Improvisation and structure in *Contradição Paradoxa*[*]

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1 Introduction

Contradição Paradoxa (2007)[1] falls into a category that is rarely associated with conventional concert music practice: the structural definitions of the piece are not inscribed in any sort of musical notation, they only exist in the memory and body of its composers/performers. Decisions related to its characteristics are taken at different times and in a myriad of ways. One may perceive several situations that coexist in a performance of this piece: entirely composed sequences; predefined temporal tendencies, with few unchangeable details; improvisation based on an accurate collection of gestures with an overall direction; computer-controlled sequences, created with probabilistic procedures *etc.*

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[1] *Contradição Paradoxa* was premiered in 2007 in *SESC Consolação*, São Paulo, Brazil; later performed in Copenhagen, Denmark, as part of the *Re:New 2008* festival.

In this article we will approach some issues on the concepts of improvisation and composition, considering the way we worked with those two methods. In the last section a description of the piece's overall structure will be elaborated.

2 On the concepts of *composition* and *improvisation*

The German musicologist Georg Knepler [Kne77, p.205-217] draws attention to a fundamental gap left by various music historians[2], that took place in the period of one of the most remarkable changes in Western Music: when an acoustic art was coded into a refined notation technique. Without this technical modification the concept of composition, as we now understand it, would not be conceivable. The technics of musical notation has enabled the development of a rich polyphonic tradition, and has been led to a further rationalization by the composers of the *Ars Antiqua*, after Pierre de la Croix in the thirteenth century (where the musical notation enforces a regular segmentation of time), the development of polyphony and the Ars Nova, and leaded to the foundation of the metric system of measures at the end of the Renaissance[Boe04].

Without the concept of musical composition its supplement, improvisation, would make little sense. Another German musicologist, Ernst Ferand[3], was pointed out by Knepler as one of the first theorists to examine the question of improvisation in music history, defining concepts of musical improvisation and composition as two methods or categories of music construction[4], "both imaginary points of the musical creative expression" [apud. Kne77]. In

[2] Knepler recalls the shared idea by the works of P.H.Lang, *Music in Western Civilization* (1941) and *History of Western Music* by DJ Grout (1960), who define the emergence of the concept of 'composition' as an important historical step in development of music, without further investigation.

[3] In texts as *Improvisation* (1957), mentioned by Knepler [Kne77, p.206]. Other important works by Ferand: *Die Improvisation in der Musik* (1939) and *Komposition* (1958)

[4] From German: *Gestaltungweisen* and *Gestaltungformen.*

this sense Ferand "showed very precisely the fact that the composition and improvisation coexisted for centuries under several different names and have fertilized each other" [Kne77].

Knepler after extensively analyzing the complex relationships between composition and improvisation - outcome of this shift in production and forms of musical technics and thinking just mentioned - a difficult question arises: "How can we define the boundaries of the construction methods of improvisation and composition?" [Kne77, p.213]. Georg Nettl questions whether we can assume, in principle, the postulate that "improvisation ends where notation begins" and addresses the issue of separation between composition and improvisation [Net74]. The separation would be even more ambiguous in non-Western communities that do not make use of a system of musical notation.

Nettl analyzes several cases in different cultures, including more conventional Western music practices, and suggests that the presence or absence of music notation would not be a crucial parameter to constitute the distinct groups of musical composition and improvisation. But he offers other two new categories, from our point of view, equally problematic:

1. carefully designed musical practices;

2. more spontaneous promptly created practices, but anchored on a secure model.

As he states:

> The first gives up the spontaneity for deliberation, while the second one refrains from seeking innovation in favor of releasing a sudden impulse. None of them needs to be considered improvisation, and none at any level is restricted to a musical or cultural complexity. [Net74]

This solution can't be considered fully satisfactory either since it only replaces one dichotomy by another. Every dichotomy can hide a deeper, and likely problematic implications and hierarchies. Derrida [Der01, p.48-57] points out quite clearly that there is a hierarchy inherent in any conceptual dichotomy; and, therefore, this structure is necessarily forceful and confrontational[5]. Derrida demonstrates an intense imposition of terms disposed in this manner, one controlling and dominating the other. This investigation exceeds by far the limits of this text, we would restrict ourselves here to propose the neutralization of this unproductive antagonism, and not satisfy ourselves with the plain turnaround of this conceptual construction.

One may consider instead that improvisation and composition are part of the very domain: the creative organization of music. Evan Parker recalls the expression "instant composition", coined with the purpose of breaking the imaginary line that segregates "serious music" from "improvised music" [Par92]. We can also recall the duo FURT's work (Richard Barrett and Paul Obermayer), described as a work in which the distinction between pre-structured and improvised music does not exist [BO05]. Perhaps even more radical, the composer and cellist Franklin Cox joins the interpretation of highly complex music, whose detailed notation covers all possible variables of instrumental performance to a "desire to focus on an intuitive performative energy that is often necessary for the responsible interpretation of this kind of music" [Cox02, p.91]. Doing so he approaches *complex* and *free improvisation* music, specially the attention dedicated to the physical body of the performer, "which is consistently depreciated in western philosophy" [Cox02, p.129].

They can not be seen as indistinguishable nor mere antonyms; but as imaginary realms, with a myriad of configurations and cross-fertilization possibilities, each one with its own poetic, technical, methodological and prac-

[5] Such enforcement also occurs in numerous conceptual dichotomies of Western thought, which is not restricted simply to the pair composition/improvisation: speech/writing, masculine/feminine, soul/body *etc.*

tical strengths and weaknesses[6]. We believe that sensitivity, spontaneity, rationality and abstraction are qualities that may be present in both more written-out and more improvised situations.[7].

3 *Contradição Paradoxa*

Contradição Paradoxa is a work for electric guitar and live electronics that can be seen as an electric guitar and electronic instrument meta-duo . The electronic instrument's materials were exclusively based on electric guitar sounds, on the other hand the electric guitar also attempts to emulate the electronic instrument's sounds through the use of extended techniques. The piece was developed and composed during extended periods of improvisation and research, and has as main characteristics the banishment of clear boundaries between predefined and open structures and an energetic and intense interaction between performers.

Technical Setup

The electronic instrument consists of a set of controllers (keyboard, sliders, knobs and foot-pedals) connected to computer programs written in SuperCollider[8] programming language. It combines real-time sampling and audio processing techniques and also automated stochastic processes. The focus is to create a sensitive, responsive and flexible instrument, trying to bring, in this respect, closer to its fellow acoustic instruments. The electric guitar is connected to a digital effects pedal, played with both traditional and

[6] As pointed out by Richard Barrett: "(...) there are certain musical phenomena that can only be achieved through an intensive process of composition, and others that can only be achieved through improvisation (also intensive) " [Bar02].

[7] It seems also interesting to point out one of the characteristics most often associated with improvisation, the immersion in the present, what is occurring at any given time, has been advocated as part of notated music, as in the work of Karlheinz Stockhausen in the late 1950's - see, for example, his program notes for *Kontakte* [Wor73, p.46-47].

[8] `http://supercollider.sourceforge.net/`

Fig. 1: Equipment setup for a concert

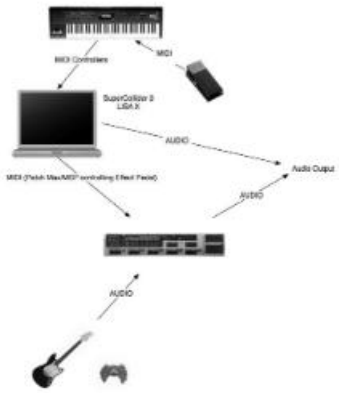

Fig. 2: Technical setup

extended techniques, including the use of two unconventional objects (knife and battery-powered toy that replaces the guitarist in the final section). The pedal effects is, in this same section, controlled by the computer via MIDI protocol, which automates the change of effects presets according to patterns, up to several changes per second.

Creative Process

First short sounds were recorded (mostly between 0.5 and 5.0 seconds), within a comprehensive heterogeneity of typologies, *i.e.* using different effects, attack modes, unconventional objects *etc.* Then few sections of longer sequences were also registered, from a few seconds to approximately 5 minutes, although with unvarying general attributes. From this fundamental material we started the development of the computer programs. To assist this development several rehearsals were required, which slowly contributed to the definition of material and final technical design.

Later on we constructed a time structure based on a set of ratios. This temporal grid served as the basis for defining several component as: the degree of novelty of each section[9]; types of interaction between instruments; presence or absence of fixed material; types of directionality; what character each instrument would adopt, ranging from a more "electronic" to a more "guitarist" one *etc.* The gestural shapes were being worked out and through improvisation later permanently defined. As we understand, even with variations on the local gesture level, the piece is always the same work, even though it manifests itself in different manners, as is nevertheless the case of fully notated works.

[9] For instance, between the first and second sections there is an sharp cut, with a complete change of the material - establishing, therefore, a maximum degree of "newness". Among other sections, there are different types of transitions, including with the inclusion or exclusion of parallel layers of material.

4 Conclusion

The material of the electric guitar — due to its high density of events, variations of tone and attack mode, fragmentation, and fast succession of normal and extended techniques — if fully written in a traditional score would result in a very intricate notation and would lead to a inevitable incomplete realization of its prescriptions (which would be also an equally valid compositional strategy).

Certain idiosyncratic instrumental techniques, if planned to be re-create by other musicians, would demand a tremendous effort to certain rare characteristics that hardly would be part of set of interests affiliated to a regular music performer. Looking in retrospect and in addiction to our inclination to explore in every performance new modes of interaction, our decision not to make use of music notation seemed very adequate.

The electronic material is divided into two groups: 1. electronic instrument (sampler-like keyboard instrument) and 2. automatic processes - that could be, in principle, classified as forms of organization of the material in a more automatic fashion (whether deterministic or stochastic) as opposed to a more "spontaneous" approach. In addition another program uses Brownian motion models to control the presets of the electric guitar effects pedal.

What we call the *electronic instrument* is what contributes a link between physical gesture and the actual resulting sound for the electronics - the nuances of gesture, timing, phrasing, articulation, dynamics, and more immediate control of the parameters

Unlike the automatic processes, physical and cognitive constraints of the electronic instrument play a factor that confers positive and negative aspects. At the same time there is a restriction of material, but also a greater control of nuance that adds a dimension of interpretation absent from a large set of works in electronic media. Each execution becomes a possible version of the work, which depends on the physical, local acoustics and psychological condition of the composers.

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