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Groove and Writing in Radamés Gnattali's *Toccata em Ritmo de Samba n. 2*

Fabiano Araújo Costa

Toccata em Ritmo de Samba n. 2 (1981) was written by the Brazilian composer Radamés Gnattali (1906-1988) to integrate the *Three Concert Studies for Guitar*, published in 1990¹, featuring alongside *Toccata em Ritmo de Samba n. 1* (1950) and *Dansa Brasileira* (1958)². This piece, originally written for solo guitar, was chosen by the Brazilian group “Baobab Trio” (piano, guitar and pandeiro)³ as an object of “groovemic” speculation, to originate the track “Toccata em Ritmo de Samba n. 2”⁴, which was recorded in 2012 by the group. This recorded work brings about an important consideration, in terms of audiotactile phenomenology, in the sense that *groove* has been “incorporated” into the written text, by the technological means of phonographic recording and reproduction. Naturally, this leads us to speculate on the details surrounding the very phenomenon, which, in regard to the audiotactile musics, may be formulated as such: How do the visual (written music-related⁵) operational system and the audiotactile (groove-related) operational system, as categorized by the AMT⁶, co-operate in the process of constituting and mutually recognizing the audiotactile musical aesthetic experience?

In this article we follow this line of inquiry with the help of two notions stemming from the AMT, namely, (1) the “mediological subsumption”; and (2) the “interactional-formative space”. We aim to analyze the case of the “audiotactile re-elaboration”⁷ treatment given to Gnattali’s *Toccata in Ritmo de Samba n. 2* (1981) by the Baobab Trio, as demonstrated in the group’s 2012 recording. The first concept is evoked throughout the Article n. 3 of the present RJMA⁸ issue, where we reflect on the idea that the audiotactile musics idioms are highly dependent on a particular blend of visual with audiotactile, that is, the degree of subsumption of the visual

¹ Radamés Gnattali, *3 Concert Studies for Guitar*, produced by Gennady Zalkowitsc, Heidelberg, Chanterelle 728, 1990.

² “Unlike the 10 Studies, all written as the outcome of one single compositional intention in the year of 1967, the 3 Concert Studies were composed from 1950 until 1981 and were played as isolated concert pieces. It was Gnattali’s wish, however, to give them a ‘unifying gesture’ by publishing all of them together as a small cycle under the title ‘Concert Studies’” (Gennady Zalkowitsc, “Introduction”, in *3 Concert Studies for Guitar*, *op. cit.*, p. iii).

³ Fabiano Araújo (p), Wanderson Lopez (ac-g), Edu Szajnbrum (pandeiro). We would like to point out, within this analytical framework, our status as *insider* and participant in the musical-formative process behind the 2012 recording. Our conduct is grounded on the premise of the “etic transcription” (*cf.* Vincenzo Caporaletti, “An Audiotactile Musicology”, *RJMA – Journal of Jazz and Audiotactile Musics Studies*, No. 1, 2018, pp. 1-17.), which reformulates the etic/emic problematic at an anthropological level, allowing, as we will see, the comparison between the neutral level effectively inscribed into the recording, with the testimonies and the written and audiotactile sources involved.

⁴ Baobab Trio, “Toccata em Ritmo de Samba n° 2”, *Baobab Trio*, Tratore, 2012. *Free streaming* available at <https://goo.gl/8TgQsH>.

⁵ See *Infra* note 15.

⁶ See V. Caporaletti, “An Audiotactile Musicology”, *op. cit.*, pp. 3-11.

⁷ This expression is used in V. Caporaletti, “Milhaud, *Le Beuf sur le toit*, e o Paradigma Audiotátil”, in Manoel A. Corrêa do Lago (Org.), *O Boi no Telhado - Darinus Millhaud e a música brasileira no modernismo francês*, Rio de Janeiro, Instituto Moreira Salles, 2012, pp. 229-28 [p. 5] to indicate one of the processes of reintroduction of audiotactile values in the written work.

⁸ See Fabiano Araújo Costa, “Brazilian Popular Music and the Audiotactile Paradigm: A Brief Introduction”, *RJMA – Journal of Jazz and Audiotactile Musics Studies*, English Notebook, No. 1, 2018, pp. 1-19.

medium by the audiotactile medium, and vice versa⁹. The second concept is our original contribution to the AMT, which concerns the inter-subjective, interactional and systemic dimension of the audiotactile musical experience. On this matter, we approach a phenomenological problem, which emerges when two or more musicians are in a context in which they together seek to provide an artistic form to different cultural, personal and musical materials and realities¹⁰.

The articulation of these concepts (which will be later detailed) offers the analyst the opportunity of envisaging the cooperation between the audiotactile operational system and the visual/ written system in the processes of constitution and mutual recognition of the formative musical experience. This process not only involves sociocultural and historical contexts, but also incorporates the ways in which the aesthetic criteria of audiotactile prevalence emerging in the interactional-formative space subsume the visual logic of musical notation. This approach aims to understand the musical creative processes of inter- and trans-cultural nature, which, in the Brazilian music context, are identified in the perspective of the amalgamations between “erudite” and “popular”, “brazilianness” and “foreign influences”, “modernity” and “tradition”¹¹. Having in mind Gnattali’s original scores, the arrangement sketches, the recording transcription and testimonies of the musicians, the analysis lies on the assumption that this contextual audiotactile poietic situation refers to the process of mediologic subsumption¹², which appears as an artistic criterion in the form of an interactional-formative space.

1. Theoretical framework

1.1. Mediological subsumption

Considering the definition of the Audiotactile Principle (ATP) as a cognitive medium distinct from the visual/written cognitive medium, the AMT views each of them as bearing an operating system and an inherent functional logic that induces its own mode of knowledge and conception of musical reality. From this distinction derives the principle of mediological subsumption, which may be better understood through the idea that “Only one formative medium is responsible for the established cognitive order: it can subsume other media in its own functional logic”¹³.

In fact, the principle of mediological subsumption contemplates possible relations of prevalence/subordination between visibility and audiotactility in the general formative process, in which, in mediological terms, there is always the *forming medium* (understood in this sense as a means which expresses its ability as an experience former) and the subordinate, *formed means*.

A brief parenthesis should be made here to describe the specific terminology that the AMT uses to formalize the relation of subsumption between the audiotactile and the visual, and to designate in each respective formative context (visual or audiotactile), the instances of the

⁹ Considering, however, that the AMT conceives visibility and audiotactility as *ideal types*, and at the logical and theoretical levels it seems appropriate to approach them always as being distinct entities.

¹⁰ See F. Araújo Costa, *Poétiques du “Lieu Interactionnel-Formatif”: sur les conditions de constitution et de reconnaissance mutuelle de l’expérience esthétique musicale audiotactile (post-1969) comme objet artistique*, PhD Thesis [Supervised by Laurent Cugny], Université Paris-Sorbonne, 2016; *Id.*, “Écouter le ‘lieu interactionnel-formatif: émergences de la forme formante dans l’expérience esthétique musicale collective audiotactile” in Béatrice Ramaut-Chevassus, Pierre Fargeton (dir.), *Écoute multiple, écoute des multiples*, Paris, Hermann, col. “Esthétique”, (forthcoming).

¹¹ See F. Araújo Costa, “Brazilian Popular Music and the Audiotactile Paradigm”, *op. cit.*, pp. 11-16.

¹² This concept was presented in V. Caporaletti, *Esperienze d’analisi del jazz*, Lucca, LIM, 2007 p. 7, note 5; expanded and discussed in *Id.*, “Esperienza audiotattile e molteplicità della musica”, *B@belonline/print – Rivista di Filosofia*, n. 8, 2010, pp. 51-63, and applied to a concrete case study analysis in *Id.*, “Milhaud, *Le Bœuf sur le toit*, e o Paradigma Audiotátil”, in Manoel A. Corrêa do Lago (Org.), *O Boi no Telhado - Darius Milhaud e a música brasileira no modernismo francês*, Rio de Janeiro, Instituto Moreira Salles, 2012, pp. 229-288.

¹³V. Caporaletti, Didatic Diapos presented at Musicologia Generale A.A. 2014-2015, Università di Macerata.

formative process (forming medium and formed means). Indeed, for the characterization of the *forming medium*, the AMT properly addresses the “formative capacity” of each medium (musical notation / music theory, and the psychosomatic system), here understood as a set of cognitive aspects related to their respective operational systems and their specific internal logic. Thus, the cognitive medium that forms the visual experience will be designated as the “visual matrix”, since it combines the cognitive aspects induced by the epistemological principles of segmentation, homogenization, uniform repeatability, etc. The cognitive medium that forms the audiotactile experience, the ATP, gathers, by analogy, the way of interpreting and “acting” on reality from an organic, intuitive logic, based on corporeality, or more precisely, on “corporeal rationality”¹⁴.

To go further into the mediological subsumption issue, two paradigmatic cases should be dealt with, namely (1) the one in which the audiotactile forming medium (the ATP) “audiotactilyzes”, i.e., reduces to its own functional logic the musical writing of Western tradition¹⁵ (the formed means); and (2) the one in which, conversely, the visual formative medium (the “visual matrix”) reduces the rationality of the body (the formed means) to its own functionality.

	Visual Formative Context	Audiotactile Formative Context
Experience Forming (Prevailing) Medium	Visual Matrix	ATP
Subordinate Means	Corporeality	Music Notation/ Theory

Table 1. Paradigmatic models of mediological subsumption in both contexts

It is worth noting that the principle of mediological subsumption tackles the problem of the hybrid formative dimension of the audiotactile musics context, by considering that “the type of culturally preeminent logic subsumes other modalities to its own representative logic”¹⁶. An application of this principle in musical analysis would consist of marking audiotactile, oral and visual sources in a given work. Caporaletti distinguishes audiotactile sources from the other two types mentioned, since orality and writing belong to the “communication criteria”, while the audiotactile media (PAT and NAE)¹⁷ should be seen as “mediological interfaces”¹⁸. Thus, when the ATP + NAE formula acts as a medium that forms the experience, it “may subsume, in the complexity of the audiotactile formativity’s specificities, under certain conditions, information

¹⁴ “Corporeal rationality” suggests a cognitive and formative capacity whose reference to the cognitive sciences lies in the paradigm of “embodied cognition”, according to which human cognition is considered as strictly linked to action and to interaction within the context in which the agents act. Cf. F. Araújo Costa, *Poétiques du “Lieu Interactionnel-Formatif”*, *op. cit.*, pp. 132-135.

¹⁵ As it is well-known, the writing of music is not limited to the Western notational system, and, it is worth stressing that musical writings in different cultures have different rates of visibility / audiotactility (cf. V. Caporaletti, “Razionalità dell’improvvisazione | Improvvisazione della razionalità”, *Itinera – Rivista di Filosofia e di Teoria delle Arti e della Letteratura*, n° 10, 2015, pp. 189-216 [p. 200]). We would also like to point out that in the context of this article we refer to modern Western musical writing in its dual specificity as a semiographic notational technology inextricably linked to the Music Theory of which it is a form of expression.

¹⁶ V. Caporaletti, “Milhaud, *Le Boeuf sur le toit*”, *op. cit.*, p. 248.

¹⁷ The question of the ATP + NAE combination was addressed by F. Araújo Costa, in “Brazilian Popular Music and the Audiotactile Paradigm”, *op. cit.*, pp. 1-3.

¹⁸ Cf. V. Caporaletti, “Milhaud, *Le Boeuf sur le toit*”, *op. cit.*, pp. 232, 247, 249.

communicated through notation”¹⁹. This so happens because, in view of the awareness of the NAE (which grants autographical textual quality to the musical values activated by the ATP), the emerging artistic criterion displays a cognitive-expressive audiotactile motivation (in this case, connected with the constitution of a *groove* or groovemic energy) capable of evoking the audiotactile sources latent in the written work. However, this operation is distinct from the music score²⁰ interpretation, given that the recorded groove becomes, potentially, a new audiotactile source.

Returning to the subject of our analysis, we may now consider two categories of musical textuality related to the *Toccata em Ritmo de Samba n. 2*. On the one hand, (1) *visual textuality*, where the medium refers to the reification of Gnattali’s music as music score, through the semiographic notational medium that attaches abstract values to the music, values such as note, pitch, duration, and a whole series of syntactic and teleological principles, which presupposes an ontological picture of the musical work, whereby the composer is the creator and the instrumentalist, the executer of the work; and on the other hand, (2) *audiotactile textuality*, which refers to the reification of the musical event in the form of phonofixation of elements such as groove, drive, swing, propulsive and de-pulsive energy, and participatory discrepancies²¹, which are not codable by the notational semiographic medium. Table 2 illustrates the distinction between the two systems addressed here.

Music Score	Music Recording
Visual Textuality	Audiotactile Textuality
<i>Toccata em Ritmo de Samba n. 2</i> <i>para violão solo</i>	« <i>Toccata em Ritmo de Samba n. 2</i> »
Music Score for Solo Acoustic Guitar (4 pages)	<i>Baobab trio</i> album track
Date and Place of Composition: 1981, Rio de Janeiro/RJ, Brazil	Date and Place of Recording: 2012, Vitória/ES, Brazil
Author: Radamés Gnattali (1906-1988)	Authors: Fabiano Araújo (p)/Wanderson Lopez (ac-g)/Edu Szajnbrum (pand)
Duration: 3’06”	Duration: 5’33”
Editor: Chanterelle Verlag, 1990	Editor: Tratore, 2012

Table 2. Two Textualities

After establishing this mediological distinction, we can now narrow the question posed at the beginning of this problematization: how do the audiotactile and the visual/written operational systems co-operate in the formative process of the “*Toccata em Ritmo de Samba, n. 2*” (2012) as an audiotactile text?

¹⁹ “*subsumir no interior das próprias peculiaridades formativas, em certas condições, registros transmitidos através da notação, portanto não orais*” (*Ibidem*).

²⁰ It is worth noting that at the level of perception and management of temporal structures in the audiotactile experience, the subsumption played by the audiotactile operational system on the visual system is translated by the argument of the subsumption played by the *schème d’ordre* system on the *schème de relation d’ordre* system (these two notions are formulated by Michel Imberty) in the AMT, where the *schème de relation d’ordre* corresponds to a cognition oriented by the music theory parametric criteria of visuality; while the *schème d’ordre* corresponds to a cognition adjusted by the influence of the energetic / complex / dynamic audiotactile criteria of *groove* (cf. F. Araújo Costa, *Poétiques du “Lieu Interactionel-Formatif”*, *op. cit.*, pp. 144-145).

²¹ Cf. Charles Keil, “Participatory Discrepancies and the Power of Music”, *Cultural Anthropology*, No. 3, 1987, pp. 275-284.

1.2. Emergence(s) of the “Interactional-Formative Space”

An important aspect of the formative-artistic process of this recording is that it consists of a collective activity, involving three musicians with their instruments (piano, guitar and pandeiro), working on a piece designed for solo guitar. The interactions that led to this specific audiotactile text invite us to consider that the phenomenon of mediological subsumption results from a certain consensual rule emerging from a particular contextual situation of shared formative-artistic criteria, which we conceptualize as *interactional-formative space* (IFS).

Some aspects of the IFS:

- 1) The type of aesthetic experience, here understood as IFS, while *artistic formativity*, consists of a dynamic process of production, invention and judgment of an *artistic shared rule*, performed in real time;
- 2) The IFS is a *state* of a collective, improvised and extemporaneous, real-time musical performance. It relates particularly to musics of audiotactile formativity language;
- 3) This performance state is described as a phenomenon of mutual *recognition* of an artistic criterion;
- 4) The IFS is a contextual situation coveted by its own poetics, which demands the *interpretation* of the “interpersonal forming form²²”;
- 5) The IFS is a contextual situation that encourages and leads to a mutual *interpretation* of the “interpersonal forming form”;
- 6) The IFS is therefore a situation which, once established and acknowledged by the performers, is driven by an underlying activity of audiotactile and interpersonal artistic formativity, which conducts the course of the musical work towards its exemplarity; but this orientation is inevitably associated with the “constrictive conditions” of the plurality of *spuntos*²³, which makes this space an undetermined but determining place, a liberating dimension, one which produces its own determinations;
- 7) Finally, the IFS may be seen as a *situation* constituted as an inter-subjective phenomenon due to its musical interactions.

It should be stressed that at this stage the musicians attempt to establish a situation that favors the emergence of the “interaction-formative space”, in real time, in the course of the performance²⁴. We may follow Alessandro Bertinetto²⁵ as he establishes a relation between interaction and temporality through the categories of “vertical interaction” and “horizontal interaction”. According to him, *vertical interaction* occurs at a diachronic level, that is, when performers interact with historical traditions of musical practice, along with whatever the performers are creating at the moment, whereas *horizontal interaction* may be defined as interpersonal experience occurring simultaneously, and in real time.

At this point, it is important to distinguish the prefixed, verbal discourse, and the situation emerging in the course of the performance. The latter represents what we call “interactional-formative space”. This emerging situation, understood as “Interactional Formative Space”, may

²² The notion of *forming form* is central to our discourse. This notion was discussed in the first article of this RJMA issue, and it can be further explored based on other references in note 8. Given the scope of this article, we will be satisfied to embrace the concept that the Subject makes of themselves a *forming form*, when they recognize themselves as an artist while making, inventing, judging and following the work while it is being made. The *forming interpersonal form* would be the emergence of a consensual rule.

²³ Cf. F. Araújo Costa, “Pluralité de spuntos et formativité audiotactile: un regard sur l'improvisation collective”, *Itinera – Rivista di filosofia e teoria dell'arte*, n° 10, 2015, pp. 216-233, DOI: <https://doi.org/10.13130/2039-9251/6661>

²⁴ Cf. later F. Araújo Costa, “Écouter le ‘lieu interactionnel-formatif’”, *op. cit.*

²⁵ Cf. Alessandro Bertinetto, *Eseguire l'inatteso. Ontologia della musica e improvvisazione*, Roma, Il glifo, ebook, 2016, § 4.0, position 4188.

also be perceived as an “interpersonal-forming form”. Thus, we have come to the distinction of two instances of the dichotomy between the *personal initiative* of each musician and the *contextual situation*: on the one hand, the emergent situation related to creative production of human initiative, which characterizes the IFS presented as an “interpersonal forming form”; and, on the other hand, the determining position that reduces the initiative to the pure and simple historical product of the situation, the latter understood as poetical program²⁶.

Hence, we propose a preliminary examination of the above-mentioned Gnattali’s piece. For such, we will carry out a brief analysis of the visual aesthetic parameters, i.e., the formal aspects of the prescriptive score. We will also look at some relevant contextual aspects, such as the rapport between Gnattali and audiotactile musics, musicians and other sources. Next, we will examine the re-design of this work as recorded by the Baobab trio. As we shall see, this interpretation produced not only a groovemic form – i.e., a form ruled by audiotactile aesthetic principles – with all the freedom and constraints which characterize this model of formativity, but also the unique traits of a groovemic and interactional *Brazilian music* type of artistry (more precisely Samba, Choro and their variations).

2. *Toccata em Ritmo de Samba n. 2* (1981)

2.1. Gnattali’s Writing and his Audiotactile References

At a formal level, the score of the original *Toccata* displays a ternary form **A-B-A** with a Coda (Table 3). Section **A** is distinctly marked by dissonant chords, traits of African rhythmic, and irregular phrases, while **B** is characterized by a contrasting *Samba-Canção* form, tending to *rubato*. In section A we may identify four sub-sections: **Aa**, **Ab**, **Ac** and **Ad** (Tables 3 and 4).

Concerning the style in writing for Brazilian concert guitar after the 1950s, experts such as Fabio Zanon see Gnattali as one of the most prolific and unique composers, his music featuring intricate and sharp ostinates and a smart alternation between rhythmic writing and melodic virtuosity. In addition, in both *Toccata n. 1* and *Toccata n. 2* Gnattali’s writing suggests a much more audacious, agile and sinuous Samba inflection than that of the 1940s Samba²⁷. In Gnattali’s *Toccata n. 2*, attention is drawn particularly to the reference to African rhythmic, evoked through the Samba, mainly in the sub-section **Aa** (Ex. 1), where the composer writes chords that resound like the Afro-Brazilian *candomblé* drums.

²⁶ Cf. F. Araújo Costa, *Poétiques du “Lieu interactionnel-formatif”*, *op. cit.*, pp. 196-197.

²⁷ Cf. Fabio Zanon, “Radamés Gnattali III”, *Programa: O Violão Brasileiro. Nossos Compositores*, Rádio Cultura FM de São Paulo, Maio 2006. Available online: <https://goo.gl/mfh2tz>. Accessed on 11/06/2016. For a more detailed examination of the works written for ac. guitar by Gnattali, and specifically the Three Concert Studies, cf. Valdemar A. Silva, *Três Estudos de Concerto para Violão de Radamés Gnattali: peculiaridades estilísticas e suas implicações com processos de circularidade cultural*, Master’s Thesis in Music [Supervised by Magda de Miranda Clímaco], Universidade Federal de Goiás (UFG), 2014; Ricieri C. Zorzal, *Dez Estudos para Violão de Radamés Gnattali: estilos musicais e propostas técnico-interpretativas*, Master’s Thesis in Music [Supervised by Mário Ulloa], Universidade Federal da Bahia (UFBA), 2005; e Bartolomeu Wiese Filho, *Radamés Gnattali e sua obra para violão*, Master’s Thesis in Music [Supervised by Turíbio Santos], Universidade Federal do Rio de Janeiro (UFRJ), 1995.

8

para Waltel Blanco

Toccata em ritmo de samba
N°2

RADAMÉS GNATTALI
(Rio de Janeiro, 1981)

$\text{♩} = 108$ $\text{♩} = 3$

Aa

Aa1

Aa2

Ab

Ac

Ad

sulla ponte

percussion

percussion

Example 1. Excerpt from the score of *Toccata em Ritmo de Samba n. 2*²⁸ – Section A (Aa, Ab, Ac, Ad)

²⁸ This score corresponds to the *3 Concert Studies* op. cit., pp. 8-9. It is worth noting that in bars 2 and 4, the second eighth note seems to be a mistake, in place of a sixteenth note, as is the case in the measures 8, 10 and 47.

Original Form - Toccata em Ritmo de Samba n. 2												
Section	A				B			A				Coda
Number of bars	49				29							6
Progressive Number	1-50				51-80			81				81-87
Subsection	Aa	Ab	Ac	Ad	Ba	Bb	Bc	Aa	Ab	Ac	Ad	Aa/2
Number of bars	11	5	10	23	10	10	9	11	5	10	20	7
Progressive Number	1-11	12-16	17-27	28-50	51-60	61-71	72-80	81-92	93-97	98-108	109-128	129-136
Metric	2/4			2/4 //3/8//	4/8		4/8 //2/4//	2/4			2/4 //3/8//	2/4

Table 3. “Toccata em Ritmo de Samba n. 2” original form chart”

2.2. Toccata em Ritmo de Samba n. 2: Problem Reformulation according to the Audiotactile Model

In order to reformulate the *Toccata em ritmo de samba n. 2*, from an audiotactile perspective, our first step was to search for the audiotactile sources and references which may have inspired Gnattali to evoke the “Samba rhythm” in its deep dimension, that is, factors linked to *swing* and *groove*²⁹. Our argument is that Gnattali’s compositional process operated, primarily, in *visual* logic, although he already had an intuition of the *audiotactile values* mentioned above.

Our contention is that Gnattali was familiar with the audiotactile values resulting from the way Choro and Rio Urban Samba were played by musicians. Some of these musicians were known as *pianeiros*³⁰, others included guitarists such as Aníbal Augusto Sardinha, also known as “Garoto” (1915-1955), and Raphael Rabello (1962-1995). In the early 1920s, Gnattali met the eminent pianist and *pianeiro* Ernesto Nazareth (1863-1934), who played at Cine Odeon. The musicologist Henrique Cazes³¹ points that Gnattali, as a young man, had known Nazareth’s music from his scores, before hearing him play. In the early 1930s, to secure his means of survival, Gnattali had to seek work as a *pianeiro*, playing with dance orchestras. At that same time he met the Carioca *pianeiros* who used to hang out and play at the Casa Vieira Machado headquarters. While in the case of Nazareth’s music, Gnattali had the scores as a reference, in the case of the *pianeiros* of the Ouvidor street, it was the other way around: Gnattali was requested by the musicians to transcribe what they played, so it could be marketed as commercial sheet music. We will later discuss the meaning of the “pianeiros” as a reference to Gnattali, in the analysis of subsection **Ab**.

Finally, it is worth noting that in many cases Gnattali wrote music with a specific interpreter in mind, mentioning them by their names in the pieces subtitles. These dedications often meant an acknowledgment, as is the case with the *Ten Studies for Guitar* (1967)³² cycle, while

²⁹ Cf. V. Caporaletti, *Swing e Groove. Sui fondamenti estetici delle musiche audiotactile*, Lucca, LIM, 2014; F. Araújo Costa, *Poétiques du “Lieu interactionnel-formatif”*, *op. cit.*, pp. 153-160.

³⁰ In general terms, the term *pianeiro* marks, in Brazil, a sociocultural distinction in opposition to the concept of “pianist”. In this sense, one studies piano to become a “pianist”, who plays in concert halls and in society halls. However, because of the distance that marks the sociocultural and economic profile of the society of Rio de Janeiro at that time, many musicians did not find work opportunities other than in clubs with dance orchestras, movie theaters, in piano stores, etc. These musicians were the *pianeiros*. Among the well-known names of *pianeiros* and *pianeiras* of the early twentieth century, besides the very famous Ernesto Nazareth, we find names like José Barbosa da Silva “Sinhô” (1888-1930), Chiquinha Gonzaga (1847-1935), Aurélio Cavalcanti (1874-1915), J. F. Fonseca Costa “Costinha” (circa 1860-circa 1940), Carlos T. de Carvalho “Corujinha” (circa 1878-circa 1922), and Luiz Sampaio “Careca” (1886-1953). For in-depth discussion cf. Robervaldo Linhares Rosa, *Como é bom poder tocar um instrumento. Pianeiros na cena urbana brasileira*, Goiânia, Cànone Editorial, 2013.

³¹ Henrique Cazes, *Choro. Do Quintal ao Municipal*. São Paulo, Editora 34, 1998, p. 37.

³² Cf. Ricieri C. Zorzal, *Dez Estudos para Violão de Radamés Gnattali*, *op. cit.*, pp. 21-22.

in some other cases they represented a straight reference to the interpreter's style and technique, which were often a result of direct collaboration, as is the case of *Concert No. 2 for Guitar and Orchestra* (1951), dedicated to Garoto³³. The pieces from the *Three Concert Studies for Guitar* cycle 1) *Dansa Brasileira* was written in 1958 and dedicated to Laurindo de Almeida (1917-1995), and 2) *Toccata em Ritmo de Samba n. 2* was written in 1981 and dedicated to Waltel Branco (1929-). The earliest of them, the *Toccata em Ritmo de Samba n. 1*, written in 1950, was the first piece Gnattali wrote for concert guitar, and does not present a specific addressee. In any way, our hypothesis is that in that particular case the author had Garoto in mind, once that one year later it would be Garoto himself, the interpreter explicitly aimed at in *Concerto n. 2*. In this sense, it is quite remarkable that Gnattali wrote for Brazilian guitar players who, like himself, had a connection with the audiotactile aesthetic culture and values, and experienced and even used the word "Samba" in his titles, such as in *Toccata em Ritmo de Samba n. 1* (1951), at a time when such musical contribution was unconceivable at concert halls in Rio de Janeiro³⁴.

By the time he was writing his *Toccata n. 2* (which was even more loaded with African rhythmic), Gnattali was close to the young virtuoso guitarist Raphael Rabello, who considered him as his 'musical father'³⁵. The two artists recorded an album in duo of piano and guitar, using compositions by "Garoto"³⁶. In this context, Rabello, who played a 7-string guitar, built a style that was deeply influenced by the fine language of traditional Choro, which was largely developed from his experience as a duo with Gnattali. We may then say that Rabello also contributed to Gnattali's compositions, as his interpretations displayed a strong tendency to subsume the composer's writing with his own audiotactile musician criteria. This phenomenon is evident in two recorded versions of the *Toccata n. 2*, in which the first one (Visom, 1987)³⁷ displays a musical object oriented mainly by the visual matrix, whereas in the second recording (Live Music Series TB0C6, 1995)³⁸ the subsumption of the visual criterion by the audiotactile principle is quite evident.

That said, it is worth stressing that, despite the evidence of pervasive "visual/written notation" formative logic in Gnattali's works, we cannot ignore his audiotactile references. We shall now see how these audiotactile traits are evoked in the Baobab trio's interpretation of the *Toccata em Ritmo de Samba n. 2*.

³³ In a transcribed interview given to B. Wiese Filho (*Id., Radamés Gnattali e sua obra para violão, op. cit.*, pp. 96-100), the guitarist Luiz Otávio Braga claims that Gnattali's guitar pieces "are forged in the Brazilian urban matrix, where the composer and guitarist Aníbal Augusto Sardinha (Garoto) stands in a place of notoriety", and that Garoto que este constantly served as a source for Gnattali. (*Ibid.* pp. 96-97). Braga also claims that technical, gestural and affective elements belonging to the musicians, personally, to whom Gnattali dedicated his works, were none less than important aspects to his approach of the work (*Ibid.*, p. 97).

³⁴ Cf. Fabio Zanon, "Radamés Gnattali III", *Programa: O Violão Brasileiro. Nossos Compositores, op. cit.*

³⁵ Cf. Fernanda Canaud's interview with Raphael Rabello, transcribed in Fernanda Chaves Canaud, *Interpretação da Obra Pianística de Radamés Gnattali através do Conhecimento da Música Popular Urbana Brasileira*. Master's Thesis in Music [Supervised by Mirian Daulesberg], Universidade Federal do Rio de Janeiro (UFRJ), 1991; *Id. O Virtuósismo e o "swing" revelados na revisão fonográfica de Flor da noite e Modinha & baião de Radamés Gnattali*. PhD Thesis [Supervised by Silvio Mehry], Universidade Federal do Estado do Rio de Janeiro (UNIRIO), 2013.

³⁶ Radamés Gnattali and Raphael Rabello, *Tributo à Garoto*, Funarte, PA 82001, 1982. Available online at: <https://goo.gl/6srA1W>.

³⁷ "Toccata em Ritmo de samba n° 2", Raphael Rabello, *Rafael Rabello interpreta Radamés Gnattali [sic]*, Visom, LPVO-006, 1987. Available online at: <https://goo.gl/ujZH4A>.

³⁸ Raphael Rabello, "Toccata em Ritmo de Samba n° 2", *Armandinho e Raphael Rabello*, Brasil Musical, Série Música Viva, TB0C6, Rio de Janeiro, 1995. Available online at: <https://goo.gl/QG756h>.

3. “Toccata em Ritmo de Samba n. 2” (2012)

3.1. The “Groovemic Form” in the Trio’s 2012 Recording

The case of Raphael Rabello – which demonstrates the retrieval of the *Toccata*’s audiotactile values permeating his own original style – leads us to conclude that Gnattali has taken a double path: first, to semiographically encode the creative idea of audiotactile musicians, and second, to offer the opportunity to fully operate an *audiotactile mediologic subsumption* in pieces following this path.

However, unlike Rabello’s recording, the trio’s version presents a few peculiarities, among which is the fact that they are in a guitar-pandeiro-piano format, a somewhat privileged instrumentation for Samba (even its traditional style), but which does not necessarily represent an easy solution for a version of this *Toccata*, originally intended for solo guitar.

Given that, if in a visual-formative context the route from one instrumental setting to another requires strategies such as “re-orchestration” – whereby a piece is directed to a new instrumental *medium* using the exclusive means of music notation³⁹ –, in the case of the Baobab trio, the re-encoding is done mainly by procedures identified under the AMT’ view as “audiotactile re-elaboration”. In this case, our analytical approach assumes that in order to re-elaborate Gnattali’s piece, the group had to find creative solutions both at formal and technical levels, grounded on extemporization on implicit and explicit models (Samba, Choro, Candomblé, etc.) found in the score.

At the same time, it is important to look at the problem surrounding the process of establishment of the IFS, where there is mutual constitution and acknowledgement of the work’s artistic criteria, based on groove, swing, production of *propulsive* and *de-pulsive energy*, and *participatory discrepancies*.

As far as the audiotactile phenomenology is concerned, two levels of ATP activity should be considered: (1) the macro-groovemic primary level, which allows an analysis of the musical phenomenon at a surface level, retrievable by means of musical notation, and associated with the domains of improvisation and extemporization; and (2) the secondary, micro-groovemic level, where psychokinetic instances are elaborated at the micro-rhythmic level of *swing* and *groove*.

In the present analysis, we will deal with the macro-groovemic aspect of the trio’s 2012 recording, with the help of a descriptive transcription of their re-elaboration work, fixated by the phonographic medium. We therefore highlight three axes of the macro-groovemic elaboration: (1) the parts remaining most faithful to the original written score; (2) the extemporization zones; and (3) the improvisation sections.

The distinction between improvisation and extemporization is indeed essential for a better understanding of the operability of the audiotactile musics in general, and in this case, the ones found in the Brazilian musical culture, such as the Choro and the Samba. In short, within the framework of the audiotactile musics, improvisation is considered as a phenomenon characterized by its logocentric function, by its material-transforming nature, and by its power of affirmation of subjectivity, with emphasis on the formal accomplishment of the elaboration of the musical material. Extemporization, in turn, from a structural point of view, consists of the sound instantiation of a “figural model” (*modèle figuré*) or of a “generating model” (*modèle générateur*)⁴⁰, which may be realized by the same principle used in the modification of the groove, as typically found in schemes of interpretation and accompaniment of soloists in Jazz, Samba, Choro, etc.⁴¹.

³⁹ V. Caporaletti, “Milhaud, *Le Bœuf sur le toit*, e o Paradigma Audiotátil”, *op. cit.*, p. 272.

⁴⁰ See Bernard Lortat-Jacob, “Improvisation: le modèle et ses réalisations” in *Id.* (dir.), *L’improvisation dans les musiques de tradition orale*, Paris, Selaf, Poche, 1987, pp. 45-59; V. Caporaletti, *I processi improvvisativi nella musica. Un approccio globale*, Lucca, LIM, 2005, pp. 48-50; and F. Araújo Costa, *Poétiques du “Lieu Interactionnel-Formatif”*, *op. cit.*, pp. 164-68.

⁴¹ Cf. V. Caporaletti, *I processi improvvisativi nella musica*, *op. cit.*

3.2. Theme Exposition

Subsection Aa

How is the formal structure of Gnattali's composition subsumed by groovemic structures, in the Baobab trio version? In the 2012 trio's recording we may observe, at a surface level, that the subsection **Aa** is composed of the thematic units **GAa**, **Aa1** and **Aa2**. The **GAa** unit seems to be of great interest due to its high potential for groovemic articulation, which was in fact produced and explored by the trio, based on Gnattali's **Aa** section. This element was understood by the group as a "figural model", from a static point of view, and as a "generating model", from a dynamic point of view. The group used the ostinato from the first three 2/4 bars of the original version (an allusion to the Afro-Brazilian percussion *atabaques* played in the *candomblé*) as building material for the unit **GAa**: a macro-groovemic unit artistically acknowledged by the musicians as an "Interactional-Formative Space". The **Aa** elements of the original score (*cf.* Ex. 1) were rearranged in **GAa** (Ex. 2) as a sequence, at structural stress level of the pulse, comprising 3 eighths + 4 eighths + 3 eighth notes, followed by the opening of the **Aa1** unit (*cf.* Ex. 1), which completes the measure with 5 eighth notes (*cf.* Ex. 2).

In order to realize the groove as a formal unit, the group decided then to repeat this **GAa** unit several times before moving on to the next **Aa1** unit in the score. To do this, they created a typical descending chromatic figure of the Choro 7-string guitar, which was performed with a perfect fourth interval split between the piano and the guitar. As for the macro-groovemic surface, we may note that the piano and the guitar maintain the sequence 3 + 4 + 4 + 5 eighths in the 2/4 measure, while the pandeiro part results from a 3 + 5 + 3 + 5 eighth notes structure, always at surface level. According to the percussionist of the group, Edu Szajnbrum, his intention was "to develop rhythmic conduction, trying to value the accents and the dynamics of the melody". Szajnbrum also informed us of an important technical trait concerning his instrument⁴²

*A função de distribuição dos acentos alternados, isto é, lá onde há a necessidade de colocar os acentos que às vezes são tocados com o polegar e depois com a ponta dos dedos, esta função foi muito demandada na primeira parte do tema, onde nós fizemos um ostinato com a primeira frase do tema*⁴².

At least two points should be stressed in this approach. Firstly, the purpose of the group in this re-modelling process was to add *continuous pulse*: a constitutive factor, par excellence, of the audiotactile rhythm phenomenology. At a musical level, it is precisely the continuous pulse that entitles the reformulation of the subdivisions in the metric figure, where the audiotactile Samba/Choro operative model would be formed in view of the *ostinato* requested by Gnattali's written score. It should be noted that the **GAa's** groove idiomatic exercise causes, in a systemic manner, an enlargement of the measure, while maintaining the beginning of the groove stream down the first beat of the measure.

The second observation concerns the use of the "inversion technique" performed by the pandeiro, as an element of audiotactile diversification of the traditional Samba/Choro norm, in dialogue with its African roots. This technique also allows the execution of the accents requested by Gnattali's score (promoting a true sense of a pursuit of the audiotactile sources of the *Toccata*).

⁴² "The thing about placing the alternating accents, I mean, where there is a need to place the accents that are sometimes played with the thumb and then with the fingertips, this function was very demanded in the first part of the theme, where we played an ostinato with the first sentence of the theme" (Edu Szajnbrum, Interview, January 2015).

Example 2. GAa macro-groovemic unit, constituted and mutually recognized by the trio as an IFS (Transcription by F. Araújo Costa, transposed guitar)⁴³

Regarding this last observation, it should be mentioned that the carioca pandeiro player Edu Szajnbrum⁴⁴ was influenced by Marcos Suzano's style. Suzano developed a technique called "amplified pandeiro", whose main characteristic is an original sonority resulting from his finger-inversion technique. Marcos Suzano's style was the subject of the doctoral thesis of Brian Potts, defended in 2012 at the University of Miami, United States. Based on interviews with Suzano, Potts offers us a precious interpretation of the link between his "inversion technique" and the rhythms of *candomblé*:

This bottom-heavy sound, enhanced by the low-pitched tuning of his pandeiro, showed similarities to the *candomblé* drum patterns he had studied with Carlos Negreiros, which he endeavored to recreate on the pandeiro. Because it is not a traditional *candomblé* instrument, Suzano's effort to incorporate the pandeiro in this way was unique. In time, he found that the use of traditional pandeiro technique presented difficulties when dealing with the driving syncopations of the rum, the lowest drum of *candomblé*. [...] Suzano felt that he needed "a different position", and attempted to lead *candomblé* patterns with his fingertips. By doing so, Suzano could play the syncopations of the *rum* with his thumb, which allowed him to propel these rhythms in a forceful manner. This inversion of technique granted him the ability to recreate these patterns on the pandeiro in a stylistically accurate fashion. As he viewed *candomblé* as the heart of all Afro-Brazilian rhythms, he began to use his inverted technique across all Brazilian genres, including *Samba*, *Choro*, *Baião*, and *Maracatu*, emphasizing the low-frequency syncopations in each of these styles⁴⁵.

After describing these audiotactile aspects, we may now apply them to the analysis of the extract transcribed in Ex. 3, which shows how they articulate the co-presence implicit in the three metric levels that characterize the phenomenon of *metric dissonance*⁴⁶ in Szajnbrum's way of playing

⁴³ Ex. 2 audiovisual media available online at: <https://www.nakala.fr/nakala/data/11280/1b3e7eb0>. (Cf. also Ex. 2a available online at: <https://www.nakala.fr/nakala/data/11280/d44a94cb>).

⁴⁴ Cf. Szajnbrum's participation in Rio's musical scenario between 1980 and 1990 includes: *Aquarela Carioca* (<https://goo.gl/NKtW7p>), and *Orquestra de Música Brasileira* conducted by Roberto Gnattali (<https://goo.gl/VMr4Qj>).

⁴⁵ Brian J. Potts, "Marcos Suzano and the Amplified Pandeiro: Techniques for Non-Traditional Performance", *Open Access Dissertations*, Paper 788, 2012, pp. 33-34.

⁴⁶ Cf. V. Caporaletti, "La fenomenologia del ritmo nella musica audiotattile: *il tempo doppio*", *Ring Shout-Rivista di Studi Musicali Afroamericani*, SidMA, vol. 1, 2002, pp. 77-112; Maury Yeston, *The Stratification of Musical Rhythm*, New Haven,

his percussion. This example uses a graphic notation model (Fig. 1), which shows the sounds of the pandeiro through a combination of attack gestures, fingering, membrane behavior and micro-modulations of pitch and sound timbre. It is notable, in the analysis of Ex. 3, the extemporization on three different pitch levels of the pandeiro membrane, indicated by symbols pointing to low, medium, and high. We emphasize that this extemporaneous play based on micro-variations of pitch levels is in fact the place of the systemic effect of the deep-level groovemic constitution of the IFS. After identifying the **GAa** groove as an IFS, the group will occupy this musical space for the equivalent to 16 bars at 100 bpm, after which a section more faithful to the score will follow, with unison patterns until the subsection **Ab**.

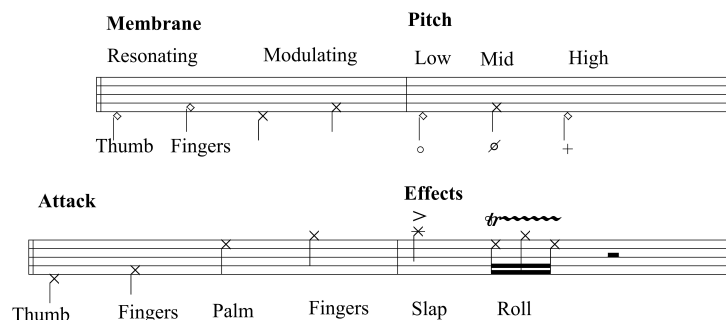


Figure 1. Semiographic encoding of the pandeiro performance transcription

Example 3. Pandeiro line in **GAa**: metric dissonances, extemporization on pitch micro-modulations, and with the use of rolls at a macro level. (Transcription by F. Araújo Costa)⁴⁷

Yale University Press, 1976; Harald Krebs "Some Extension of the Concepts of Metrical Consonance and Dissonance", *Journal of Music Theory*, n. 31, 1987, pp. 99-120; Harald Krebs, *Fantasy Pieces: Metrical Dissonance in the Music of Robert Schumann*, New York, Oxford University Press, 1999; Christopher Hasty, *Rhythm as Meter*, New York & Oxford, Oxford University Press, 1997.

⁴⁷ Ex. 3 audiovisual media available online at: <https://www.nakala.fr/nakala/data/11280/b9a0e1ea>.

Subsection Ab

In the subsection **Ab** (Ex. 4), which, thanks to Gnattali's original melodic contour, contrasts with the percussive character of the **GAa**, we observe that at the beginning, the pandeiro extemporizes on the traditional Samba-Choro model in 2/4, while the figures played by the guitar and piano are arranged in 3/4.

Then, we notice that while expressing a style of interaction through *perceptive feedback*⁴⁸, the pandeiro also organizes the Samba groove in 3/4, unexpectedly participating in the construction of the metric dissonance between the piano and the guitar – which will produce, in turn, a kind of *metric feedback*⁴⁹.

In this subsection, the guitar follows the original composition more faithfully. The piano intervention may however be perceived as an extemporaneous development of audiotactile sources of the original piece, which resulted in a *pianeiro*-like sonority. This specific extemporization standard stems from the score archetype and from typical models of the Choro language; e.g., the ascending chromatic counterpoint at the beginning of the second measure.

Example 4. Ab sub-section indicating the *metric dissonance* between the written guitar phrases and the lines developed by the pianist and the pandeiro player. The metrical feedback effect between the pandeiro and the guitar/piano duo is indicated through the pink area. (Transcription by F. Araújo Costa, transposed guitar)⁵⁰

In fact, in this case, the “pianeiristic” audiotactile source lies in Gnattali's pieces for piano, particularly the *Brasiliana n. 7* (for tenor saxophone and piano), whose piano part, in the III

⁴⁸ V. Caporaletti, “La fenomenologia del ritmo nella musica audiotattile: *il tempo doppio*”, *op. cit.*, p. 79.

⁴⁹ Cf. *Ibidem*.

⁵⁰ Ex. 4 audiovisual media available online at: <https://www.nakala.fr/nakala/data/11280/84df72a8>.

movement/Choro (see extract in Fig. 2), may be perceived as an inheritance of Gnattali's experience as a *pianeiro*, and particularly as a *transcriber* for the *pianeiros* (as noted in § 2.2).

The image shows a handwritten musical score on aged paper. It consists of two main sections, A and B, each with multiple staves. Section A is marked with a circled 'A' and a measure number '18'. It features a tenor saxophone line with a melodic phrase and a piano accompaniment with complex rhythmic patterns. Section B is marked with a circled 'B' and a measure number '30'. It continues the tenor saxophone and piano parts with more intricate rhythmic and melodic development. The score includes various musical notations such as notes, rests, accidentals, and dynamic markings like 'mf' and 'p'.

Figure 2. Extract of the *Brasiliana* n. 7 score, for tenor saxophone and piano, III movement / Choro, which served as Gnattali's "*pianeiro*" sound reference, and for the piano extemporizations

Subsection Ac

Although being more close to the written score, the **Ac** section in the Baobab trio version (Ex. 5) evokes the groovemic form of the *Breque* – a typical element of *Partido Alto Samba* and Choro – which will support the idiomatic preparation for the subsequent subsection, whose more traditional nature is projected from the phrase in anacrusis written by Gnattali.

The image shows a musical score for three instruments: guitar (Gtr.), piano (Pno.), and percussion (Pand.). The score is divided into two systems. The first system is labeled 'Ac' and the second system is labeled 'Ad'. Red vertical bars highlight specific sections of the score, indicating written conventions. The guitar part features a melodic line with various chords and intervals. The piano part provides harmonic support with chords and bass lines. The percussion part includes rhythmic patterns and dynamics markings like 'mp' and 'mf'. The score is written in a standard musical notation with treble and bass clefs.

Example 5. Subsection Ac indicates the written conventions, which supports the evoking of the *breque* model, typical of the *Partido Alto Samba* and Choro. (Transcription by F. Araújo Costa)⁵¹

Subsection Ad

This unit of Gnattali’s piece is composed of a melodic line in a high-pitched region of the acoustic guitar. In the trio’s perception, it evokes a rhythmic-harmonic extemporization model, which was conducted by the piano. Both the pianist and guitarist outlined a harmonic sequence with a harmonic rhythm pattern of two chords per bar. Fig. 4 shows the sketch with the code used by musicians, and Ex. 6 shows the piano extemporization transcription whose *modèle figuré* corresponds to the beginning of Ernesto Nazareth’s *Odeon* (Fig. 5), and whose extemporization *generating model* lies in the way the *pianeiros* played. However, this piano extemporization section lasts only three bars, as Gnattali’s score requires the group’s attention again, who then execute the passage in two voices, in intervals of thirds – a procedure also typical of the languages of Samba and Choro.

The image shows a handwritten musical draft for the Ad subsection. It consists of three systems of musical notation. The first system shows a sequence of chords: Dm, A7/c#, Dm/c, Bb, B13, A(b13), and G#7(alt). The second system shows a sequence of chords: G13/F, Bb11, and A. The third system shows a sequence of chords: Dm, Fb7, and A, followed by an ellipsis (...). The draft includes various musical notations such as stems, beams, and accidentals, along with handwritten annotations and markings.

Figure 4. Draft of the chord changes and piano conventions designed for the Ad subsection

⁵¹ Ex. 5 audiovisual media available online at: <https://www.nakala.fr/nakala/data/11280/3816ab94>.



Figure 5 – Score of the first measures of *Odeon*, by E. Nazareth (1909), Ed. Bevilacqua & Co.

Example 6. Ad sub-section with the piano rhythmic-harmonic extemporization and the pandeiro extemporization. (Transcription by F. Araújo Costa)⁵²

⁵² Ex. 6 audiovisual media available online at: <https://www.nakala.fr/nakala/data/11280/2cfcaa3b>.

Section B and Transition to the Improvisation Section

The formal macrostructure of the trio’s recorded version of the *Toccata* follows the standards of modern jazz, namely: theme exposition – Improvisation – theme re-exposition. However, in order to display both the idiomatic peculiarities of traditional Samba and Choro and follow the formal standards of Gnattali's score, a re-elaboration of the original compositional architecture, based on audiotactile groovemic criteria, was necessary. For example, after section **B**, in which both the piano and the guitar take turns playing phrases in a *quasi rubato*, *Choro-Canção* style, the group resumes the powerful **GAa** groove and adds the *breque* from the end of subsection **Ac**, and then follow on, setting the stage for improvisations. Table 4 shows the architecture of the first theme exposition.

“Toccata em Ritmo de Samba n. 2” Theme Exposition													
Section	A								B			GAa	
Subsection	:GAa :	Aa1	GAa	Aa2	Ab	Ac	Ad	GAa'	Ba	Bb	Bc	GAa	Breque
Number of Bars	:4: 4x	2	3	2	6	11	18	6	10	13	8	8	1
Progressive Number	1-16	17-18	19-21	22-23	24-29	30-40	41-58	59-64	65-74	75-87	88-95	96-103	104
Groove	<i>Samba/Canandablé</i> + Writing; Metrical dissonance	<i>Tuti; Unison;</i> Writing	<i>Samba/Canandablé</i> + Writing; Metrical dissonance	<i>Tuti; Unison;</i> Writing	<i>Samba-Choro;</i> <i>Pianeiro;</i> Metrical feedback; Dissonance feedback	<i>Tuti; Writing;</i> <i>breque</i>	<i>Samba-Choro;</i> Writing; <i>breque</i>	<i>Samba/Canandablé</i> + Writing; Metrical dissonance	Slow <i>Choro /rubato</i> ; Piano/Ac. guitar phrases			<i>Samba/Canandablé</i> + Writing; Metrical dissonance	<i>breque;</i> Anacrusis piano solo

“Toccata em Ritmo de Samba n. 2” Improvisation							
Section	Impro piano Ch. 1	Impro guitar Ch. 2	Impro piano Ch. 3	Impro guitar Ch. 4	Impro piano Ch. 5	Impro guitar Ch. 6	Ad
Number of Bars	12	12	12	12	12	12	18
Progressive Number	105-116	117-128	129-139	140-152	153-154	165-176	177-194
Groove	Traditional <i>Samba-Choro</i>		Traditional <i>Samba-Choro</i> ; Outside notes; Rhythmic extemporizations	<i>Samba-Choro</i> ; phrasing following 7-string guitar patterns	<i>Samba-Choro</i> ; Outside notes; Rhythmic extemporizations	<i>Samba-Choro</i> ; phrasing following 7-string guitar patterns; cavaquinho-like rhythm	<i>Samba-Choro</i> ; Writing

Theme Re-exposition “Toccata em Ritmo de Samba n. 2”				
Section	A			Coda
Subsection	Aa (original)	Ab	Ac	GAa
Number of Bars	11	6	9	:4: 4x + 1
Progressive Number	195-205	206-211	212-220	221-237
Groove	<i>Tuti; Unison;</i> Writing	<i>Samba-Choro;</i> <i>pianeiro;</i> Metrical dissonance; Metrical feedback	<i>Tuti; Writing;</i> <i>breque</i>	<i>Samba/Canandablé</i> + Writing; Metrical dissonance; <i>Pandeiro</i> extemporization

Table 4: Chart of the formal macro-structure of the “Toccata em Ritmo de Samba n. 2” (2012) recorded by the Baobab Trio. This model results from the audiotactile re-elaboration of the original *Toccata em Ritmo de Samba n. 2* (1981)

Here we present an example of the prevalence of audiotactile formativity within the constraints imposed by the formal structure of this transition unit. Thus, as it may be observed in the transcription of this excerpt (Ex. 7), the groove from GAa is played twice. This repetition is virtually a *sine qua non* condition for the groove, and it is enough to thrust its energy onto the *breque*, which naturally preludes subsection **Ad**, which somehow welcomes the improvised "choruses". Nonetheless, the rhythmic *ostinato* units do not complete the 2/4 bar. As we previously mentioned, they form a 3 + 4 + 4 + 5 eighths metric sequence (Ex. 2), and thus produce de-pulsive psychokinetic energy, derived from the expansion of the metric. Thus, the *breque* should at the same time take place within the third unit of the *ostinato*, and perform its role

of projecting the traditional Samba groove of the improvisation section (which by idiomatic standards, must begin with a phrase in anacrusis). The metric then takes the shape of precisely five eighth notes, so that the first thesis of the 2/4-breque bar is understood right after the sixteenth note which contains the A7, thus stressing the *breque* (Ex. 7).

The image shows a musical score for three instruments: Guitar (Gtr.), Piano (Pno.), and Pandeiro (Pand.). The score is divided into two main sections: a purple-shaded section and a yellow-shaded section. A magnified view of a 5/8 note is shown below the main score, with arrows indicating its placement in the piano and guitar parts. The score includes various musical notations such as chords, rhythms, and articulation marks.

Example 7. The pandeiro *Breque* anticipates the improvisations (Transcription by F. Araújo Costa)⁵³

The Improvisation Section

The improvisation part was built on the **Ad**-modified harmony as shown in the manuscript of Fig. 7. As observed, the **Ad** subsection naturally ties with the *breque* evoked (from the end of **Ac**) to form an end to the **GAa** groove. How was the harmony modified in the solos, in relation to **Ad**? What was the principle behind this process?

The image shows handwritten musical notation for a solo section. The notation is written on two staves. The word "Solo" is written above the first staff. The chords are: Dm, C#, Dm/e, Bb, Bb, A7, G#7, G7, Cm, Dm, Cm, Bb, A7, Dm7, A7.

Figure 7. Handwriting indicating the chord change for the solos, resulting from the modifications in **Ad**

We may note right away that the first five bars of **Ad** were not changed and that the modifications may be seen afterwards, either at a harmonic-rhythmic level, or at the level of the chord changes. In fact, the harmony of **Ad** would remain, originally, with two G# 7 bars, two G7

⁵³ Ex. 7 audiovisual media available online at: <https://www.nakala.fr/nakala/data/11280/f5e661a0>.

bars, two C7/Bb bars before finally landing on an A triad. Gnattali's writing granted this passage a contrasting sonority in comparison to the previous bars, following rhythmic conventions with dissonant chords and a sequence of descending phrases on altered scales.

However, the sonority envisioned for the improvisation area would further enhance the traditional Choro sound, encouraged by the suggestive information of the *breque* and by the "Odeon" sequence. The criterion to modify the harmony in **Ad** (or rather, to carry on with the harmony after the fifth measure) was a chord progression in which the groove and reminiscence of Choro would constitute the rhythmic-melodic model of the extemporizations, which, projected at the level of improvisation logic (and dialogic), would contribute to the emergence of new artistic rules in the form of what we understand here as IFS.

The harmony - which is actually quite simple - grants the continuity of the initial chromatic movement of the bass line (|Dm C#°|Dm/C Bø|), following the same proportion of four chords, but with a de-pulsive harmonic rhythm of only one chord by measure (| Bb7 | A7 | G#7 | G7 |). After these six bars of downward movement on the bass lines (of which, four contain Dominant 7th Chords) the harmony is back to C minor, for three bars. Then, it becomes D minor, with a very brief resumption of the propulsive harmonic rhythm of two chords per bar, followed immediately by the Dominant that prepares the repetition of the whole cycle (| Bb7 A7 | Dm | A7 |). The piano and guitar solos (which will not be analysed in this article) are alternated within each chorus of twelve bars, creating an image of dialogue between the instruments, which does not distance itself much from the traditional idiomatic phrasing of Choro.

The solo ending was marked by the resumption of **Ad** by the guitar, with the phrase in anacrusis written by Gnattali. At the end of the **Ad**'s 18 bars, the trio begins the Theme re-exposition.

Theme Re-exposition

To re-expose the theme, the trio waives the **GAa** groove, following instead the originally written **Aa** form. The subsection **Ab** is identical to that of the Exposition, but **Ac** loses the last two bars for a **GAa**'s solid resumption by the piano and guitar, introduced by a pandeiro *breque*. The pandeiro reappears extemporizing as a soloist, on the boundary of the poly-rhythmic effects of a Samba School percussion set, dialoguing with the piano/guitar ostinato, for 12 bars until the final convention.

The aim of this study is twofold.

- 1) To reflect on how the audiotactile and the visual operational systems cooperate in the process of constitution and mutual recognition of the formative musical experience;
- 2) To identify audiotactile prevalent criteria generated in a transcultural poetical musical context (in this case: Western Musical Written Tradition, Popular, Brazilian Urban, Afro-Brazilian, Jazz, etc.) in Brazil, by Brazilian audiotactile musicians.

It should be emphasized that in order to identify these criteria, we focused on the distinction between the situations agreed upon by the musicians (verbal or fixed arrangement, for example) and emergent situations in the course of performance. The combination of these two conditions promotes the emergence of audiotactile sources, disseminated throughout culture and memory, but which are collected and incorporated in a pre-conscious manner (through the ATP),

and then interpreted as an artistic form (through the NAE) into an “interactive-formative space” ready to be constituted, recognized, and crystallized.

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