

Improvisation in Isolation: Quarentena Liv(r)e and Noise Symphony with the Playsound online music making tool

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ABSTRACT

In this paper, we describe artistic practices with the web-based music making tool Playsound.space held over the last two years since the inception of the platform. After completing a first design phase, which is documented in previous publications, Playsound has been regularly used by the first author as her main musical instrument to perform in live improvisation contexts. The tool proved to be especially useful during the quarantine period due to Covid-19 in Brazil, by enabling the musician (i) to take part in performances with other musicians through online gatherings, and (ii) to compose solo pieces from home leveraging crowd-sourced sounds. We review these endeavours and provide a critical analysis exploring some of the benefits of online music making and related challenges yet to tackle. The use of Playsound “in vivo”, in real artistic practices outside the laboratory, has enabled us to uncover playing strategies and user interface improvements which can inform the design of similar web-based music making tools.

1. INTRODUCTION

Playsound.space¹, a web-based tool for free music improvisation[2], was started in 2017 and evolved based on feedback from user evaluations and practice-based research. From a musical perspective, the main objective of the first author in developing Playsound was to create a tool that could support her own musical practice. The main development stage occurred during her PhD, which was completed in 2019[14]; this focused on designing, implementing and evaluating, the interface, as described in previous publications[15]. Since then, the tool has been used extensively by the first author and collaborators for teaching, music composition and performances.

The literature on new interfaces for musical expression (NIME) often focuses on the design and implementation of interfaces but longitudinal analyses of NIMEs based on

¹<http://www.playsound.space>



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Web Audio Conference WAC-2021, July 5–7, 2021, Barcelona, Spain.

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real performative contexts outside the laboratory are less frequent [9]. The focus of this paper is to analyse how Playsound supported some performances that occurred over a two-year period between 2019 to 2020 and what lessons can be learned from these experiences. Different contexts are considered: online concerts, offline concerts, and composed pieces both in solo and in collaboration with other musicians such as with Female Laptop Orchestra and Orquestra Er-rante. Emphasis is made on two events, Quarentena Liv(r)e and Noise Symphony, which started after the quarantine imposed by Covid.

Online music making tools are particularly suitable for situations where social distance between performers is necessary due to a sanitary crisis. The quarantine taking place in Brazil and other countries created a necessity to use the online medium to gather people for work but also entertainment. In terms of music collaboration, this has been for the first author an opportunity to re-connect with musicians she used to play with in the past in São Paulo ²

2. PLAYSOUND

Playsound[15] is a web-based player that works with Creative Commons audio samples provided by the Freesound platform. The main idea of the software was to provide a way to seek and play crowd-sourced sounds in real time, and to this end, keyword searches and spectrogram representations were used to help performers find sounds they wish to play. Users can play multiple sounds simultaneously, perform loops, cuts, and change playback speed, panning and volume for each sound. The tool was developed mainly for playing in free improvisation contexts, where it is desirable to support flexible rhythm, and not be constricted by a time grid as commonly found in digital audio workstations (DAWs).

3. MUSIC IMPROVISATION DURING LOCKDOWN USING PLAYSOUND

In this section, we describe two performative events with Playsound which took place during the lockdown in 2020. Following practice-based research, the processes were doc-

²The first author moved since in the State of Bahia, which is located 1900 kms away from São Paulo, to become lecturer at her new institution.

umented and feedback from participants were collected in order to analyse the processes retrospectively.

3.1 QUARENTENA LIV(R)E

Quarentena Liv(r)e (QL), meaning Free Quarantine, were a series of online gatherings and performances organised by the Institute for HUmanity, Rights and Democracy (IHUDD)³ organization[10], as a space for reflection and debate about the current situation related to Brazilian politics and the pandemics. The events happened twice a week and gathered artists, academics, and musicians as well as invited guests. Topics of discussion were varied and included political issues, history, art, war, religion, racism, indigenous culture, mental health, physics, music, imaginary, international issues, human rights, revolutions, Marxism, cryptocurrencies, aerospace culture, pandemics, environment, queer, cure, and love. The director of the event Gregorio Gananian expressed that *“these live sessions worked as healing rituals to cleanse the paranoia, fears and angst in these tense and obscure times, as a kind of collective schizo-analysis”*.

3.1.1 Form

The topics of discussion were the object of live performances which combined sound, visuals and spoken language, and followed a participatory art approach, in Gregorio’s words: *“stepping away from the ego, and putting poetic effort in breaking cliché, and removing the protagonism of whoever is talking”*. The resulting form resembled a sort of live movie to which a live music soundtrack was a central part. The *Europera* and *Musicircus* pieces from John Cage were used as references, as they consist in a mixture of speech, music and dance [3]. He also mentioned that his artistic expression was also connected to *happenings* “that applied the idea of composition to a broader field than music”.

3.1.2 Participants

In each session of the 45 sessions, there was a fixed team of debaters. Weekly Tuesday sessions were the object of discussions between participants and Thursday sessions featured an invited guest. A list of debaters and some of the guests is provided in Appendix A.1). Participants were from a broad range of backgrounds including a painters, performers, writers, architects, film makers, sociologists, public policy researchers, lawyers, and musicians. Guests included trans artist and performer, psychologists, political militants, sociologist working on violence against women, psychiatrist, indigenous activist, journalist, performers, lecturers in political sciences and art, designers, schizo-analyst, musicians and composers.

3.1.3 Methodology

The meetings were held using the Zoom⁴ platform. This platform was adopted first since it is more suitable for online video-conference musical interactions than other tools due to the possibility to remove the audio compression and noise canceling adapted for speech but not for music. It also allowed each participant to change their background image, creating a “collective patchwork”, using the built-in chroma key function creating visually intriguing images for the discussions, by replacing backgrounds or foregrounds with im-

³Instituto Humanidade Direitos e Democracia

⁴<https://zoom.us/>



Figure 1: QL 16# - balanço de fogo em boca de pedra.

ages and videos. Thus, rather than waiting passively for their time to talk, participants were engaged creatively during sessions by setting up visual scenes evolving dynamically during the show. This idea of “electronic windows” comes from video technique and has been used by different filmmakers, enabling a “juxtaposition of distinct plan fragments on the same picture” [7].

The first author performed as a special guest in the 16th edition alongside pianist and free improviser Sergio Villafranca⁵. Sergio Villafranca was part of the team since the first QL edition and performed using prepared piano techniques on a synthesiser, using percussion sound samples. He was accompanied by the singer Danielly O.M.M who used extended vocal techniques. The duo wanted to explore other sonic palettes which motivated the collaboration with the first author and Playsound. The performance in the 16th edition also featured main guest and performer Pedra Homem1 .

To share their sound over Zoom, the performers routed audio from microphones, synthesisers and web browser to Zoom using the Loopback software. The topics proposed by the event director, which were used as a basis for visual image searches, also acted as keywords for sound searches using Playsound, to create a sound database to improvise during the show. These keywords were related to the field of the guest or the debate’s theme, for example: forest, space, war, jail, meditation. Sometimes there was a specific instruction for the images.

During the interview with composer Livio Tratemberg, for example, the debaters started playing with excerpts from the Antropofagist Manifesto from Oswald de Andrade,[6], changing their names, creating a real-time concrete poem on screen ⁶.

Following the initial performance, the first author joined a total of 15 online QL events⁷, with different moods and themes. Playsound was used in 14 of these performances, and for the other one an analogue minimoog was used since the Freesound server was down. Each time, she started by using a selection of sounds that were somewhat related to topics expected to be raised during the interviews. For example, when the discussion was centred on incarceration, sounds of chains, shots and police sirens were chosen, while

⁵Sergio Villafranca is a disciple of the musician Hans-Joachim Koellreutter, who believed that an artist’s “mission is a social mission in the broadest sense” [13]

⁶<https://www.youtube.com/watch?v=PcpFuti02xE&t=15s>

⁷See a full list of links to the episodes on <http://ariane.stolfi.org/index.php/som/quarentena-livre/>

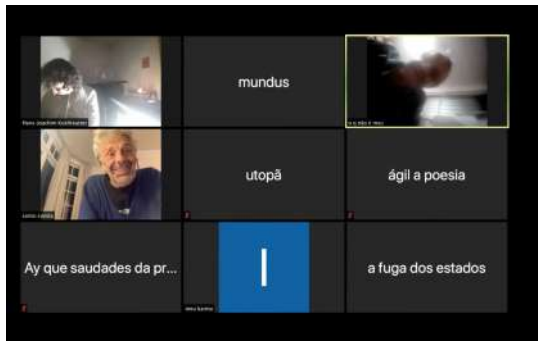


Figure 2: QL 36# - 1 + 1 = ? com Livio Tragtenberg.

discussions on indigenous issues was accompanied by sounds of forest and animals.

The music performances during QL live sessions lasted around two hours. In the first performance, 132 sounds were used⁸ and an increasing number of sounds was used across sessions. In the 4th session, 705 sounds were used⁹. When performing, spectrograms were used to avoid sound masking, searching for samples that would not conflict with the timbre of the speaker’s voice, which was achieved through hearing.

The QL sessions were streamed on a YouTube channel¹⁰ to let audiences watch and hear the debate and performance. Although the main objective of the QL online encounters was to generate discussions between participants, there was a regular audience, yielding from 35 to 450 views on YouTube. The process of holding events twice a week was tiring and after 45 editions, the events stopped which coincided with the end of the first isolation period due to Covid-19.

3.1.4 Critical analysis

The soundtrack generated by the musicians was initially felt as a nuisance for some of the participants who were not familiar with a concomitant presentation of music and speech during a debate. However, as the director’s instructions were to act as in a live movie, the combination of speech and music enabled to convey a cinematographic dimension to the events. One of the participants reported that at first she felt that the sound content was a kind of annoyance as it was difficult to concentrate with the presence of noise and sound. However, slowly, as more performances were held, this sensation disappeared. She said that it was like she had done an exercise to simultaneously listen and talk, and at turns be silent to give predominance to the sounds. After a few performances, she started to miss something when there was no sound interventions. Another participant felt that the musical interventions were rather hallucinating: *“the productive chaos was installed through the participants”*, giving them multiple possibilities, and that *“the interaction between the talks and the sound created an unique content totally improvised”*.

From the perspective of the first author as practitioner, being able to accompany speech and music became another opportunity to put into practice Playsound to live soundtrack creation. Playsound has been used before to create live

⁸http://bit.ly/quarentena_pedra

⁹shorturl.at/owBO9 and shorturl.at/fkpx6

¹⁰<https://www.youtube.com/c/IHUDD/videos>

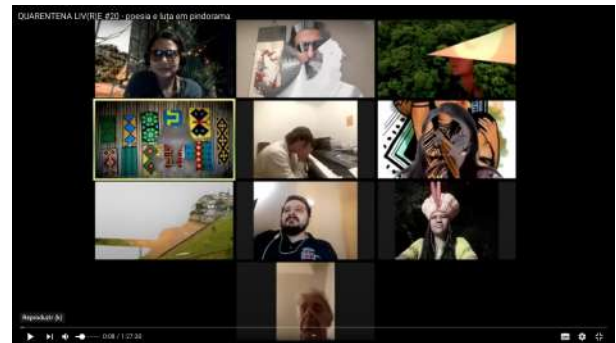


Figure 3: QL #20 - poesia e luta em pindorama.

soundtracks of silent movies in the Reverbera Project[15], however these performances were rehearsed and the silent movies were short compared to the QL live sessions. Testimonials from organisers were collected using the text message app *WhatsApp*. A lot of live streamed music sessions were happening all over the world at that time, driven by the Covid-19 pandemics and the impossibility of real life encounters. These live can be tiring due to the lack of stimulus for the participants [17]. The format combining sound and talks was something that put QL at a different level of experience compared to other events where either speech or music was predominant. As Gregorio Gananian stated, it was a *“nano-tentative of breaking bubbles, reuniting people from different fields and contexts”*.

One of the most memorable episodes was “QL #20 - poesia e luta em pindorama” with the indigenous activist Narubia Werreria, where, according to Gregorio Gananian, the participants *“ritualized together with her”*. Narubia Werreria, indigenous activist sang a song with the soundscape which was being produced in real time³.

As result of this process, Eduarda Sansão said that the experience enabled a dialogue in these quite chaotic times, forging in political, social, academic and militant connections to discuss some issues in a unusual way. Douglas Ferreira also mentioned a collective learning process, that generated diverse forms of audiovisual and content experiences, and interesting imagetive mosaic with sound creation and relevant political content. One of the interesting things about using Playsound in such online context, is that it allowed the performer to play with just one hand. The other hand was used to to compose visual scenes using geometric shapes such as circles and triangle, as shown in Figures 1 and 3, creating a kind of cyberpunk persona.

3.2 Noise Symphony

From the experience of using Playsound during the QL events, it became a desire for the first author to create a library of sound objects that could be useful for performances on different occasions. Some of the terms used to retrieve sounds to create libraries yielded a lot of results from Freesound. For example, when searching for the keyword “noise”, the search retrieved at that time around 37000 sounds¹¹. Usually, sounds from first search result pages were used, which prompted an interest in exploring all the other

¹¹It is currently only possible to acknowledge the number of search results with Playsound using logs displayed in the JavaScript console from a web browser.

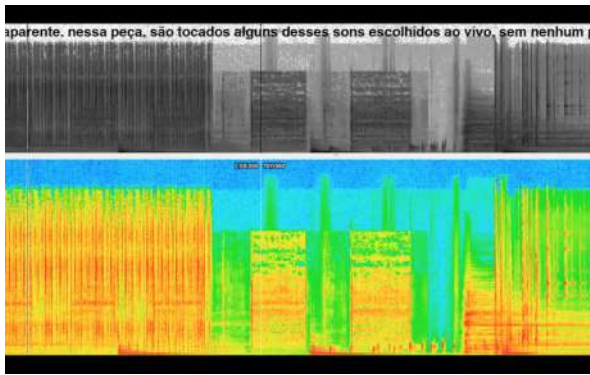


Figure 4: Screenshot of Noise Symphony 1. Src: <https://www.youtube.com/watch?v=oYLe6WYpIIc&t=21s>



Figure 5: Noise Symphony no5. Src: <https://www.youtube.com/watch?v=eiNFStFfGLU>

sounds (the tail). During the isolation, especially in the first months when the quarantine regulations were strict and activities such as lectures were suspended in Brazil, the first author dedicated around 30 hours to browse through all of the “noise” search results to select some sounds to create a new series of pieces.

3.2.1 Methodology

The main idea was to gather a collection of sound that would be capable to generate complex variations of sounds, and well suited for musical performance. Pierre Schaeffer, as cited by Chion, considered that that some sound objects are “*more appropriate than others for use as a musical object*”, that are sounds “perceived with the intention of musical listening”[5]. The criteria for that is that they must “*be simple, original and at the same time easily “memorable”, with a medium duration; therefore be balanced typologically*”. They also cannot be too anecdotal and shouldn’t carry out too much meaning or emotion. Also, they should be easily understandable as sounds, and capable to be combined one with another to produce “musical value”. The idea was to make a collection of signs, that could be combined to produce different sensations[5].

To gather this collection of sounds (See figure 7, we first based the retrieval on spectral characteristics of the samples, looking for different spectral shapes for choosing less redundant elements. Also, shorter sounds were chosen, as they are more suitable to be played without cutting, and they also require less CPU access as they are loaded into the page.

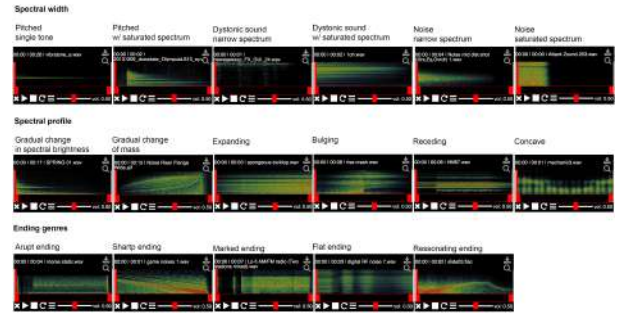


Figure 6: Some of some of the selected samples organized by spectral properties.

In order to reach different types of sounds, the search criteria, were partly based on the TARTYP (Recapitulative Table of Typology) created by Schaeffer to categorize sound object’s typologies based on different sound characteristics, specially in the adaptation made by Lasse Thoresen for spectromorphological analysis[16]. This distinguishes around 30 types of sound objects. The system, divides objects according to “*seven criteria of musical perception: sound spectrum, dynamics, harmonic timbre, melodic profile, profile of the sound spectrum, grain, and gait.*” [16]. According to Schaeffer, objects are divided into three families: balanced objects (well formed, with suitable duration and strong unity), redundant objects (“homogeneous sound”, “that don’t evolve at all”) and eccentric objects (“too original” in terms of form) [5]. In our collection, we gather the tree types of objects, with more emphasis on balanced and eccentric sounds. A total of 690 sound samples were collected acting as a basis for the pieces.

Once a sound collection was retrieved, the first author started to play live solo performances using the content. A complete list of pieces from this series can be found in Appendix B. The first session, Noise Symphony No. 1¹², was only audio recorded, and after that, it was uploaded to Youtube with a visual presentation showing a spectral analysis made using Sonic Visualiser [4] (see Figure 4). During the first performance, only samples were used, without any sound processing, and in later performances, other elements were integrated, such as a change of playback speed or cutting samples.

After the first session, the live performance were broadcasted directly to YouTube using the OBS software, with a mixed image consisting of a portion of the Playsound interface and a video feed from the author’s webcam as shown in Figure 5. The screenshot shown in the figure is an excerpt from Noise Symphny No. 5, that gave to the pieces a meta-linguistics and performative characteristic, on showing both the performer and the interface being played at the same time. In the 4th performance, a vocal performance was introduced with extended vocal techniques, in a piece that was played on Radio Caso Sonora’s radio show¹³.

The last performance, Noise Symphony X, debuted at the Festival de Música Nova - Gilberto Mendes, a well known festival in Brasil that was fully held online this year due to

¹²<https://youtu.be/oYLe6WYpIIc>

¹³<http://www.sonora.me/2020/08/13/playlist-2-sonora-para-radio-caso/>

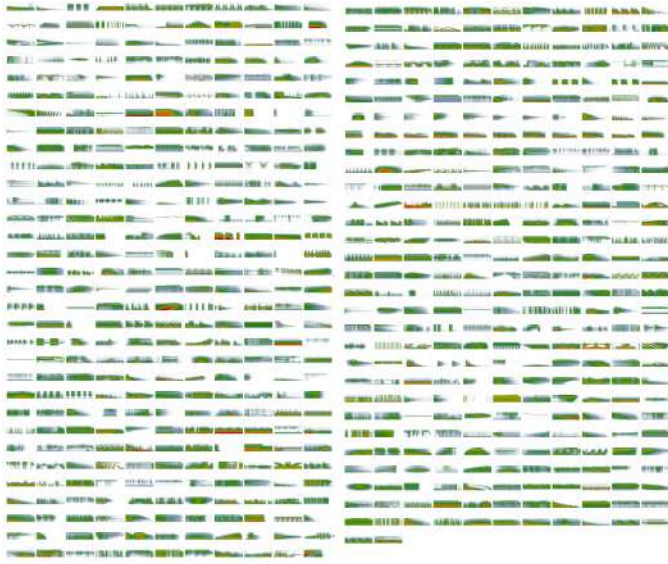


Figure 7: Spectrograms of all sounds used on Noise Symphony X. Source: <http://http://finetanks.com/musica/noise>

the pandemic. It was also the longest performance of the series, lasting 20 minutes in total, and the one using more sounds and dynamics variety¹⁴. A printed spectrum of the performance is displayed in Figure 3.2.2.

3.2.2 Critical analysis

As pointed by Chion, “in traditional Western music, the value of pitch predominates ... to be considered as “musical” and not be rejected as “noise”” [5]. Noise Symphony, puts itself outside the pitch and tonal music tradition, alongside many experimental genres such as noise music, concrete music and free improvisation. It can be considered as a improvisation piece [1], since it is a mixture of composition, and improvisation, and has a structure of sounds previously selected for the artist to play in each session.

For the proposed methodology, spectrograms provided by the tool were essential, as it would take a much longer time to actually hear all the search results, so the first sound selection was based on spectral shape, and then the sounds were also auditioned.

Through several performances involving the same set of sounds, the performer managed to know much better each sound, and also increased the ability of reading sound samples from their spectrograms. Difficulties were still found in controlling a large number of sounds, especially to browse between them, and for that the Playsound could be developed further, as we describe in the next session.

4. IMPROVEMENTS IN PLAYSOUND

The intensive use of Playsound revealed possibilities of resources to be added and improvements in the user interface. Some of them were already implemented. To control a larger number of sounds quicker, the playlist and search results windows were swapped, to put more emphasis on selected sounds rather than on search results, and have more

¹⁴For a complete list of pieces, see <http://ariane.stolfi.org/index.php/som/noise-symphny/>

sounds accessible on the screen. A color border was also added to sounds which are being played in order to identify more easily the looped samples during a performance.

We also developed a button for similar sound search, using resources provided by Freesound API [8]. This enables to use sound variations from a determined sample, and thus achieve subtle variations. It is also interesting to use sound sources that are not keyword-related, and sounds that are not properly tagged in the Freesound database.

Playing intensely with the instrument, some challenges and issues with the interface were also faced, which would be interesting to address in the future. The location of sounds which are currently being played is still difficult, so it would be good to have a possible way to sort objects on screen and also an index to jump to sounds that are being played.

It would be good to improve search criteria to include, for example: sound duration, audio quality, and exclude terms. We also still wish to implement things that can add more musical possibilities to playing such as adding silence between loops, and also ways to modulate the sound samples to fit a more traditional notion of rhythm.

5. CONCLUSIONS

Besides the great number of new interfaces for playing music, there are few musicians that really use their inventions as main instruments [11]. After two years of releasing the first functional version of the software, Playsound has become the main instrument for the first author’s free improvisation practices, together with extended vocal techniques.

In previous published works we have shown, with several user evaluations conducted during the development phase, that Playsound could be easily played by different types of users, from novice to professional musicians. Now, with the first author’s own practice, it can be advanced that Playsound can be an efficient instrument for her musical needs in different contexts. Jorda states that music instruments “must strike the right balance between challenge, frustration and boredom”, and the intense use of Playsound after two years proves that the instrument has not been abandoned, on the contrary, we are still finding ways to better play with it every time.

The spectrogram research feature is becoming even more useful as the practice with the instrument is improved. Of course there is still some improvements that could be done on the interface, and we hope to have resources to implement them to achieve a better instrument with time. Jorda [12] proposes that “music instrument efficiency” is related to “Musical Output Complexity and Diversity Control and inversely proportional to the Control Input Complexity”. With Quarentena Liv(r)e, we managed to prove that Playsound is capable of generating a lot of different moods and atmospheres, related to each topic’s debate, and with Noise symphony we managed to achieve precise relation within sound objects in real time. Achieving this by playing in the browser, with the mouse itself proves that the input complexity is very low, witch puts Playsound as a high efficient music instrument for certain purpose.

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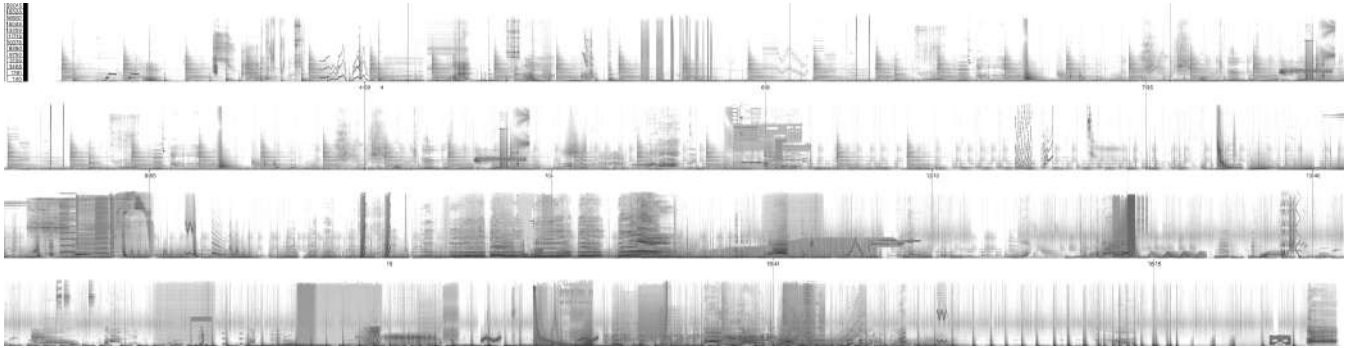


Figure 8: Noise Symphony X - spectrograms of the full performance.

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APPENDIX

A. QUARENTENA LIV(R)E SUPPLEMENTARY MATERIAL

A.1 Team of debaters

Participants in Quarentena Liv(r)e sessions included José Roberto Aguilar, painter, performer and writer; Fábio Otheguy Fernandes, economist; Hugo Albuquerque, lawyer; Danielly O.M.M., architect, film maker and artist; Douglas M. Ferreira, sociologist and researcher in public policies; Eduarda Sansão, lawyer; James Hermínio, masters student in law; Beatriz de Barros Souza, psychologist; Sergio Vilafranca, pianist.

A.2 List of guests

Rafael Ordanini, social assistant; Priscila Lopes Belchior de Queiroz, social assistant; Abraão Silva, SUS doctor; Yuri Tripodi, artista trans, performer, poeta e cantora; Diego Ribeiro, visual artist and designer; Manoel Taisi, physicist; Heitor Loureiro, social scientist and historian; Negro Leo, musician and composer; Fernanda Ramone, journalist; Paulo Galo, antifascist delivery worker; Pedra Homem, performer; Cesar Gananian, film maker; Narúbia Werreira, indigenous activist; João Gomes, medieval historian; Jackson Rêgo Matos (Jackson Tapajós), Chico Malta, Maestro Helder Gama (Catraca) and Eduardo Serique, musicians and amazon residents; Lucio Agra, lecturer on arts and performer; Sérgio de Souza, law student; Guilherme Castro, criminal lawyer; Jean Tible, lecturer on political Sciences; Marco Mendez, programmer; Edemilson Paraná, activist; Fabi Borges, spacial art researcher and schizoanalyst; Frederico Daia Firmiano, lecturer on Social Sciences; Andre Takahashi, social scientist; Cauê Seignemartin Ameni, political activist; Ricardo Teixeira, lecturer on medical school; Lucas Jerzy Portela, monarchist psychologist Nelson da Silveira, alimentar terapist; Otávio Matias, Trans Sol collective; Livio tragtenberg, composer; Marcelo Ariel, poet; Jards Macalé, musician and composer.