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Instrumental texture and heterophony in a Fon repertoire for drums

Marcos Branda Lacerda

Abstract

Among the basic elements that characterizes the repertoires of traditional percussion ensembles in Western Africa is the formation of a rhythmic texture, which acts permanently during a musical performance. The texture consists of fixed patterns distributed among several instruments whose parts contrast with the extreme mobility of the solo drum, while at the same time providing a structural foundation for its performance. This study intends to present the instrumental parts that form the rhythmic texture in a Fon repertoire. In addition, it will be shown how the master drummer assimilates structures from the rhythmic texture for the construction of his own part. Due to stylistic peculiarities and also to the methodology used for the study of the solo drum's part, the use of filtering and acoustic measurements to facilitate listening and comprehension of the separate parts will be reflected here.

Key words: West African Music, Fon Music, African Drumming.

Introduction

During a short visit in the spring of 1984 to the town of Widah, south Benin, I had the opportunity to attend to a Fon religious ceremony. Those were the last days of a field research dedicated to the observation of Nago-Yoruba music in the towns of Kétou, Pobè, and Sakété.^[1] Even though there was not enough time left for a longer and closer relationship with the musical practices and rituals of that population, I asked the musicians for permission to record them outside the worship venue. They were the Adjosogbe group. All participants lived in the same compound in town, where we spent a whole morning in a very engaged and participatory work. I have since then considered that a detailed evaluation of the pieces from that repertoire could add new elements to the knowledge of the traditional musical conception of Western African peoples.

I registered the instrumental part of a repertoire consisting of the following pieces:

Solejebe
Wede
Gobahun
Gbehun
Agbehun
Hungan

The first three were the ones I had repeatedly listened to during the ceremony: in that event, the music was played by itself or in alternation and together with collective dance and vocal music. The ceremony was possibly dedicated to the *Atime Vodun*.^[2] According to the musicians, however, this repertoire could be equally executed in important social occasions, *such as a president's visit to town*. The ensemble for these pieces comprises the following instruments:

Hunda Ho (master drum)
Alekle 1 (medium-treble register supporting drum)
Alekle 2 (medium-low register supporting drum)
Assan (rattle)
Gan (bell)

The last three pieces comprise the musical part of ceremonies to which I could not attend. They differ from the first ones as from their instrumental organization: the Hunda Ho bass drum assumes the supporting function, one of the Alekle is replaced by the Kotoklo and another bass drum (Zolihun) takes over the solo part.

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I chose to investigate the first three pieces from the recorded repertoire. They form a unified *corpus* which seemed *a priori* better suited to contribute to musical research with a focus in complexity as a criteria. Driven by the increasing need in African musical research of discussing elements beyond the basic rhythmic conception of Western African peoples, I chose to study in depth the formal issues related to this repertoire. That means I concentrated all my efforts in describing a limited number of pieces, trying to grasp the totality of its structures.^[3] The present study represents the part of the investigation dedicated to the description of the fixed instrumental parts in the musical texture of Solejebe, Wede and Gobahun. Due to stylistic peculiarities and also to the methodology used for the study of the solo drum's part, the use of filtering and acoustic measurements to facilitate listening and comprehension of the separate parts will be reflected here.

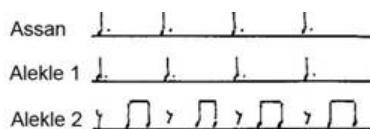
The Fon instrumental ensemble is not an exception to the regular organization of traditional Western African ensembles. On one side there is a permanently active rhythmic texture present throughout the musical performance, consisting of relatively fixed patterns distributed among several instruments. The textural elements contrast with the extreme mobility of the solo drum, giving at the same time the structural rhythmic support to the soloist. The musical texture is performed by the Assan, the Gan, and the Alekle 1 and 2. This part of the musical ensemble acts in the upper spectral region. Using its main frequencies as references, we perceive that their range lies between 230 Hz (Alekke 2) and 600 Hz (Gan). The Assan's timbre expands through wide ranges of the sound spectrum. The Alekle 2 provokes a slight sensation of definite pitch, but its sound also consists of undifferentiated frequency ranges. The Alekle 1 and particularly the Gan can be distinguished for their harmonically defined sounds. The main frequencies of the Hunda Ho, on the other hand, take place in the lower region, between about 40 Hz to 280 Hz. The spectral intersection of this instrument with the Alekle 2 is neutralized by the high level of its dynamics.

The texture varies in the three pieces, but there are common elements. The Gan is in charge of maintaining a permanent rhythmic pattern, particular to each piece. Its part describes expanded time measurements in relation to the other supporting instruments, and serves as a reference for the insertion and extension of configurations in the solo drum's part. We will this presentation from the Assan's part, as well as those of the supporting drums, which remain stable in the three pieces. Next we will approach the Gan's forms of articulation. Finally, we will make an outline of the assimilation of the textural elements for the construction of the solo drum's part.

1. Assan and supporting drums

The Assan and Alekle 1 parts have virtually undifferentiated roles in all the pieces: they consist of simultaneous repetition of articulations with the same duration which define the metronomic value or the sequence of main beats for each piece. This time measurement, abstractly defined in other African styles, is therefore actually performed by these two instruments in this repertoire. The Alekle 2's part is shifted, by one pulse, from the main beat. It consists of the repetition of one figure formed by two articulations which fill in, as a rule, the time intervals between the pulses established by the Assan and Alekle 1's articulations. As a whole, therefore, the Assan and Alekle 1 and 2 basically provide a metronomic value and its subdivision in ternary pulses, cf. ex.1.

Example 1 – Basic musical texture for Solejebe, Wede and Gobahun without the Gan's part.

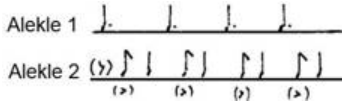


Solejebe and Wede

Some aspects concerning the real articulation of these rhythmic values and the resulting perception inflicted on the listener should be considered. The transcription adopted in example 1 expresses a rhythmic relation which corresponds directly to the perception of Gobahun only, the fastest piece in the repertoire (metronomic value = ca. 160 bpm). Thus, the notation would convey a relationship of complementariness and dependency among the parts. However, according to some known textural constructions in Western African music, we could suspect that the supporting drums' part cannot be summed up as such. We could think of the possibility of equivalence of the metric insertion of Alekle 2's articulations with the supporting drums' parts in pieces of the Anlo-Ewe repertoire which have already been studied, such as Agbadza or Atsiagbeko, in spite of the different forms assigned to those pieces' patterns. The Alekle 2's pattern, in the above form, matches the supporting drum Kagan (2) pattern in *Slow Atiāgbeko*, from the Ewe repertoire, presented by Locke (1982:220-22). Furthermore, the patterns of Alekle 1 and 2 are equivalent to the patterns of the Kidi and Kagan drums, respectively, in *Fast Atsiā*, presented in Koetting (1970:128-34).^[4] This being the case, we could redefine the Alekle 2's role as a relatively autonomous configuration, superposed and not supplementary to the Alekle 1's articulations. The first articulation of Alekle 2's figure would happen consistently on the first offbeat position, associated to an accentuation at least equivalent to that of Alekle 1.

This is what happens here. It would be possible to change the notation of the Alekle 2 to the form presented in example 2. However, as we mentioned above, the rhythmic relationship established by this notation would not correspond to the perception of the textural parts in Gobahun. It should be noted that the notation in this example matches the rhythmic structure provided by Jones (1954:39-40) to demonstrate what he called "crossing the beats".

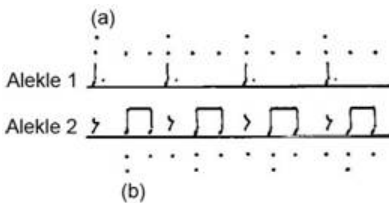
Example 2 – Parts for the supporting drums re-written for Solejebe and Wede



As we shall see below, the Gan’s pattern having a timeline function in Solejebe, is the standard pattern. This pattern, widely used in Western Africa, is usually submitted to a ternary rhythmic base, according to most studies about it. More recently, Temperley (2000:70) generically re-wrote the existence of regulating structural levels for the sequence of articulations of this pattern. The lowest level refers to the sequence of pulses; above this level, the ternary organization of the sequence of pulses originates from the particular manner in which the standard pattern is presented.

In Solejebe and Wede, we have another perception of these hierarchical levels. The articulation of Alekle1 and the initial articulation of Alekle 2 have dissimilar accentuation levels, benefiting Alekle 2’s part. That is, to the listener, the position of Alekle 1’s articulations, even when added to the Assan’s articulations, does not define by itself a hierarchical level above the succession of pulses, as one could imagine. The first articulation of Alekle 2’s figure is clearly predominant over the articulation of Alekle 1. Both parts allow for multiple or individualized perceptions, at least.^[5] In example 3a we have the hierarchical organization derived from the perception of Alekle 1; in 3b, from Alekle 2.

Example 3 – Hierarchical levels



We could simply acknowledge the fact that Alekle 2’s figure is just not aligned with the metric conception associated to the standard pattern, which is reinforced here by the presence of Alekle 1’s articulations. However, this ambiguity is provoked not only by the accentuation of the first articulation of Alekle 2’s figure in Solejebe and Wede. The rhythmic values concerning Alekle 2’s part present an additional complicating factor for a homogeneous interpretation of the supporting drums’ parts: the second articulation of Alekle 2’s figure is perceived to be consistently delayed in relation to the pulse, in opposition to the perception induced by the hierarchical levels shown in example 3. Alekle 2’s figure, formed therefore by the accentuated articulation and followed by an articulation which is delayed in relation to the pulse, is so remarkable that it deserves a more detailed study.^[6]

Figure 1 presents Solejebe’s sonogram, privileging the region ranging from 230 to 330 Hz in which the main frequencies of Alekle 1 and 2 occur. This is one of the few moments in which the four-beat cycle occurs without the presence of the solo drum. The articulations of Alekle 2, around 250 Hz, are numbered and identified by the vertical lines. Alekle 1’s articulations can be perceived above them, around 300 Hz. For study purposes, only Alekle 2’s articulations have been amplified. We can notice in this part a reduction in amplitude of the second articulation (even numbered articulations) in relation to the first one, as perceived by a smaller intensity of the blurring and by the representation of the waves’ forms above the sonogram. No kind of treatment has been applied to the region below 200 Hz. Therefore, a predominance of Alekle 2’s odd articulations can also be seen there, as identified by a subtle blur below them.

Figure 1 – Solejebe’s sonogram with gain in the Alekle 2’s part

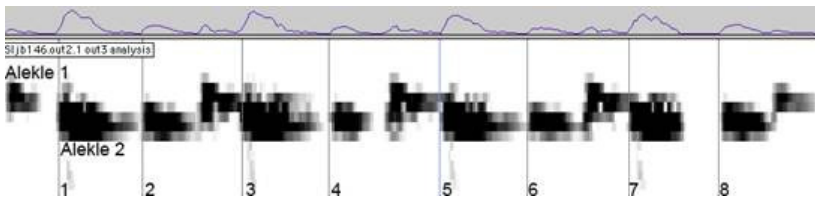


Table 1 presents, firstly, the time intervals defined by the sequence of the initial articulations of Alekle 2’s figure. Below these measurements are the durations of each articulation supplied by the application in milliseconds. I shall use the expression “offbeat-tempo” for the time interval defined by the articulations which the Alekle 2’s figure (odd articulations). The average duration of those beats is 450 ms. From the average offbeat-tempo, we arrive at the value assumed for the musical notation. These values can be seen below table 1.

Table 1 – Duration of the articulations of Alekle 2 (in ms)

1	2	3	4	5	6	7	8
---	---	---	---	---	---	---	---

428	466	453	448				
205	223	217	249	209	244	203	245

Average values implicated in the musical notation

Offbeat-tempo	450
Pulse value	150
Value of two pulses	300
Binary subdivision value (♪)	225

The series of odd articulations actually performed consists of extremely close durations: the shortest articulation is 203 ms long while the longest one is 217 ms. The even values are from 223 to 249 ms long. Comparing these values to the notational values, we notice that the shorter as well as the longer durations are closer to the binary division (225 ms) value than to the pulse (150 ms) or to the value of two pulses (300 ms), which are the notational values of the Alekle 2's figure. Thus, without resorting to complex rhythms, we could notate the figures as shown in example 4. This is closer to the actually performed durations and to the rhythmic sensation transmitted by the Alekle 2's part.

Example 4 – Alternative notation for Alekle 2's part in Solejebe

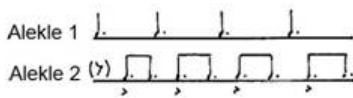
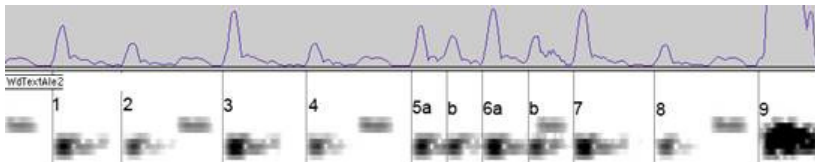


Figure 2 presents the sonogram of the region of Alekle 1 and 2 in Wede. As we can see below, I have set the value of 24 pulses (24/8) for the Gan's cycle in this piece. The chosen segment corresponds to the second half of the cycle. For better visualization, Alekle 1's part has been amplified by 10dB. Still, its articulations are much less prominent than Alekle 2's. The average difference in amplitude between Alekle 1's articulation and the first articulation of each figure in Alekle 2 is about 20dB. This explains the absence of the predominance of Alekle 1 which is induced by the notation. This effect can be noticed by the form of the waves given by the application above the sonogram. The amplitude peaks are all related to the articulations of Alekle 2. The expressive blurring in the location of the last articulation of Alekle 2 (articulation 9) is due to the simultaneous insertion of the solo drum in the offbeat position of the next metrical cycle.

Figure 2 – Wede sonogram with amplification (10 dB) in Alekle 1's part



For better definition of the rhythmic reality of Alekle 2's part in Wede, the values corresponding to this sonogram are presented in table 2.

Table 2 – Durations for Alekle 2

1	2	3	4	5	6a-b	7a-b	8
476		528		446		524	
192	284	232	296	198	248	234	290

Notational values

Offbeat-tempo	487
Pulse value	162
Value of two pulses	324
Binary subdivision value (♪)	243
♪	121
♪	81

If we consider articulations 1 and 5 (192 and 198 ms long, respectively), we notice they are closer to the pulse value (162 ms) than to the binary division (243 ms). Still, these values are always higher than the pulse value. The values of articulations 3 and 7 confirm the relationships established in example 4. In the first half of

Wede's cycle (see table 4 and figure 3), only the value of the first articulation on the fourth offbeat-tempo is half way between the pulse value and the binary division value; in the remaining beats, the duration of the first articulation is always closer to the value of the binary division. Placing these numbers percentually, we can see that the participation of the first articulation results in the proportions expressed in tables 3 and 4. The total time of the figure is always represented in milliseconds in the table's upper line.

Table 3 – Participation of the first articulation of Alekle 2's figure in the total offbeat timing (Solejebe)

428	466	453	448
41,5%	44%	44%	44%

Table 4 – Participation of the first articulation of Alekle 2's figure in the total offbeat timing (Wede)

First part of the cycle			
459	505	487	528
44%	49,5%	46%	42%
Second part of the cycle			
476	528	446	524
41,5%	44%	44%	44%

The average 44% value for the first articulation of Alekle 2's figure is clearly defined by these measurements. This value is closer to the notational value assumed for the time interval occupied by the duration of the binary division (50%) than to the value of the presumed pulse (33%). Hence, the value remaining for the second articulation does not reach the duration of 2 pulses presupposed in the musical notation, either. Thus, the sensation of binary division of the offbeat-tempo observed above for Solejebe and expressed in example 4 is also justified in Wede.

The sonogram in figure 2 also demonstrates a non-structural modification, sparsely performed by the Alekle 2's player in Wede and Solejebe. It consists of an increase in density of the basic figure. This is done by articulations 5b and 6b, which are rebounding strokes of articulations 5a and 6a. Table 5 presents the corresponding rhythmic values.^[7]

Table 5 – Values of the increase in density in Alekle 2's part

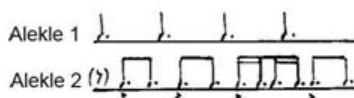
5a	5b	6a	6b
99	99	124	124
22%	22%	28%	28%

Offbeat-tempo: 446 ms.

 = 111,5 ms.

Apparently, the execution of this figure would imply a slight acceleration movement at the beginning of the figure. The values are surprisingly symmetrical and very close to the duration of the notational value of the division of the beat in four parts (the dotted sixteenth note). In this way, the increase in density of the figure tends to reinforce the sensation of binary division of the Alekle 2's figure. It could be notated as shown in example 5.

Example 5 – Increase of density for Alekle 2



In spite of the possibility of adopting the notation in example 5, the sonogram demonstrates that articulation 6b falls anticipated in relation to the articulation of Alekle 1. That is, in theory, the denser figure should invade the following beat established by the Alekle 1.

To answer to this question, we must investigate the position of the Alekle 2's part in relation to that of Alekle 1. For that, we shall use the first half of the Wede cycle, which is complementary to the other half presented in figure 3. Despite the gain in intensity in the articulations of Alekle 1, we can also note the predominance of amplitude in the first articulations of the Alekle 2's figure in the representation of waves above the sonogram. In this analysis, both parts' articulations are marked. Correspondent time measurements supplied by the application are given in table 6.

Figure 3 – Wede sonogram with 20 dB gain in the Alekle 1's part – part a of the metric cycle

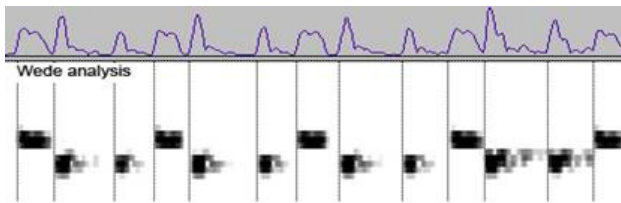


Table 6 – Absolute durations of the articulations of Alekle 1 and 2 in Wede

Al. 1:	459	482	516	482								
Al. 2:	(122)	203	134	(122)	226	134	(145)	215	156	(116)	215	151
	(rest)		(id.)									

From the values in table 6 we can arrive at the average value of 485 ms for the time interval established by the Alekle 1's articulations and, therefore, to the notational value of 161 ms for the pulse. The average values of all articulations in Alekle 2's part are represented in table 7, along with the difference relating to the pulse value and its proportion in total time in percentage terms.

Table 7 – Average durations of the articulations of Alekle 1 and 2 in Wede

485		
(126)	215	143
-35	+54	-18
25%	44%	30%

These values reveal that the Alekle 2 player *anticipates* the insertion of the figure in relation to the pulses' notational value. Besides, he extends the duration of the first articulation and invades the interval of time of the third pulse as defined by musical notation. The value of this *anticipation*, corresponding to 35 ms, is greater than the time of prolongation of the first articulation in relation to the third pulse. However, I wish to restate that, for perceptive purposes, the predominance is exerted here not by the sensation of *anticipation* of the Alekle 2's figure, but by the perception of the expanded value of Alekle 2's first articulation in relation to the pulse, which is admitted as a regulative element in Western African musical styles.^[8] In spite of the longer time span established by the anticipation, we can suspect that the Alekle 2 player distributes the value of the expansion among the intervals of time corresponding to the first and third pulses implicated in musical notation. If we looked for an approximate way of notating this anticipation, we would have to use the division of the pulse in four parts. This value would express a duration of 40 ms, which is close to the 35 ms anticipation. In relation to the denser figure, we conclude that it does not actually surpass the beat value established by the Alekle 1. That is probably due to the value of the anticipation and the initial acceleration of this figure. The denser figure therefore does not surpass the main beat established by the Alekle 1.^[9]

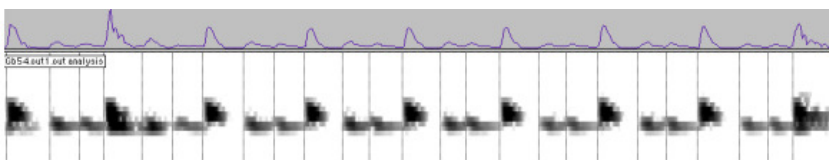
The figure of the Alekle 2 constitutes, then, a clash, but not exactly in the sense employed by some authors.^[10] This happens not only due to the continuous insertion of an offbeat figure, with an accentuation of its own, but (also) because of its internal organization, which is in conflict with the pulse sensation generally implied in the textural organization and in the solo drum part. We could maybe use the heterophony concept here to understand the nature of these configurations: besides taking place in a peculiar manner in relation to the hierarchically defined metrical properties, they regularly present elements which disturb a theoretical abstract order.

The rhythmic uniqueness of the Alekle 2's figure will have its effects on the construction - or, if we prefer, on the perception - of the solo drum part. This fact will be approached later.

The Assan and supporting drums parts in Gobahun

In Wede and Solejebe the expansion of the first articulation of the Alekle 2's figure is achieved through the distribution of the rhythmic value among adjacent pulses. The value of the anticipation (on the first pulse) is superior to the value of the delay (on the third pulse). This fact is important for the understanding of the difference established in the construction of Gobahun's texture. Figure 4 presents the sonogram of the supporting drums' main frequencies region in this piece.

Figure 4 – Sonogram of the supporting drums in Gobahun



As we said before, Gobahun uses the fastest tempo in the repertoire: 160 bpm. The other pieces at 120 bpm

and point to a slight acceleration during the performance. The first effect of this difference in tempo is the absolute absence, in Gobahun, of the Alekle 2's denser figure, which was expressed in example 5. Another difference, and one that is even more important, is the inversion of the amplitude relationship. As demonstrated by the more prominent blur in the sonogram, the articulation of Alekle 1 is predominant; it is about 10 dB more intense than the articulations of Alekle 2. Finally, the sonogram reveals a tendency to a relative equilibrium in the durations' proportions. The patterns' total time is 2880 ms. The average duration of the beat established by Alekle 1 is 360 ms and the average duration of the pulse is 120 ms. In this case, instead of an anticipation of the first articulation of the Alekle 2, we have a delay in relation to the second pulse. The proportion of the average duration of the Alekle 2's articulations is expressed in table 9.

Table 9 – Average durations of the articulations of the Alekle 2 in Gobahun

360
(145) 103 110

Here the slightly longer duration of Alekle 2's figure becomes the second one, and the *pause* time is proportionally longer than in Solejebe and Wede's texture. However, these values do not produce a sensation of binary division, which would have a time interval of 90 ms as its minimum value, as expressed in example 6.

Example 6 – False relation of values of Alekle 2's figure in Gobahun

In opposition to Solejebe and Wede's, Gobahun's supporting drums' parts form a complementary relationship in a ternary form. The reason for this seems to be the tempo used for Gobahun's performance: we could speculate that the Alekle 2 player is forced, at such a speed, to reduce the accentuation on the first articulation at the same time as he approximates both articulations to keep them within the metronomic value established by the Alekle 1.

Therefore, we can think that both forms originate from a basic conception which is in turn subject to contextual alterations. Considering this, it would be convenient to maintain a relatively unitary notation for all pieces, but a notation that could reflect also the exceptional perception of Alekle 2's figure in Solejebe and Wede. For Gobahun, the conventional notation form is kept, which by itself induces the reading of a complementary pattern, cf. ex. 1. For the remaining pieces, the reference to the alteration of the pulse perception is expressed by a symbol of displacement on the second articulation of the Alekle 2's figure. This was really not about indicating the figure's anticipation, but more about highlighting the manifest difference established between the perception and the reading induced by the use of conventional music notation. The representation of the relation of intensity between the first and second articulations of Alekle 2 has also seemed imperative to me. In Solejebe and Wede, an accent on the first articulation has been added, cf. ex. 7.^[11]

Example 7 – Notation of the supporting drums for Solejebe and Wede

2. The Gan's part

Solejebe

The Gan's part is variable in all three pieces. In Solejebe, it consists of the continuous emission of the standard pattern, a pattern which is present in several known African and Afro-American styles. It consists of a sequence of seven articulations of one and two-pulse values irregularly alternated, delimiting a total time interval of 12 pulses. The notation adopted here coincides with the practice adopted for some studies on Ewe music.^[12] We can consider it neutral, as it does not necessarily induce an orientation according to the ternary or binary rhythmic base. The pattern is asymmetrical by itself. Usually a ternary rhythmic base is assumed, mainly because of the dance.

Example 8 – Standard pattern – Gan's pattern in Solejebe

David Locke (1982:224) mentions the occasional interpretation of this pattern in Ewe music as a movement springing from the second articulation and following in the direction of the first one. Indeed, this seems to be the case in the present repertoire. (The rhythmic perception of the observer becomes more *comfortable* when oriented this way.) However, we would like to note that the target articulation undergoes a decrease in intensity and not an accent pointing to the beginning of the metric mensuration. Example 9 presents two contiguous emissions of the standard pattern at the beginning of *Solejebe*, in which, among others things, one can observe a slight diminution of the first articulation's intensity if compared to its neighbor's articulations.

Example 9 – Standard pattern in *Solejebe*

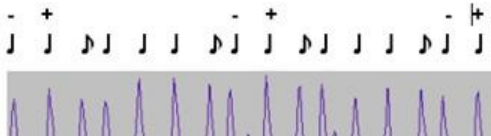


Table 10 presents the absolute mensurations and the percentage of the participation of the seven articulations in one cycle at the beginning of the piece. The first articulation occupies, generally speaking, more time in the construction of the pattern. It is preceded by the sequence of articulations 5, 6 and 7, which shows greater rhythmic stability and is closer to the notational values.^[13]

Table 10

1	2	3	4	5	6	7
348	291	197	290	302	302	168
18.3	15.3	10.3	15.2	15.9	15.9	8.8

Total time: 1898 ms.

Pulse: 158 ms.

Example 10 presents notational representations generated by the application from time mensurations close to the 120 bpm *tempo*. We can note that the values stated in these examples are very close to the conventional notation and only partially equivalent to the proportions displayed in table 10. Both confirm, however, the longer time interval of the first articulation.

Example 10 – Alternative forms of notation for the standard pattern

(a)



(b)

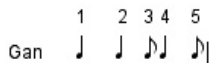


Table 10 reveals an additional fact in the construction of the standard pattern in *Solejebe*, confirmed by the interpretation expressed in example 10b. It shows that the third articulation is usually longer than the seventh, although they possess equivalent notational values. A reduction of the values of the third articulation's neighboring articulations can be noted as well.

Wede and Gobahun

In *Wede* and *Gobahun*, the *Gan* articulates patterns which were so far unknown to me in a ternary context. In both cases, we are talking about configurations which, if taken separately, describe an 8-pulse cycle, cf. ex. 11-12.^[14]

Example 11 – The *Gan*'s pattern in *Wede*



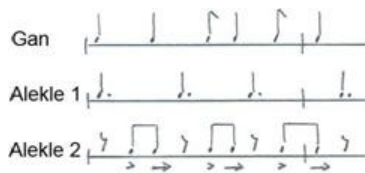
Example 12 – The Gan's pattern in Gobahun



These patterns indicate a partial parallelism. The figure in Gobahun presents two articulations less than the one in Wede. In spite of that, its articulations correspond to articulations 1, 2 and 4 in Wede. These patterns can, therefore, stem from a common construction idea. The pattern in Gobahun would be the result of the suppression of Wede's shorter articulations, due to the increase in speed.

I have chosen a representation in additive terms, mainly visible in Gobahun. Otherwise, there would be an explicit conflict with the ternary rhythmic base supplied by the supporting drums; the use of ties would induce a binary interpretation of the rhythmic base. In Wede, a binary organization is naturally suggested, being relevant for the construction of the solo drum's part. However, the 8-pulse sequence, as a metrical reference, is not a referential value for the construction of structures of the Hunda Ho part.^[15] In example 13, the notation in Wede is represented according to the 8-pulse conception. The inversion of the supporting drums' and the Assan's positions would be totally undesirable. Similarly, the definitive adoption of a cyclic meter of 12 beats would make the Gan's part's notation irregular in contiguous metric cycles (see below).

Example 13 – Wede's texture notated in 8-pulse cycles



Consequently, the most adequate form of representation for the metric orientation in Wede and Gobahun is given through a rhythmic base of 24 pulses with 8 beats of ternary division. The representation of the cycle in this form matches the structure of many segments of the solo drum. On the other hand, it would still be necessary to determine the point from which the players metrically define those patterns. We determined, for this purpose, an *aural* perception of the relation that the solo drum establishes with the Gan's part for the construction of types of rhythmic structures which would in some way prevail in its execution. The determining element for this was the most frequent conclusion moment used for great part of the solo-drum's segments, from which the *tactus* is inferred.^[16] Another collaboration for the definition of the beginning of the metric cycles were the moments in which the articulations in the Assan and Gan's parts are simultaneous (see ex. 14). Locke (1982:231, ex. 14) approaches a section of the solo drum's performance in *Atsiagbeko* which establishes, with two adjacent emissions of the standard pattern, exactly the same relationship as between the Gan's patterns in Wede and Gobahun and the sequence of articulations of the Assan and the Alekle 1. This is a cross-rhythm relation in a 3:8 ratio. He also suggests the hypothesis of notating the figures corresponding to this pattern in binary metric forms.

Summing up, we choose metric units of 12 pulses for Solejebe (12/8) and 24 beats for Wede and Gobahun (24/8). However, in spite of the resulting fragmentation of the Gan's part, it proved convenient to partially *divide* the Wede and Gobahun's parts into two 12-beat units for two reasons: these secondary metric references have a role also in the construction of certain configurations of the solo drum, as well as assisting in the physical location of the formal units which we referred to in the descriptive process. For transcription purposes in the last two pieces, a secondary bar is interposed halfway into the metric units.

Seen as a whole, the patterns reveal important common features: (a) the parallelism of the timeline articulations in Gobahun and Wede is maintained; and (b) all the patterns have an articulation marking the last main beat of the metric cycle, which would serve as a preparation to the beginning of the next cycle, cf. ex. 14. Furthermore, in the Solejebe and Wede patterns one can perceive the identity of the sequence of their first articulations, which become references for the use of constructions common to both pieces.

Example 14 – Solejebe, Wede and Gobahun timelines



3. Parallelisms between texture and the solo drum part

Obviously, the fixed parts expressively mark the profile of each piece in this repertoire, and can provide by themselves the essential elements for the regulation of the basic dance movements. If, on one hand, it is necessary to approach them separately, it is also necessary to set them back in the general context where they perform their respective roles. This refers to the textural parts in relation to each other as well as to their relationship with the solo drum part which, in this repertoire, assimilates them in several ways. Besides, the music described here would be unthinkable without the permanent action of the solo drum. To illustrate this, from about 50 minutes of recording transcribed and studied, the metric cycles in which the solo drum is not present would not reach as much as 5% of the whole. The amplitude of articulation 9 in the sonogram in figure 4 also shows the acoustic importance of the solo drum's presence in the performance. Therefore, the presentation of the repertoire's textural properties would not be complete if not accompanied by the elements from the solo drum part with which they establish a general meaning to the musical construction.

The configurations presented below constitute a small set of elements including the direct participation of the Hunda Ho. With remarkable exceptions, these elements are fundamentally typical of the pieces in which they are used. That is, they are associated to tempo and instrumental texture of a specific musical event. The segments are also situated in basic hierarchical levels, in the same way as the timelines presented above. They consist, mainly, of groupings with little or no possibility of ulterior segmentation. We can anticipate, however, that the Hunda Ho player expands its construction forms to superior levels, such as phrases and sections, as well as long regions defined by the concentrated occurrence of structurally related configurations. [17]

Solejebe

Example 15 presents a series of typical configurations in Solejebe, clearly based on the standard pattern or in qualities intrinsic to this pattern. Example 15a consists of a configuration clearly displaying a rhythmic orientation according to Alekle 2's sequence of articulations, metrically structured by the presence of the standard pattern in its usual presentation: the first articulation on a sequence of four beats coincides with its first articulation and sets the *tactus* (see ex. 3a). In example 15b, on the contrary, the player uses the configurations [a+x], [b+x] and [c+x] which have the second articulation of the standard pattern as a target. These configurations belong to a class of figures which are always differentiated, though they have a meeting ground at the insertion point at the third beat of the metric cycle (with anacrusis) and the figure (x) which leads to the third pulse of the next metric cycle. Note that in examples 15a and 15b, all the 12-pulse metric cycles are marked by finalizing articulations on the first or third pulse. In these structures, there is no possibility of occasionally understanding the standard pattern in dislocated and differentiated metric forms, once the configurations in 15a and 15b at equivalent moments in the 4-beat sequence. Considering this, it would already be clear that there is only one metric orientation acting on the realization of both examples' structures. However, in the light of these same examples we can question the differentiation of the types of accentuation employed by the player. [18]

Example 15c presents a figure typical of Solejebe ("a"), which the player uses to close a certain type of phrases. It is also present in Wede, in a more veiled manner. The construction of the figure presupposes again the rhythmic support provided by the second articulation of the standard pattern. Possibly, the player would re-interpret the standard pattern's figure departing from its second articulation, according to a ternary rhythmic base, to conclude the following metric cycle in this same position. This procedure characterizes a case of *consistent offbeat timing*. [19]

Solejebe frequently presents a relatively long segment also used as a form of conclusion for specific phrases but with an internal organization which is less unitary than the phrases concluded by the configuration in example 15c. This consists of configuration "a" in example 15d. We recognize, in this segment, characteristics very similar to those of the standard pattern: the player displaces the pattern to the third main beat of the metric cycle and repeats it in the form of an imitation, omitting the last articulation. Then, he concludes the structure with segment "b", which seems to be based on the last four articulations of the Gan's pattern. This would be, therefore, a fragmentation of the standard pattern with a new shift, implying the closure in the first offbeat position. Example 15d presents still another possibility of understanding of this segment, according to the delimitation of the dotted line: the final part of the segment would present the pattern (omitting the third articulation) departing from the first offbeat position.

Finally, it is necessary to anticipate here the possibility of interpreting the standard pattern as an abstractly referential configuration for the two-pulse value. The solo drum part is permeated by configurations which can

be defined by this rhythmic orientation.

Example 15 – Parallelisms between the texture and the Hunda Ho in Solejebe

(a)

Musical notation for Example 15(a) showing three staves: Assan, Gan, and Hunda Ho. The Hunda Ho staff has brackets labeled 'a' and 'b' under specific rhythmic segments.

(b)

Musical notation for Example 15(b) showing three staves: Assan, Gan, and Hunda Ho. The Hunda Ho staff has brackets labeled 'a' and 'b' under specific rhythmic segments.

(c)

Musical notation for Example 15(c) showing two staves: Gan and Hunda Ho. The Hunda Ho staff has a bracket labeled 'a' and 'offbeat B' under a specific rhythmic segment.

(d)

Musical notation for Example 15(d) showing two staves: Gan and Hunda Ho. The Hunda Ho staff has brackets labeled 'a' and 'b' under specific rhythmic segments.

Wede

The Hunda Ho part in Wede is particularly marked by the recurring presence of the structure in example 16a, employed as a form of phrase introduction. This structure consists of an initial figure, followed by a segment formed by articulations with the same value as the pulse. The segmentation is justified by the occurrence of the first figure in slightly altered contexts. The segment occurs in the first part of the metric cycle established by the Gan, but is invariably inserted at the end of the preceding metric cycle. This demonstrates that the player unhesitatingly holds on to a particular combination of the Gan's figure with the other textural elements. The segment follows the rhythmic orientation in compliance with the first offbeat position and represents, therefore, another example of consistent offbeat timing.^[20] The parallelism with Alekle 2's figure is evident: the high pitched articulations of the solo drum's initial figure totally match the articulations in this pattern. The transcription process confirmed the rhythmic peculiarity presented above: in spite of the segment's repetitions, the initial figure was continually re-written in a non-uniform manner. The first articulations were rarely interpreted as equal values with the duration of one pulse: there was a predominance of the sensation of anticipation of the initial articulation, according to the alternative notations below the Hunda Ho's part shown in example 16a.^[21]

Example 16b equally presents a structure which is common and unique in Wede. It is the configuration used most often by the player to finish phrases. It is always inserted parallel to the respective Gan's articulations. It is, therefore, a fragmentation of the Gan's group formed by the short/long/short durations. The insertion of this configurations implies the formation of a cross rhythm in a 4:3 ratio between the sequence of main bets, manifest in the Assan and Alekle 1's parts and the 4-pulse (the half note) rhythmic base implied in the solo drum's figure.

Both configurations demonstrate an important fact in the metric conception of Wede, also valid for Gobahun. The player is fully aware of the 24-pulse organization of the metric unit, as demonstrated by the absolute regularity of the insertion of the segment in example 16a at the point defined in the example. However, the metric cycle is broken into two parts. Both segments occupy an interval of four beats. The configuration in example 16b invariably leads to a finalization at the *tactus*, always in the same position in relation to the Gan's part. Both segments represent, therefore, structures which are parallel to elements present in the texture, independently from the changes in rhythmic orientation implied in their respective constructions.

Example 16 – Parallelisms between the texture and the Hunda Ho in Wede

(a)

Musical notation for Example 17a. It consists of five staves. The top staff is labeled 'Gan' and shows a series of vertical stems with flags. The second staff is labeled 'Alekle 2' and shows a rhythmic pattern with beams and accents. The third staff is labeled 'Hunda Ho' and shows a rhythmic pattern with beams and accents. The fourth and fifth staves show a rhythmic pattern with beams and accents, with a bracket underneath labeled 'a' and 'b'.

(b)

Musical notation for Example 17b. It consists of two staves. The top staff is labeled 'Gan' and shows a series of vertical stems with flags. The bottom staff is labeled 'Hunda Ho' and shows a rhythmic pattern with beams and accents, with a bracket underneath.

Gobahun

The fixed parts in Gobahun present less potential of generating structures for the solo drum which happen strictly parallel to the texture. The best we can do is to show here the moments in which the player focuses on certain articulations of the Gan to infer new supporting points for the construction of longer segments. Firstly, we wish to point at a very common configuration which legitimates the choice for the metric organization into 24 pulses, cf. ex. 17a. It is implied in the configuration a cross rhythm relation with the main beats in a 6:4 ratio (or, repeatedly, 3:2). The player also maintains with absolute regularity the relation implied with the Gan's part, based on the parallelism between the two initial articulations in both parts.

Example 17b presents a configuration extracted from a structure which occupies a relatively long interval of time in the piece, though it cannot be seen as a regular structure in Gobahun. In the whole construction, a remarkable metric shift is implied towards a certain point in the Gan's cycle, at the moment in which it presents the sequence of two 3-pulse articulations for the second time in the cycle. That is, the Hunda Ho player concludes the previous structure and then inserts the structure from example 17b, still in the same cycle. Consequently, this structure is parallel to Alekle 2's part, and constitutes another example of consistent offbeat timing in the first position.

Finally, example 17c presents a common structure present in the conclusion of certain phrases in which the player again is based on the Gan's first articulation of the second half of the metric cycle. This forms a figure which is then consistently re-inserted in the first offbeat position. This structure always occurs in the second half of the metric cycle and invariably leads to the conclusion of the segment on the *tactus*.

Example 17 – Parallelisms between the texture and the Hunda Ho in Gobahun

(a)

Musical notation for Example 17a. It consists of three staves. The top staff is labeled 'Assan' and shows a series of vertical stems with flags. The middle staff is labeled 'Gan' and shows a series of vertical stems with flags. The bottom staff is labeled 'Hunda Ho' and shows a rhythmic pattern with beams and accents, with a bracket underneath.

(b)

Musical notation for Example 17b. It consists of two staves. The top staff is labeled 'Gan' and shows a series of vertical stems with flags. The bottom staff is labeled 'Hunda Ho' and shows a rhythmic pattern with beams and accents, with a bracket underneath.

(c)

Final notes

Concerning the metric condition in Wede and Gobahun, there is an ambiguity which is revealed by examples 16a-b and 17c. One can note that the division into two parts is relevant as a factor of regulation for the alternation between structures. These structures are quite often immediately followed or preceded by different configurations having the same extension. However, whenever they are employed, they invariably occupy a specific part within the 24-pulse metric interval. In Solejebe, a preference for the central point in the metric cycle as a moment for inserting segments or alternating them can be noted as well.^[22] No referential element for the construction of regular offbeat structures in the second position is present in the fixed parts. In this sense, the possible interpretation which the solo drum player makes of the standard pattern as beginning from its second articulation assumes special importance. This interpretation is also possible for the sequence of articulations of the Gan in Wede. In an ensuing work, we shall present a structure oriented by the second offbeat position, which can be used in both pieces. The structure in example 17a is employed one single time in Solejebe, but it is cut down to half of its extension. This reveals the importance of the Gan as a measurement element permanently present in the solo drum player's conscience.

* * *

The Fon ethnic group became well known through studies in cultural anthropology and religious ethnography fields. However, it has not yet received the same attention in the musicological field. In its whole, this study presents a very precise view of the musical conception practiced by this Fon community in Benin. The prevalent perception of the presence of abstractly defined phrase structures is a highlight in it. Another consequence of it may be the possibility of its insertion in frequent musicological discussions aroused by studies on Ewe music. The historical link between the Ewe and Fon styles has been underlined before.^[23] One of the goals of the present study is to extend an ongoing research with the inclusion of a correlate style. The identity of these ensembles' instrumentation should be emphasized. The Hunda Ho solo drum corresponds to the *Atsimewu*. They are both in the lower register and are played with hand and stick. The function and means of performance of the supporting drums correspond to the *Kagan* (1 and 2) or the *Kidi*, and, finally, the Assan and Gan match *Axatse* and *Gankogui* respectively. The standard pattern, so frequently used in the repertoire of Anlo-Ewe music, has a timeline function only in Solejebe. However, as mentioned above, it is present in the three pieces that have not been included in this research. (In Gbehun, it is used in the binary version, in the same way as in the piece *Ogogo*, from the Yoruba repertoire.)^[24] In Wede and Gobahun, the timeline function is represented by patterns not clearly identified in the Ewe style, or at least in its research. In the three pieces we see the same preference for the ternary rhythmic organization established by the supporting instruments. Some of the concepts that characterize the processes of rhythmic structuring seen in that music are also present here, such as consistent offbeat timing and cross rhythm. The examples also show evidence of the formation of additive rhythmic structures, usually resulting from an adjustment among configurations with distinct rhythmic properties. This subject shall be approached in the future together with formal aspects of Fon music. The study of the solo part will show that the use of these forms of rhythmic structuring is related to precise types of phrase structures. As far as we know, texture building in Anlo-Ewe music may imply in greater complexity due to the addition of another supporting drum and of more diversified textural figures. However, we may wonder whether the greater or lesser textural density may have opposite consequences on the construction of the solo drum's part.

The study of the huge variety of configurations of the solo part in the three pieces led us to search for a pragmatic representation of them in the traditional western music notation. In addition, we were also led to the search for abstract definitions for fixed formal patterns taking into consideration the methodology derived from the linguistic segmentational method^[25] or from methods from formal musical analysis.

If on one hand it does not seem fair to take the Ewe music *a priori* as the root for generalizing discussions about the theoretical dimension of Western African music, on the other hand the Fon music from south Benin already testifies to the fact that the type of exuberance and beauty which are attributes of that music are common traits of other African populations.

Notes

See Branda-Lacerda (1988).

The name *Atime Vodoun* is mentioned by Pierre Verger (1957:97), but the author does not go into detail on the characteristics of this Vodoun. Arthur Ramos (1979 [1935]:114), in the context of Afro-American ethnography, refers to *Ativodu* as "the tree-jinee, a type of home-god, protecting the house."

See Branda-Lacerda (2007). These pieces have been partially published in the CD "Samba e Fetiche" (Funarte DSFB 48, Rio de Janeiro, 1998). Some of the musical examples presented here can be listened at www.eca.usp.br/lacerda.

Locke (1980) mentions the historic and musical relationship of the Ewe/Fon people. His works are also important representations of the textural formation in the Ewe repertoire. The textural construction of the present repertoire could be seen as an expressive evidence of the stylistic relationship between Ewe and Fon cultures (see below).

I risk, as Temperley (2000:88) pointed, of assuming a conceptual discrepancy between the ethnomusicological and the theoretical-musical discourse. In his work, the study of the standard pattern does not lead him to observe it in relation to other textural patterns. Being pervasive, these fixed textural patterns should not be simply confined to the category of groupings, in my opinion.

These acoustic analyses can be considered preliminary studies, considering the wide range of approaches that they provide. Filtering was employed fundamentally to isolate the solo drum part and make its transcription possible. My intention here is just to qualify some of the remarkable and perceptible rhythmic qualities in the textural context of this repertoire. The possibility of inconsistency in the execution of Alekle 2 is out of the question, since the other parts keep a consistent course without any apparent disturbances. The applications employed in the analyses are AudioSculpt and, complementarily, OpenMusic, developed by IRCAM, France.

The denser figure has not been notated in the transcriptions. In Solejebe it apparently occurs concurrently with important structures of the solo drum part, preferentially in the third beat of each cycle. In Wede, they happen mainly at the moments when the solo drum is paused, but only during the first half of the performance, which extends for about 12 minutes in total. In Wede, the player seems to prefer especially the seventh beat of the metric cycle to insert it, and sometimes the fifth beat.

About the importance of the referential level of *pulse* in African music, see Kubik (1984:69-73). The author states the following: "With the exception of totally irrational phrasings [...], the offbeat accents do not simply fall anywhere within an one-beat interval, but simultaneously with the elementary pulses." (p. 72) (author's translation).

This fact could be associated to Chernoff's statement, who says that "a player can vary his part to a certain extent, but not so much that it destroys the beat," quoted in Temperley (2000:71).

] This is the case in well known pieces in Ewe music. I ran into the versions of Agbadza and Atsiagbeko through Richard Hill's recording *Drums of West Africa*, Lyricord Discs LLST 7307, s.d.. Agbadza has also been treated in Branda-Lacerda (1990). In this piece, the texture is modified probably because of involuntary displacements occurring in the fixed parts.

] In a certain way, this is an inversion of what could be inferred from some approaches of texture in the Ewe music: under Gan's standard pattern, the diversity of supporting drums parts points to differences in textural organization. Here, the differences in the Gan's pattern are manifest under the permanence of the supporting drums' parts. Admitting tempo as a distinctive factor between parts of the same repertoire, the difference between Alekle 2's figure in Solejebe and Wede, on one hand, and in Gobahun, on the other, could be seen as an expression of the following rule, established by Chenoweth and reproduced in Arom (1993:21) via Nattiez (1975:230): "two [etic] units in complementary distribution, one of which appears in different environments from the other, are variants of a single emic unit."

] In the Ioruba *bátá* music, the textural organization led me to associate this pattern to the ternary rhythmic base already in the form of notation, using one-pulse value and pauses, see Branda-Lacerda (1988 (vol.2):23). In Locke (1982 and 1983) we can also see a direct suggestion of ternary rhythmic base partially or totally expressed in the notation.

] See Temperley (2000:94, n.17) for a discussion on the matter. Solejebe, therefore, is one among a number of examples in which the beginning of the standard pattern, when viewed in isolation, is established from the second articulation. A detailed study of the intensity measurements can confirm the interpretation of the standard pattern in additive terms, or by means of hemiolas (5+7), as proposed by Nketia, (quoted by Agawu (2003:90, ex. 4.7, line 5) and also discussed by Temperley (2000:80-2)). The interpretation would coincide with the form of representation suggested by Locke (1982:225, ex. 4a): 2 1 2 | 2 2 1 2 ||. The relation of intensity among articulations of the standard pattern in Solojebe is in conflict with the generic presumption that in African music "the norm is for strong beats to occur at the ends of groups" (Temperley 2000:91).

] In Gobahun, the player internally adjusts the performance as from 20th metric cycle.

] Gobahun's pattern, associated to a binary rhythmic basis, is naturally very well-known. In this same form, and with smaller rhythmic values, it can be seen in Nketia (1974) (quoted by Agawu (2003:75, ex.4.1h)), though without mention to its origin. The relation between values in a binary context can also be seen in the Axatse (rattle) part in Gahun from Ewe music, cf. Ladzekpo (1980:225). Authors mention that this rhythm would have been taken to Ghana "in the 1950s by some Anlo people who went on a fishing expedition in Badagry (Western Nigeria)". Note here as well that there is phonetic resemblance between the two pieces' names. David Locke has an extensive work on this piece, to which I have not had the access. The pattern is also used in Kiriboto, combined with a binary version of the standard pattern in the *bátá* Yoruba music, cf. Branda-Lacerda (1988 (Vol.2):29). Still in the binary form, this rhythm is largely employed in Afro-Brazilian music, in which the Bantu origin is presumed. The binary standard pattern is also present in the Gbehun piece, not shown in this study, cf. n. 1.

] See Jackendoff & Leirdahl (1983:21). The *tactus*, generally, seems to be more important for the conclusion of segments of the solo drum than as a means for inserting its configurations.

] See Jackendoff & Leirdahl (1983, Chapter 3).

] Segments formed by the reiteration of such figures offer a good discussion on the types of accentuation defined in Leirdahl and Jackendoff (1983:17-8). See also note below.

] See Watermann (1952), Kubik (1984), David Locke (1982:227-44) offers a dense and accurate discussion about this type of structure. Agawu (2003:84-6) makes a conceptual reflection upon structures suggesting overlapping or juxtaposition in the metric plan. Apparently, this segment would support the rejection to the idea of polymetrics once it is preceded by segments which follow distinct rhythmic orientations and are followed by a long pause, in which the player metrically re-orientates his part. In other words, the consistence of accents as from the third beat is valid only for the mentioned configuration, and not to its neighbor configurations. Thus, they would not affect the dance. However, long and homogeneous configurations may be constructed based on the second offbeat position.

] See note 19.

] I put myself here as an *informant*. As mentioned above, the Alekle 2's part does not possess frequency ranges that can

be isolated when the solo drum is active. Thus, it cannot be systematically filtered. As a consequence, there is no possibility of listening to the Hunda Ho in combination with Alekle 2.

] More recently, Willi Anku stated the fundamental presence of the 6/8 meter in African rhythmic constructions, followed by the existence of only one regulative beat (in 12/8). The Solejebe metric condition should be seen within this theoretical frame. See Anku (2000), Agawu (2003:194-96) and Branda-Lacerda (2007:250-51).

] See note 4.

] This is the *bátá* repertoire, for Egungun, from the town of Pobè in Benim. See Branda-Lacerda (1988:122-23).

] Cf. Arom & Alvarez-Pereyre (1993).

References

- awu, Kofi. 2003. *Representing African Music*. New York: Routledge.
- ku, Willie. "Circles and Time. A Theory of Structural Organization of Rhythm in African Music" *Music Theory Online* 6, 2000.
- m, Simha & Alvarez-Pereyre, F. 1993. "Ethnomusicology and the emic/etic issue." In *WoM* 35 (1), p. 7-33.
- anda-Lacerda, Marcos. 1988. *Kultische Trommelmusik der Yoruba in der Volksrepublik Benin. Bata-Sango und Bata-Egungun in Pobè und Sakété*. 2 Vols. Hamburg:Verlag der Musikalienhandlung Karl Dieter Wagner.
- __. 1990. "Textura Instrumental na África Ocidental: A Peça Agbadza." In *Revista Música* 1 (1), São Paulo, p. 18-28.
- __. 2007. *Estruturas musicais de um conjunto instrumental Fon - As peças Solejebe, Wede e Gobahun* [Musical Structures in a Fon Instrumental Ensemble - The Pieces Solejebe, Wede and Gobahun]. Universidade de São Paulo, Escola de Comunicações e Artes, 2 Vols., 370 p.
- dahl, Fred & Jackendoff, Ray. 1983. *A Generative Theory of Tonal Music*. Cambridge, Mass.: MIT Press.
- nes, Arthur M. 1954. "African Rhythm". In *Africa* 24 (1): p. 26-47.
- etting, James. 1970. "Analysis and Notation of West African Drum Ensemble Music." *Selected Reports* 1(3):115-46.
- bik, Gerhard. 1984. "Einige Grundbegriffe und -konzepte der afrikanischen Musikforschung." In Joseph Kuckertz (ed.), *Jahrbuch für musikalische Volks- und Völkerkunde*, 10, p. 57-102.
- izekpo, Alfred K. & Ladzekpo, Kobla. 1980. "Anlo Ewe music in Anyako, Volta Region, Ghana." In Elizabeth May (ed.), *Musics of many cultures*. p. 216-31, Berkeley:University of California Press.
- ake, David & Godwin, K. Agbeli. 1980 "A study of the drum language in Adzogbo." In *Afr. M.* 6 (1), p. 32-51.
- __. 1982. "Principles of offbeat timing and cross-rhythm in southern Ewe dance drumming." In *Ethnomusicology* 26 (2): 217-246.
- __. 1983 "Atsiagbeko, the polyrhythmic texture." In *Sonus* 4: 16-38.
- ttiez, Jean-Jacques. 1975. *Fondements d'une sémiologie de la musique*. Paris:10/18.
- mos, Arthur. *As culturas negras no novo mundo*. São Paulo: Companhia Editora Nacional, 1979 [1935].
- nperley, David. 2000. "Meter and Grouping in African Music: A View from Music Theory." In *Ethnomusicology*, 44 p. 65-93.
- rger, Pierre. *Notes sur le Culte des Orisa et Vodum*, Dakar:Ifan, 1957.
- berman, Richard Alan. 1952. "African influence on the music of the Americas." In Sol Tax, ed., *Acculturation in the Americas*, Chicago University Press, p. 207-18.

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