Lines for saxophone quartet, prepared piano, improvisers on Skype and interface for the audience; descriptions and reflections upon the creative process[1]

Sergio Cote, October 2014.

The present paper compiles the processes that shaped the composition of the piece *Lines*, developed with the Scholarship for the Creation of Contemporary Music awarded by the Colombian Ministry of Culture and premiered in Bogotá, Colombia on October 21st, 2014. This is a compilation organised following an empirical research methodology. It begins by presenting an edition of the project submitted and approved in the initial call, followed by the discussion and the description of the mounting process of the piece. Thereon, two parallel evaluations are offered in conclusion: one about the possible technical improvements suggested by the premiere, and the other one about the aesthetic reflections that the piece brings about.

The project

'*Lines*' aims to generate, along with a reflection about the space in a traditional concert hall, a dynamic between three elements that when adjoined interact to complete a musical work. The first element is the 'fixed' composition for saxophone quartet and prepared piano: '*Fixed Lines*'. The second element comprises three to five instrumentalists in different parts of the world using Skype to improvise as a reaction to '*Fixed Lines*'. From their location, each improviser generates another performance space, simultaneously acting as audience and creative participant of the event. Finally, the audience is able to actively participate by means of an interface that enables it to modify each of the signals sent by the musicians (saxophonists, piano and improvisers) during the performance.

The piece aims to enrich the inherent subjectivity that a work of art generates on an audience. My experience as composer has always been related to the creation of 'fixed' pieces in which the craftwork of score writing is taken to instrumentalists to be

[1] The audio-visual recording of the premiere and the short documentary about the piece can be found following this link: https://www.youtube.com/watch?v=E0bAHgc8Vco

performed in front of an audience. During the last two years I have explored how, from this paper-based perspective, a more subjective response might be achieved for each individual towards a piece. In this respect I have considered different compositional approaches such as the work of Olivier Messiaen, György Ligeti, John Cage, Brian Ferneyhough and Beat Furrer; concluding how textural ambiguity might be a crucial approach to this goal. The scope of this concept and its influence in perception is stated by James Boros in his paper *Why Complexity?* Where he states that:

> "Music that is perceived as complex seems actively to encourage the coexistence, both within a single individual and amongst different individuals, and both within a single hearing and amongst different hearings, of multiple viewpoints, implying the presence of a high degree of ambiguity with regard to its "true" identity as seen in terms of susceptibility to the imposition of definitive perspective-bound hierarchies." [2]

It is clear how one of the key points in this proposed ambiguity is the enhancement of the interaction between the piece of music and the audience. Consequently, it is in accordance with this that '*Lines*' also incorporates, together with a paper-based composition, improvisations and audience interaction. With these approaches is possible to make audible the different subjective reactions that an audience has towards a piece of music.

Historically, and furthermore throughout the second half of the twentieth-century, the implications of improvisation and its functionality in music, specifically contextualized in the traditional notion of composition, has been continuously debated. This debate has somehow established a dichotomy between both concepts. Composition, understood as "a process in which a composer, with pen and paper, outside of 'real time', uses revision and hard work to eliminate or avoid mistakes"[3]. Improvisation as "a process in which performers, with their voices or instruments, in 'real time', use luck or skill to respond to or incorporate mistakes"[4]. Even though the debate is still on going, '*Lines*' does not intend to assume a position in regards to the legitimacy of either one. Instead, improvisation is used with the goal of raising

[2] J. Boros, 'Why Complexity? (Part Two) Guest Editor's Introduction', *Perspectives of New Music*, vol. 32, no. 1, winter 1994, pp. 90-101. Available on Jstor (Accesed on January,31st, 2010).
[3] S. Larson, 'Composition versus Improvisation?', *Journal of Music Theory*, vol. 49, no. 2 (Fall, 2005), pp. 241-275. Available on Jstor (Accesed on April 2nd, 2014).
[4] Ibid.

questions about the role of the components that are involved in the piece, making these queries audible thanks to a series of interactions. Improvisation here aspires to "establish a dialogue with 'hip' audiences by letting all the parties participate in the creative aspects of music." [5]

The project also generates a reflection by locating two dissimilar kinds of improvisation within the same musical piece. On the one hand, the interaction between the professional musicians on Skype suggests an edge in which improvisation is "the domain of the expert, rooted as it is in knowledge and experience" [6]. On the other hand, the interaction of the audience, using the interface to manipulate the final aural outcome of the piece, implies an approach to improvisation in which the individual spontaneously incorporates missteps to learn and to create.[7] Furthermore, this dual approach enhances the subjective perception of the final product by adding more 'layers' of textural ambiguity.

The alternative to including improvisers, not only in the concert hall, but also in other cities or countries using current technologies, has different motivations. It is firstly due to:

> "The recent increase in performance activities in networked environments due not only to the availability of high-speed network communication protocols and increased bandwidth at universities and new media centres, but also to an increased recognition of net art within the context of arts/research funding bodies."

Furthermore, there has also been a rise in the works that use or are based on either the network or its theorisation. This theorisation is usually about the role of the network in art, and/or about the role of the art that uses the network.[8]

Among the theorisations that have been generated about the artistic practices on the Internet, the relationship that has been stated between them and dramaturgy is crucial. In regards to this, Schroeder affirms that the network motivates a constant personal

[5] E.T. Hall, 'Improvisation as an Acquired, Multilevel Process', *Ethnomusicology*, vol. 36, no. 2 (Spring - Summer, 1992), pp. 223-235. Available on Jstor (Accesed on April 2nd, 2014).
[6] Ibid.
[7] Ibid.
[8] Ibid.

reflection regarding these practices in connection with a specific location. At the same time, the network inspires thinking on how these practices are perceived from an external point of view. [9] Schroeder concludes that the different kinds of collaborations in the network comprise a diverse range of artistic participations situated in different locations. Therefore, these result in a variety of approaches and understandings[10], significant for the inclusion of improvisers on Skype as part of '*Lines*'.

The relationship between the artistic practices on the network and the concept of dramaturgy, finally defines the piece as a representation of how the artist reacts creatively and in isolation to what is taking place in distant geographical context. As a critique, what happens in this distant location, shared by he audience, is built with a 'fixed' and 'more traditional' character. Subsequently, the audience receives the result of both creations. The audience hence gets an unfinished object while interminably selecting and shaping it according to their own preferences and experiences.

The fixed section of the piece, '*Fixed Lines'*, is written for saxophone quartet with the addition of a prepared piano. This ensemble was chosen because the saxophone being a fairly young instrument not commonly included in traditional repertoire, the demand for contemporary pieces using this ensemble is ever higher. Thanks to its relatively young age, its techniques and timbrical possibilities are still open to exploration. Simultaneously, the saxophone quartet has a homogenous timbre throughout the register. The prepared piano is included in the ensemble in the search for a contrasting timbrical element with a different sonic source. The preparations are used to enrich this contrast or to transform the piano in a changing environment.

Having defined the three constituent elements of the piece, the creative process was developed in five stages. These were not always subsequent and some of them were overlapping. The first one was the composition of the fixed piece for saxophone quartet and prepared piano '*Fixed Lines*'. During the second stage, a network of interactions was chosen collaboratively, in correspondence to the conceptual approach of the team. With this collaboration we chose the system best suited to the necessities of the project, taking into account the implications of using Skype for the

[9] Ibid.
[10] Ibid.

improvisation and the possible interfaces for the audience. During this collaboration we considered the modifications to the concert hall in terms of practicality and reproducibility as fundamental. The third stage dealt with the improvisers that were located in different countries. It encompassed a series of informal and formal Skype conversations and emails, agreeing on software and hardware requirements, and on the instructions for the improvisation for the premiere. The present document, altogether with the audio-visual documentation of the event, is part of the last stage of the creative process.

Methodology of the creative process

This methodology was outlined in three sections. The first section defined the steps of the compositional process of the 'fixed' piece: *'Fixed Lines*' for saxophone quartet and prepared piano. The second section dealt with the relationship between the technical requirements and their aesthetic scope to design and mount the interactive section of the entire work ('Lines'). The third section defined the processes needed for the implementation and premiere of the piece.

Methodology used for the composition of the piece for saxophone quartet and prepared piano

The methodology of the creative process is a description of the procedures that I often use in my composition. However, it is worth noting that though their description is possible, these tools and the order in which they are arranged may vary.

1. Defining the form: due to my aesthetic preferences, the piece was organised by a constant juxtaposition of two extremely contrasting materials (ABABAB…). After deciding upon the duration (12 mins.) I established the number of contrasting sections and the duration of each of them.

2. Defining the preparation of the piano: I experimented with different preparations. To decide which preparations to use, I took into account, along with the feasibility

and reproducibility in different pianos and concert halls, the timbrical scope and its influence on the musical materials of the piece.

3. Sketching and defining musical materials: I wrote some sketches and ideas about the possible musical materials of the piece. These sketches were evaluated in terms of personal interest and development possibilities in order to select the ones with which the piece was composed.

4. Composing the piece

Methodology for the definition of the interactive processes

1. Definition of the network of interactions: In collaboration with audio engineers, we select the network of interaction according to the following criteria:

    - Conceptualization
    - Aesthetic implication (dramaturgy)
    - Musical Implications (texture, harmony, rhythm, etc.)
    - Feasibility
    - Reproducibility
    - Notation and mounting indications for the score

    1.1 Definition of the software for the transmission and reception of improvising musicians according to:
        - Software used in similar artistic experiences
        - Conceptual accordance with the piece
        - Latency
        - Sound quality

    1.2 Definition of the interface for the audience according to:
        - Conceptual accordance with the piece
        - Aesthetic implications (dramaturgy)
        - Technical implications for the audio system

- Feasibility
- Reproducibility
- Notation and mounting indications for the score

- Definition of the improvisers: In this section we contacted the improvisers in order to explain the project to them and to agree on configurations for the premiere. To select the improvisers we used the following criteria:

  - Trajectory
  - Availability
  - Experience with improvisation and contemporary music

Methodology for the processes needed in the implementation and premiere of the piece

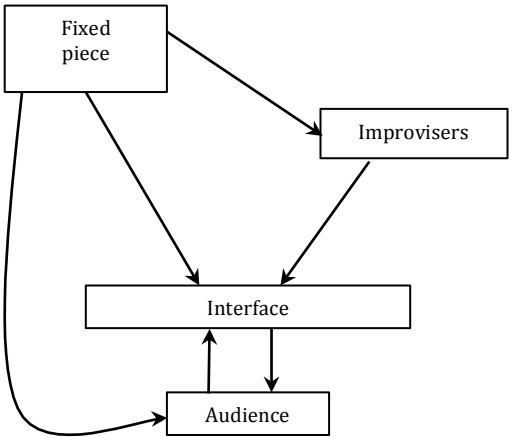
The implementation of the project started with the meeting between the audio engineers, Nataly Castellanos and Nicolás Ramírez, and I. During the first two meetings we established three objectives. The first one was to define parameters of evaluation to subsequently select one network of interactions. The second objective was to define the parameters of evaluation to subsequently select and design the interface for the audience. The last objective was to define the mounting processes for the premiere.

Collaborative Process for the design and mounting of the network of interactions

Before selecting a network of interactions, it was decisive for the project to reflect upon the choices of different possible models. A network of interaction is the context that defines the ways of organising the three elements that constitute the piece (fixed piece, improvisers on Skype and interface for the audience). Consequently, by selecting the network, we defined the challenges in terms of audio engineering and

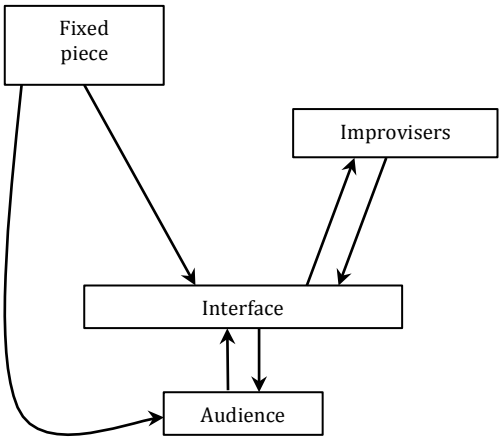
some of the resulting aesthetic implications. Having this in mind we departed from the three following alternatives.

Network of interactions option 1:



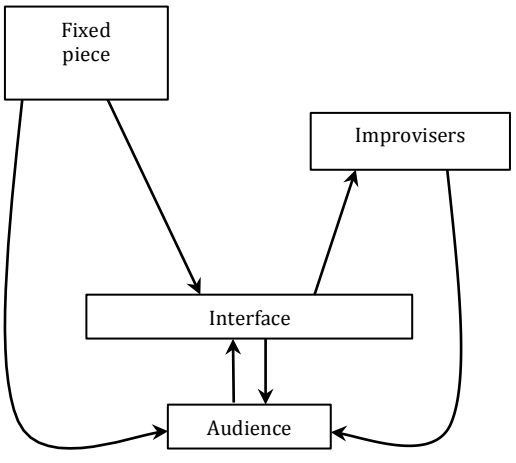
The first option was organised as a circuit of stimuli and reactions. Here, when the fixed piece is performed, the improvisers listen to it without the modifications that the audience is creating with the interface. The improvisers then react to this adding new musical material. Subsequently, the audience manipulates the combined signal of the fixed piece with the improvisations. In short, as the audience is sharing the concert hall with the fixed piece, the audience receives two final elements: the fixed composition without its modifications, and the manipulation of the fixed piece with the improvisations.

Network of interactions option 2:



With the second option, the improvisers react to the result of the manipulation made by the audience with the interface. They listen and improvise as a response to the manipulation made on the fixed piece together with the participation of the other improvisers. In this case the improvisers do not perceive the original fixed piece or the original improvisations. In regards to the last

Network of interactions option 3:



option, the improvisers here react to the manipulated version of the fixed piece. Here the audience cannot manipulate the participation of the improvisers, as this reaches the spectators without passing through the interface. In this option the improvisers cannot listen between them.

As first consensus we decided that the complete piece ('Lines') should represent the audience as final receptor and definitive creative entity. From this premise we discarded the last option, because in this, the audience does not manipulate the signal sent by the improvisers. Consequently, the discussion focused on the two first options and on the role of the improvisers inside them.

In the second option, the improviser creates as a reaction to the manipulation made by the audience upon the fixed piece. This represents how the individual located in an external geographical context (the improvisers on Skype) develops its creative act based on the impressions and judgments of the audience that, along with the fixed piece, is placed in a different remote location (the concert hall). Also represented here, is the manner in which the external individual cannot react to the creative act without it being firstly filtered by the audience.

The first option represents a creative entity (instrumentalists performing the fixed piece) that is located in the same geographical context as the audience, at the same creative level as the external one (improvisers). The external individual reacts to the remote creative act in isolation. Due to its professional context, this individual receives and reacts creatively to what the artists have elaborated in the distance. Finally, the audience perceives these elements, both local and external, as a single material, manipulating it and making the final decisions on the aural output. As it is a more accurate and current representation of our professional setting, from this conceptual reflection we agreed to use this first option as the network of interactions for the piece. Moreover, here the audience is the definitive receptor and creative entity of the entire event.

The interface

To define the means by which the audience would interact within the piece we departed from the following options:

1. Interactive patch in Max/MSP with pre-established processes triggered by buttons, knobs and MIDI keyboards located in front of the stage. [Proposed by Sergio Cote]

2. Microphones with pre-established processes with which the audience can move around whilst locating the microphones in different parts of the instruments to explore different results. [Proposed by Juan Manuel Loaiza tutor of the project]

3. A mixing console in front of the stage in which each fader can control the amount of pre-established processes sent to the general mix. [Proposed by Sergio Cote]

4. A set of guitar pedals per each instrument (the signal of the improvisers counts as one) located in front of the stage for the audience to manipulate. [Proposed by Nicolás Ramírez and Nataly Castellanos]

The conceptual approach and its relationship to the aesthetic result of the piece ('*Lines*') were crucial to define the interface for the audience. Consequently, it was stated that, as the fixed piece is the only determined and fully notated section of the network, it should be the only one "controlled" by the composer. In contraposition, it was then defined that the audience and the improvisers should react spontaneously to the stimuli produced by the fixed piece. In accordance to these lineaments the first option was discarded, since it presented a substantial percentage of control of the composer on the interaction.

The second option represented a noteworthy dramatic elaboration on the piece making the interaction visible on stage. However, it was discarded as it had logistical problems in its implementation. Firstly, due to the unfamiliarity of the audience with

the instruments and how sound is produced in them. Secondly, because having people moving around the stage causes spatial problems with the instrumentalists. This could also result in technical problems such as feedback and the audience stumbling on cables and equipment. Thirdly, it would not be possible for the people on stage to hear the results of their interaction.

The option that uses a mixing console in front of the stage was also set aside due to spatial problems. Although with this alternative the complications of having members of the audience on the stage was solved, the space in front of the stage with just one mixing console would have been limited to a maximum of two or three people at any one given time. Taking into account that the piece is relatively short, this would have limited the number of people that could have been interacting with it. Furthermore, this option was discarded, as it is difficult to find concert halls with two mixing consoles, and willing to allow untrained people to manipulate them.

The idea that implements a set of analog guitar pedals for each instrument, proposed by the audio engineers of the team, solved the problems of the other three alternatives. This interface enables up to three persons manipulating each instrument and up to eighteen in the entire interface at the same time. Moreover, whilst using the buttons and knobs that alter the effect of each pedal, a micro-visual, physical and individual representation of the interaction is added. This representation generates an aid for the people that are not familiarised with this kind of equipment. In regards to the reproducibility, analog guitar pedals are easily found in a professional musical environment.

Having decided on the interface, we proceeded to find the means by which to implement it. Taking into consideration the reproducibility and feasibility of the piece, we organised the interface into two sections, the central unit and the active section. Afterwards, we defined the tasks and minimum equipment requirements for each of them as follows:

Tasks of the central unit:

- Receive all the signals

- Amplify the signals
- Distribute the signals according to the chosen network of interactions: the 'clean' signal should be sent to the improvisers and to the stage monitoring. The performers on stage do not receive the signal of the improvisers.
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Minimum equipment requirement of the central unit:

- Digital mixing console with a minimum of 16 inputs, 12 of these should be microphone inputs. The 16 inputs must be assignable inputs. The mixing console is chosen because of its routing flexibility. [We used a *Soundcraft SI Compact 32* in the premiere]
- 12 passive direct boxes
- A stable internet connection (6 MB is recommended)
- One laptop per improviser
- One audio digital interface per laptop to send the signal of the laptop (improvisers on Skype) to the mixing console and to receive the signal sent by the mixing console (the performance of the fixed piece on stage)

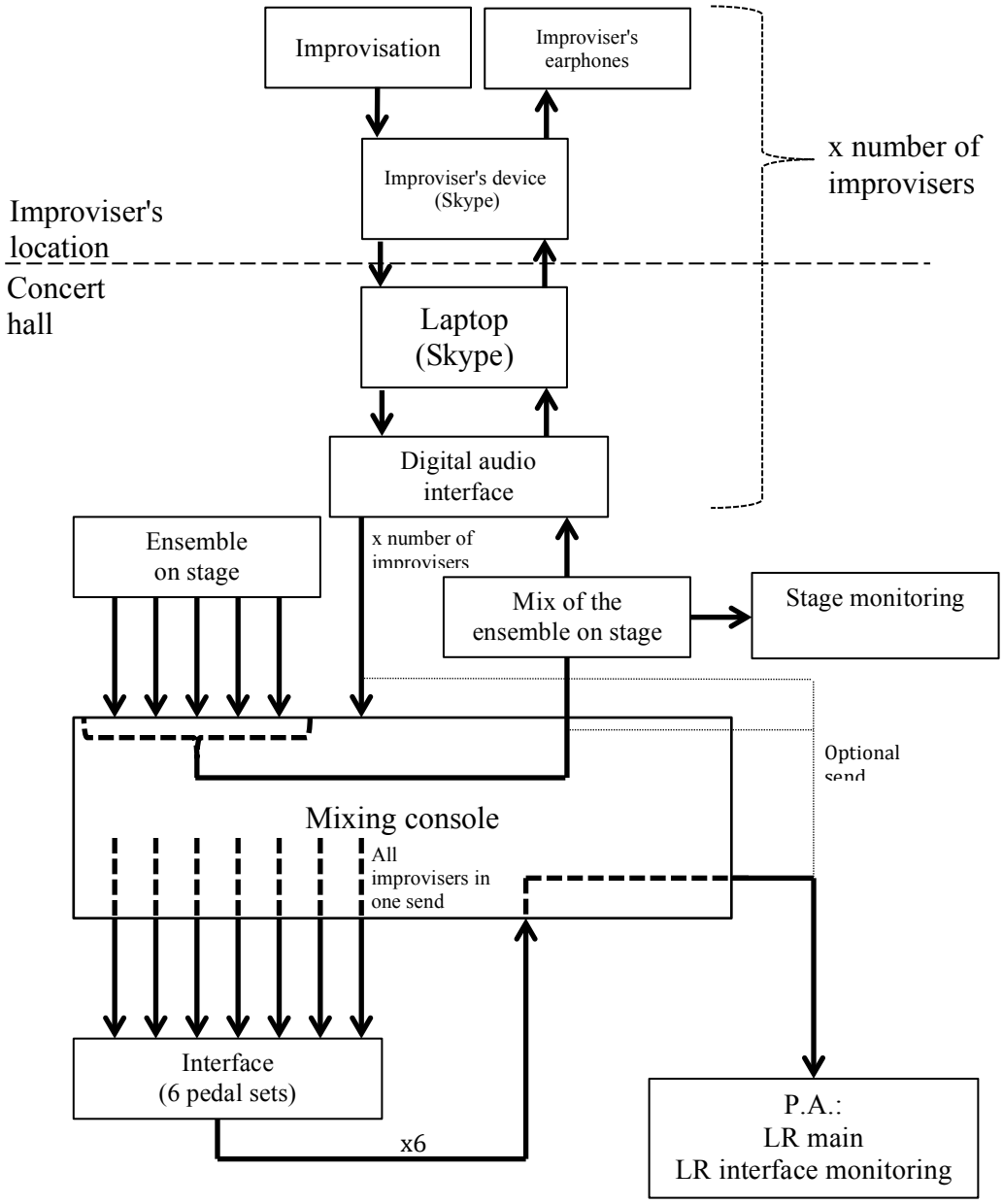
Minimum equipment requirements of the active section:

The active section of the interface is ideally formed with 4 analog guitar pedals per instrument and 4 analog guitar pedals for the aggregate signal of the improvisers. Each set of pedals, 6 in total, must be labelled with the instrument that it processes. In addition, the active section is complemented with the monitoring of the signal processed by the pedals. Together with the labels on each set of pedals, this aims to make the interaction more understandable.

Each set of pedals should ideally consist of:
Delay
Modulation (*flanger, phaser, chorus, tremolo, vibrato, rotary speaker*)
Distortion
Additional pedal subject to availability

It is suggested to block the gain buttons on the pedals to prevent problems with the signal flow.

It is worth noting that this is the ideal scenario in which there is the perfect variety and quantity of analog guitar pedals. Foreseeing other circumstances, it was agreed that the piece could be reproduce with at least 2 pedals per instrument, using a different combination than the one previously suggested. The technical specifications of the interface: the network of interactions together with its diagram; the concept of the piece and the score of *'Fixed Lines';* are part of the complete score of '*Lines*'. Following the definition of the interface, we proceed to elaborate the subsequent diagram that summarises the routing of the entire network of interactions:



On Wednesday August 13, 2014, at the Concert Hall of the Javeriana University, we executed the first test of the system agreed on collaboratively. Due to the logistical and budgetary requirements needed to reproduce the whole piece, we reproduced the network of interactions using one instrumentalist on stage, a recording transmitted on Skype from a room outside the concert hall and manipulating two sets of pedals ourselves. Although Skype presented some latency and changes in the quality of the sound, this was negated thanks to the manipulation made with the interface. Together with this, some of the aforementioned requirements resulted from this test. These were: the number of direct boxes, the monitoring by the audience of the interface, the monitoring for the ensemble on stage, and the suggested blocking of gain buttons.

This test was also crucial in deciding Skype as the software for the piece, as this favours it in terms of feasibility and practicality. Furthermore, it adds a representation of the everydayness of Internet communications to '*Lines*', converting the potential technical disadvantages in terms of audio quality and latency into crucial factors of the sonic result. As it is described below, this test was also decisive to define some processes in the fixed piece '*Fixed Lines*'.

Annotations about the piece *'Fixed Lines*' for saxophone quartet and prepared piano

The result of the complete piece ('*Lines*') is based on aleatoric processes, as this is transformed in each performance by the interaction between the instrumentalists on stage, the improvisers on Skype and the modifications made by the audience using the interface. The section of the network of interactions defined as fixed (*'Fixed Lines'* for saxophone quartet and prepared piano) specifically corresponds to my personal reflections and explorations about formal and structural procedures of a work written on a score.

As regards to the form, this is constituted by continuously alternating two extremely contrasting materials without transitory procedures between them (ABABABA…). The duration of each of these sections together with the timbrical, textural and instrumental configurations, varies to retain interest on the piece. This design was

chosen to avoid forms such as ternary, rounded binary and binary; which together with transitional sections generate a narrative, though apparently more complex, predictable. Besides, juxtaposing contrasting musical materials favours abstract processes whilst maintaining a notion of movement vs. stillness, as Steinitz suggests about Ligeti's second string quartet. [11]

Aesthetically and in resonance with the complete piece, '*Fixed Lines*' for saxophone quartet and prepared piano was written in the search for perceptual ambiguities. Here, these originated from canonical demeanours. From these, it is expected for each member of the audience to perceive a different role and hierarchy for each gesture within the texture. This subjective perception is achieved by means of imitations of musical materials that, when added, result in textural complexities. Finally, this subjective perception results in yet another layer of interaction for the audience and the improvisers, since it generates different reactions within each individual.

The test of the network of interactions that was done in collaboration with sound engineers, delivered important thoughts which influenced the creative process in '*Fixed Lines*'. For instance, it was surprising the extremes that the interaction generated in terms of complexity; in one second saturation can be produced while abruptly being followed by a simplification of the texture. Furthermore, the effects of the guitar pedals showed to have a high influence over temporal events, for example, with processes such as *delay*, a single note can be exaggeratedly repeated until the end of the piece.

The main musical material of the piece was complemented taking into account these elements. It is presented in the first nine bars of the piece. The pitch content is always defined by an interval of an octave, usually accompanied by a minor or major second placed over and/or under one of its notes. This harmonic material enables the cohabitation of the perceptual ambiguity achieved by canonical behaviours occurring in a range of a second, with a non-saturated harmonic space built with the octave. The material is then articulated as a phrase demarcated by a fermata over a rest with the indication *longa*. These fermatas work as a tool of control over the results of the

[11] R. Steinitz, *György Ligeti: Music of the Imagination*, London, Faber and Faber, 2003, p. 170.

interface, since the performers have to wait until the texture becomes simpler and cleaner from the audience's manipulation, before starting the next gesture.

Another tool to devise some kind of control over the manipulation made by the audience is the orchestral disposition of the piece. This is organised with scarce *tutti* sections with active polyphony and high dynamics. On the contrary, the texture is 'cleaning' itself by duets, solos, long notes and short attacks. In addition to this texture, I added a codetta after each section A, where the prepared piano elaborates a timbrical exploration that will always be enriched by the result of the interaction.

The timbrical exploration of the piano was elaborated from its preparation. Acknowledging that preparations of the piano are an inconvenience in most of the scenarios of the world, in this piece the preparation is simple and does not involve tuning or procedures that can cause detriment to the instrument. In collaboration with the pianist who participated in the premiere, we decided on a pragmatic preparation using affordable items. Furthermore, the musical material of the piano is tightly related to the material of the whole piece.

Balance

It is important to note, in first place, that the projected impact of the present piece was contextualised in the Colombian artistic scene, specifically, in Bogota. By including a list of actual trends, it is expected that the piece will motivate new similar expressions and discussions about the creation of contemporary music. Secondly, although the piece has a major percentage of performance art in which the results are difficult to replicate, it was decided that the legacy of the piece would consist of the score indicating the different mounting procedures, the documents in which the selection of the network of interactions and the interface are described, and an audiovisual short documentary about the premiere that compiles a balance by the people involved in the project. This last element is fundamental as it presents evidence of the multiple experiences that the entire piece generated in its premiere.

As regards to the reflections that the piece and its premiere generate about the role of the audio engineers, Nataly Castellanos[12] mentions how the interaction of the audience is a challenge. From her perspective, with a soundcheck, the engineers attempt to find an ideal environment that allows musical performance while minimizing the possible contingencies that the performance and the technical environment may produce. In contraposition, Nataly suggests that during the premiere, the interaction of the audience exceeded the contingencies that were defined during the soundcheck. For this reason, the engineers went from only monitoring to actively listening and reacting to the output of the piece, making the necessary efforts to ensure that the network of interactions could work. Consequently, one could infer that the network of interactions is configured as an event and not as an object, proposing a further fourth interactive element that arises between the whole network and the people that externally enable its proper functioning.

When referring to the impact and projection of the piece it is fundamental to consider, if only in general terms, the audience who attended the premiere. It is evident how the number of people who often attend contemporary music concerts is limited. Most of the audience that attended the premiere are academically and professionally involved with music. Moreover, as the premiere took place in the concert hall of a university, the audience mostly consisted of students and teachers. Hence, the piece's importance is further elevated because it aims to arouse reflections and creations around the issues involved in the piece.

On the other hand, it is also important to consider the public that was not academically involved with music. They accessed an experience where, without being musicians or without ever having been part of a musical creative process, they were involved creatively with the piece: whether directly interacting with the interface or passively sitting in the auditorium. It should be noted that among all the team there was always some scepticism about the willingness of people to participate in the piece through the interface. Partly because of the apathy of the public towards these kinds of pieces, and also because of our insecurities facing an innovative approach.

[12] Audio-visual Documentary of the project. 2014

However, as it can be seen in the audio-visual documentation, the interface was highly busy throughout the premiere.

During the premiere, the sonic result resembled an old radio broadcasting with its inherent noise in flux. These noises were often turned into a cacophony produced by a gestural complex but discernible saturation. In other moments the texture allowed to distinguish more between the modifications made by the audience and the two other sections of the network. At some points, this saturation was such that the complexity became a simpler sound mass. Regardless of the aesthetical judgements and, according to some people in the audience[13], it is evident that the final sonic result came from a process of experimentation in which the audience experimented through the interface. This process started timidly while the spectators were identifying the possibilities of each pedal, then followed by an exacerbated exploration of these possibilities that finalised in a more sensitive and aware use of each pedal.

One of the predictions that were made about the piece was that the interactive process was going to transform a language often considered hermetic into a closer and more understandable experience. However, for some members of the audience the result was illogical and noisy. For others, especially younger students, the result was enjoyable and interesting. From this contrast of aesthetic judgments it would be possible to consider that young people are more tolerant to the sonic result of the piece, as they are continually exposed to music that involves noise and saturation in its language. Based on these contrasting positions, it might be suitable to consider John Cage's definition of experimental music when he states that:

> "Where, on the other hand, attention moves towards the observation and audition of many things at once, including those that are environmental -becomes, that is, inclusive rather than exclusive- no question of making, in the sense of forming understandable structures, can arise (one is tourist), and here the word 'experimental' is apt. Providing it is understood not as descriptive of an act to be later judge in term of success and failure, but simply as of an act the outcome of which is unknown." [14]

[13] Audio-visual Documentary of the project. 2014
[14] Cage. John. *Silence: Lectures & writings*, London, Calder and Boyars, 1973, p.13

While it is not worth evaluating the piece in terms of satisfactory results, it is important to evaluate possible improvements suggested by the members of the team (engineers, musicians, composer), drawn from the premiere.

The most recurrent observation is related to finding ways in which each of the interactions can be more identifiable. By doing this, two subsequent suggestions were addressed, the first in regards to the role of the improvisers and the second to the practicality of the performance of the ensemble on stage. As the transmission of the improvisers on Skype was just with audio, there was some inequity of dramatic importance compared to the elements that were taking place in the concert hall. For future instances it would be worth appropriating this condition to develop conceptually and technically, or to try conveying more importance to the improvisers using an audio-visual telepresence.

In relation to the performance of the ensemble on stage, Daniel Muñoz, pianist and conductor in the premiere, underlines the difficulty of playing the fixed piece while the improvisations and the result of the interface is heard. [15] Hence, he suggests that there is a need for some insulation for the performance of the fixed piece. In subsequent versions of the work '*Lines*' it would be possible to ensure that the musicians of the ensemble have better monitoring enabling them to hear more of their ensemble (headphones or better localized monitoring speakers). Furthermore, it would be interesting to use this difficulty to generate new approaches in new pieces. Here it is worth noting that during the presentation of '*Lines*', the rapport of the ensemble, characterized by the conducting from the piano upon the full sonic result, had an effective scenic effect. While the conductor and the saxophonists were marking relatively simple metric signatures, counting bars and giving cues between them; what was heard was something different. This reinforced the role of the audience as absolute controller of the content produced within the network of interactions. This control was upon three levels: sonic, conceptual and scenic.

Finally, it is important to note that the network of interactions made for the piece '*Lines*' can be used inserting different repertoire. Having different pieces to locate

[15] Audio-visual Documentary of the project. 2014

them in this context can be decisive to think about the role of a fixed composition, both in the network and in a reality where a finished artistic and musical event is virtually impossible. With regards to this last point it is worth pondering to what extent the composer is willing to lose control over his/her creations. It is also significant to reflect upon whether it is worth composing a fixed work. These questions do not need to be answered, but they have been proposed, over the twentieth-century and up to this day, as reflections that define the aesthetic views of our time.

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