furthermore, the idea of the tablature score used as a grid in the piece *Bottom-up* opened the possibility of writing more woodwind pieces using this technique. Excluding *Coloratura*, most pieces were composed for a single or a few players, so in the future I would like to involve a gestural approach to an ensemble piece.

Willing to continue on the already traced first lines of this research, the field between arts is very fertile. After working on this project I can conclude that the creativity related to the analogies between the fields is something vast and practised by many composers and artists. In fact, this exercise may be a way to expand on how to conceive beauty and art and surely will provide with new connections.

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