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SEAM PROJECT - SUSTAINED ELECTROACOUSTIC MUSIC

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ABSTRACT

The musical composition is close to a point break: almost one hundred years ago Ottorino Respighi introduced a recorded media into his orchestral composition *I Pini di Roma* and even today we don't have a shared consolidate electroacoustic practice to play it likewise the orchestral one. Someone does it better than others, by its own equilibrium between knowledge and consciousness. After all, it is only a recorded bird sound to be placed inside an orchestra, not a virtuoso part to be played on a handmade custom electroacoustic instrument disappeared from the earth except by memories and score notes. The problem is more serious and deep if consider most of today's electroacoustic-manipulators don't know who Respighi was and what happened after him. Something must change to introduce a way that conducts a practice consolidation on literature.

1. INTRODUCTION

Sustained Electro-Acoustic Music is a project inspired by Alvise Vidolin and Nicola Bernardini's article on *live electroacoustic music sustainability*. In their article they point at multiple faces of the sustainability problem such as: technological, notational or general conception issues. Even if the article aforementioned focuses only on *live* electroacoustic music, the concept of sustainability is applicable to any kind of documented music that uses electroacoustic environments including therefore the acousmatic works, instruments with tape and amplified works. This will be the purpose of the presented text.

The ambition of this project is to grow the interpretation and the electroacoustic musical practice with the consciousness of the electronic and informatics problems that had made difficult and arduous to approach this music which prevented the growth of interpretative thinking. It is possible, with a community structure, to determine, build and stratify interpretation of musical core, the repertoire, concealing the environment-related technological issues. They are instruments, not the music itself after all.

The Problem section will introduce the definition of general issues and actual circumstances. After the description of the SEAM project, there are three sections in which a starting idea of sustainability is applied and described in three different processes.

2. PROBLEMS

When we refer to a virtuoso musician, we often point at a violinist or at a piano player: someone who intensely practice on his instrument. This is the central point: Does the violinist builds its own violin every time he approaches a new composition? Does the pianist? The electroacoustic musician does it every time.

* This work was supported by the XYZ Foundation

† This guy is a very good fellow

The electroacoustic music culture was born in a daily changing context. The sustainability of what the electroacoustic musicians and composers were doing during the years wasn't an interesting and useful point during the realisation of the compositions. Today the situation remains similar to decades ago. Sustainability is an intricate and complex concept and music sustainability sounds like an abstract problem applied to an abstract thing only for a small number of people like an abstract community not related to the mass. Again, we acknowledge that mass-media, mass-culture, mass-society-things, are no place for the *sustained people*.

Contemporary music composition, is characterised by an interdisciplinary approach to research on sound and perception and writing itself. Writing something push the writing itself into a becoming writing, to the best comprehension of something. Yeah this is in a form of best wish.

If actual music is afflicted or not by the contemporary and electroacoustic music issues, it is an ordinary question, but the evidence that musical thinking changed thanks to the electroacoustic thought is an undeniable fact. Music was changed inexorably after the introduction of electronics and informatics in music composition, as well as the way how it has transformed the approach to playing and production of music.

An example. Deutsche Grammophon released three interpretations of Beethoven's Complete Symphonies by the conductor Herbert von Karajan. Karajan itself made four complete recordings of the nine in less than 35 years. Each of those boxsets is a separate thing, a collection of objects, not the music itself. We have three sets of reproduction of the same musical works through the same mind (the Karajan's) conducting the same orchestra (the Berliner) for the same label (Deutsche). We consider it a huge resource of thinking, (Beethoven's thinking through the Karajan's one) not a huge resource of music itself. Every man who has listened to Beethoven's music in a concert hall knows perfectly that his music can't fit in a box that can stay in a hand. Every man who has listened to a symphony orchestra in a concert hall knows well at all. But if a boxset is not music itself, but a reproduction, a process, it is sure a complex object of recursive thinking. This is a point of view not in coincidence with the purpose it was built, people in Deutsche Grammophon surely promote their boxset as great music and not as great objects, but it doesn't matter. The point is that we have stratified musical thinking and listening attitude on Beethoven's music through interpretations of his music. We have not rewritten his music each time and we have not built his instruments each time. Is it a technological fact? A musical one? Both of them.

Luigi Nono's repertoire is not on a triple boxset of no one. It is on paper in the best-case scenario. The *Archivio Luigi Nono* does an immense musicological and production work. We have some recordings, yes we have them, but what can we study and interpret of his lately composed music, like *Risonanze Erranti* that we introduce later, in which half of the instruments of the ensemble in score

wasn't traditional acoustical ones but *Live Electronics Instruments* dated the '80s and not really described and not sustained through the years? Who has memories of those disappeared instruments from musical daily doing? And after all, who better than the people who directly worked with Nono can accurately describe and share what happened?

Looking at the Post-Graduate Doctoral offers to an electroacoustic musician all over the world, there are many *interactive-all-you-can-think-about* positions but nothing about electroacoustic repertoire. There are a lot of *Machines (that are) Learning* something, somewhere. All over the world, the music industry conceived the purpose of doing music. With or without musical problems to solve. During that well-studied interaction learning of the art of entertainment, where the industry is god, and *God is a DJ*, meanwhile, there is also a repertoire of music that we must consider the core of the actual musical thinking that will disappear in a few years. Not the written papers, neither the recordings of that repertoire. We have *Clouds* for that, and *Machine Learning* something of that, maybe. But it will disappear the practice, the interpretation, the sensibility and musical thinking itself and there will be no place for that. Because if there are clouds, they are grey and full of rain.

What can we do about a lot of music made by composers who have framed their music in events without sustain at all their electronic instruments through decades?

Here are the focal points. What will happen when all the people who are part of the history of a musical work, continuously manipulated its electronics and knows all the related work production problems during a concert, will disappear? What will become the electroacoustic music repertoire if not the one played in the concert hall? Why we do concentrate too many resources and time on technical problems and not on musical interpretations and playing practices of repertoire?

3. SEAM

From seam meaning:

> A line where two pieces of fabric are sewn together...
> An underground layer of a mineral such as coal or gold: the buried forests became seams of coal...
> Join with a seam.

We have to study Vidolin's gestures to understand Nono, to have a clear sight on our music through an era and join literature and practice with a seam. Vidolin is for Nono what Karajan was for Beethoven: time, consciousness and thinking. We need his work to know what was happening, what we have to do, what is necessary and what doesn't matter. And that is we have to do, seam it just one time, forever. Refine it, maintain it, and again realise it, through practice, forever.

Neatly layering people's knowledge and thinking is the only way to hold back what we are loosing and prevent music from being a boxset of objects without consciousness of music their represent.

To prevent catastrophic regression of musical thinking we must consider there are few dogmatic concepts to build, re-build and sustain an *electroacoustic repertoire*:

1. Open and Be Open
2. Don't Repeat Yourself
3. Think and Act as Community

SEAM is an Open, DRY, Community. People in SEAM will share their knowledge to weld words, paper, literature with meaning.

3.1. SEAM Instruments

Why faust?

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3.2. SEAM Topology

Referencing to electroacoustic music literature, where the substantial difference with acoustical one is it's inevitable continuously changing of the environment, we prefer to use the topology classification in place of typology one. A classification typology is a classification according to general type, used in science where characteristics of something are fixed and produce a catalog of things. A topology classification considers the time-space characteristics of shape and permits the time variance of the environments. We classify three topologies of electroacoustic music literature:

The undocumented that uses only word description to generate environment and circumstances.

The hole-word deep documentation with undocumented instruments;

The porting informatics traduction between languages or informatics technologies.

The identification of topological classes in place of typological forms is necessary to subordinate technology to musical practice and poetics

4. WRITE THE UNDOCUMENTED

The undocumented is the first topology class we approach. It holds all works used only word description to portray the electroacoustic performing environment, with the rules and circumstances needed. Like Ottorino Respighi does with *I Pini di Roma* at the very beginnings, many composers until now never documented their works with the technologies at their disposal.

Speaking at newbie electroacoustic music students about *I'm Sitting in a Room* is a kind of multilevel experience. There are a lot of layers of different bits of knowledge and experiences possible approaching *I'm sitting*. One of these, of course, is how you can do it today.

4.1. 1969, I'm Sitting in a Room, Alvin Lucier

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```
ctrlgroup(x) = hgroup("[02]", x);
main = vgroup(
  "[01]Check both boxes to start",
  *(IL) : de.delay(maxdel, D-1))
  with{
    maxdel = ma.SR *(180);
    B = checkbox(
      "[1]Uncheck me after the incipit
      (max 180s)");
    I = int(B);
    R = (I-I') <= 0;
    D = (+(I):*(R))~_;
    L = checkbox(
      "[2] I'm Sitting...
      Uncheck me at the end");
    IL = int(L);
  };
```

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process = ctrlgroup(chstrip) : main :
    ctrlgroup(hgroup("[03] ", *(g88) :
    svmeter));
```

5. REWRITE

The second topology of score approached has electroacoustic deep documentation and score notation with the, what we defined, hole words. Risonanze Erranti is a long work of the latest Nono's composition period, with many live electronics instruments inside the ensemble.

5.1. 1989, Risonanze Erranti, Luigi Nono

Deve passare il concetto di pratica strumentale che non può passare senza una pratica strumentale consolidata. Nono stesso ne parla in termini esecutivi ed interpretativi:

> Lo spazio è uno degli elementi con cui componi, anche se dall'Ottocento, dal tempo della sala da concerto e dell'opera, ciò non succede più. Tutto il melodramma italiano si è realizzato in una forma già prefissata. Ma continuare così sarebbe stato come considerare vera la sola forma sonata di un certo periodo della vita di Beethoven, come se lui non avesse continuamente trasformato e stravolto quella forma fino alle ultime sonate.
>
> Questo vuol dire, per me, pensare la musica. E la stessa cosa avviene col computer: nel tempo reale tu hai la possibilità di programmare, ma anche di intervenire, modificare, trasformare tutto, completamente. Una volta programmato, il computer non va avanti come una locomotiva sul binario., che niente la può fermare. Il computer non è intelligenza delegata agli altri. No, è un mezzo che ti obbliga a un nuovo tipo di sapere, di conoscenza, esattamente come i piani acustici della chiesa di S. Lorenzo. Intendo dire che Piano ha costruito, insieme alla chiesa, una *machina da sonàr* come si diceva nel Cinquecento. E con lo Studio di Friburgo, con Hans Peter Haller, con Alvise Vidolin, con il processore, le quattro orchestre e i solisti, noi verifichiamo continuamente le acustiche e inseriamo delle continue modifiche a ciò che ho pensato o scritto.

6. PORT

The porting of music informatics to a sustained programming language and technology merge into a branch of interests of the authors: History of electronic instruments and the back to the future of music lost in the past for technological issues into a new possibility of music playing.

6.1. 1991, Mobile Locale, Michelangelo Lupone

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7. CONCLUSIONS

With this article, the music sustainability concept was spread from live electronics music to the broader electroacoustic music. The Bernardini-Vidolin's paper starting problem of not properly documented electronic music is the fundamental core of the concept, but the focus of this research and approach point on a less technical and more complex problem that afflicts not only the documentation of a score musical thinking at all. The research approached different topologies of electroacoustic music (the undocumented, the hole-word and the porting) consolidating same emerging critical circumstances: sustainability is only marginally related to the documentation. The documentation is a quality parameter of sustainability but is the musical practising and interpreting to build musical thinking during the years. The first concept to be clarified in the conclusions is that sustainability must aim at maintaining the musical idea, the peculiarities of the piece, of what we could define the sustainability of the process. The most undocumented works here proposed of Respighi and Lucier are simplifications of this fundamental aspect: the practice on difficulties araised studying each musical literature work is the only documentable and sustainable and refinable musical object: the repertoire.

To improve, share and grow the musical interpretation of repertoire there are rules to be observed, derived by informatics sustainability itself: Open and Be Open, Don't Repeat Yourself, Think and Act as Community.

The process sustainability also points the fact that a community can truly build instruments one time only, as a tool, and refine it, and

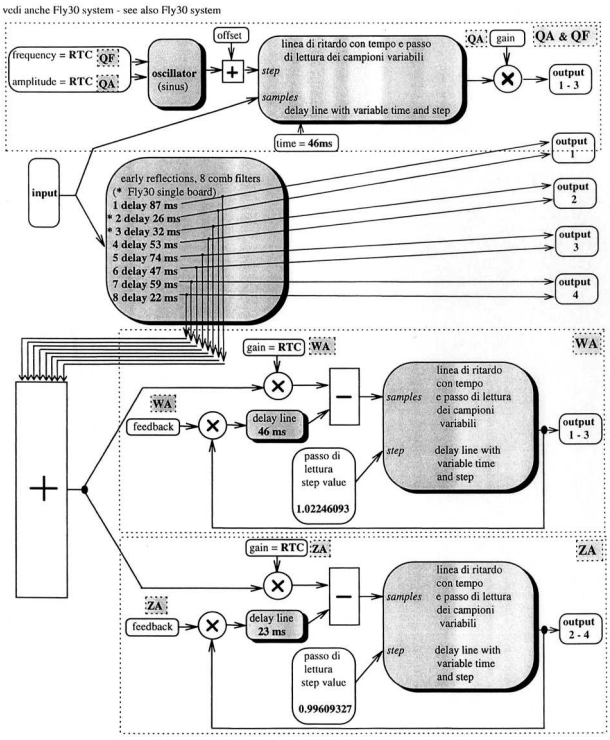

Figure 1: *Ping.*

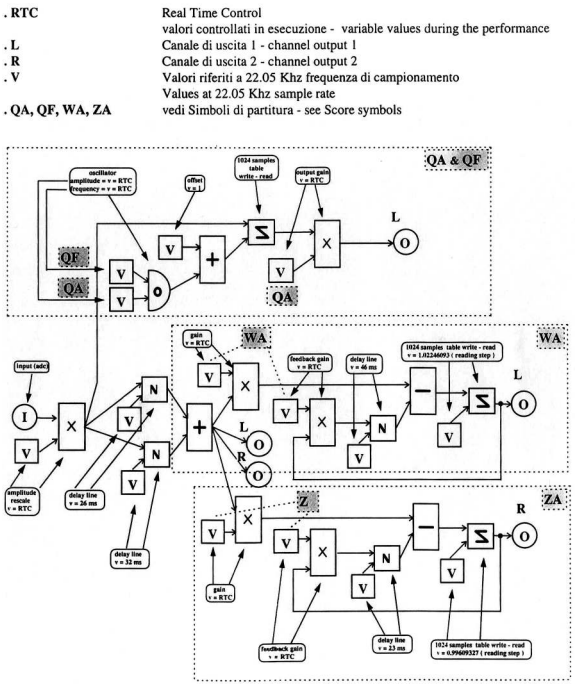

Figure 2: *Ping.*

making it accessible through open-source, would lead to the interpretation implementation of electroacoustic compositions, preserving electronic thinking for greater progression and research within contemporary composing, untying the possibilities of realization from tools and means available during music composition.

8. REFERENCES

[1] Richard Freed, "Karajan vs. karajan vs. karajan vs. . . ," `https://www.nytimes.com/1990/03/18/arts/recordings-karajan-vs-karajan-vs-karajan-vs.html` (2019/12/20).

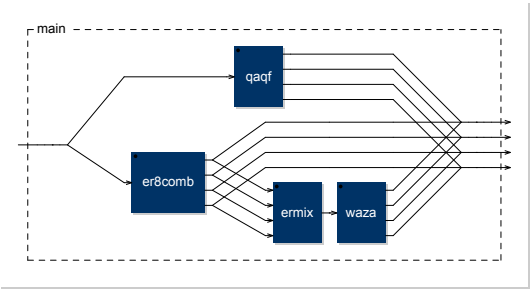

Figure 3: *Ping.*