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# Problems of Understanding Southern Benin Music from a Western Perspective - A Preliminary Report

## 0. Initial Event

1.12.2019 – 15.1.2020 Expedition to Benin

Field recordings in the villages of Gbeffe Djimey, Avlékété and Hévé

### L'expédition pour faire des études de la musique traditionnelle béninoise

du 1er décembre 2019  
au 15 janvier 2020



# 1. Theoretical Problems with Western Music Notation

- 1) Multiplicative vs Additive Rhythm Construction
- 2) Onset and Implied Duration Problem / Inter-Onset-Interval (IOI) / Articulation / Theory of Rhythm Recognition

# 2. Problems Analyzing the Recorded Music

- 1) fast and very fast tempo
- 2) very much layers sounding together
- 3) sometimes diff cuties through doubled instruments
- 3) diff cuties while recognizing drum timbres
- 4) diff cuties through quieter or muted strikes:  
video shows a strike but no sound to listen
- 5) diff cuties through immediate variations of the patterns
- 6) dominating improvising solo drum isn't connected to other rhythmical layers  
while masking the sounds of the other instruments
- 7) sound masking due to other louder instruments as shaker or  
due to singing voices
- 8) synchronization of the layers to each other or  
asynchronous layers / polytempic structures

Some solutions:

- Knowledge about playing technics
- Following the video
- Using colored markers in the DAW (Digital Audio Workstation) for analyzing
- Measuring IOIs after waveform in DAW
- Re-Recordings of the Field Recordings with Beninese Musician Steve Abeni

all methods particularly helped and have their advantages and disadvantages

### **3. Practical Problems and Questions**

1) Playing Technique Issues:

- a) using left and right hand
- b) muted strikes while holding hand or stick on skin
- c) muted by the other hand or stick
- d) bell muted on top of the leg, secondary movement
- e) Accentuation as a secondary layer

2) Interpretation of Duration Relations

- a) When Long-Short Relation found: 2:1 3:2 4:3 or something else?
- b) More complicated relationships, e.g. in the solo-drum parts

### 3) Period Finding Problem:

beginning and end, identification while rhythmic variations

### 4) Formal Questions

a) how the ensemble starts together

preliminary strike before bell pattern starts (Atchina, Agbadja)

b) how the ensemble ends together

c) the role of the solo drum

## 4. Recordings from Gbeffa Djimey Village

8.12.2019

1) Atchina

2) Azandro

3) Toba 1

4) Agbadja

5) Káká 1

25.12.2019

1) Káká 2

2) Toba 2

3) Blékété

# Atchina

Gbeffa Djimey village (Bénin)

♩ = c. 186

The musical score is organized into four staves, each with a double bar line and a clef-like symbol. The staves are labeled on the left as Bell 1, Bell 2, Kléon, and Kpéssine. The music is written in a system with three measures. The first two measures are identical, and the third measure is marked as a 'variation'. The notation includes quarter notes, eighth notes, and rests. Performance instructions 'R.' and 'L.' are placed above and below notes to indicate right and left hand playing. The Kpéssine staff features asterisks under the first three notes of each measure, suggesting a specific playing technique. A tempo marking '♩ = c. 186' is located above the first measure. A small square icon is present in the top right corner of the score area.

# Toba

## Gbeffa Djimey village (Bénin)

♩ = c. 200

The musical score is written in 12/8 time and consists of four staves: Bell 1, Bell 2, Kléon, and Kpéssine. The tempo is marked as c. 200. The score is divided into two measures. Bell 1 plays a steady eighth-note pattern. Bell 2 plays a pattern of eighth notes with red 'x' marks and blue brackets labeled 'down' and 'up'. Kléon and Kpéssine play eighth-note patterns with accents.

# Agbadja

Gbeffa Djimey village (Bénin)

(5+7 or 7+5)

The musical score is arranged in five staves, each with a 12/8 time signature. The first measure is marked with a double bar line and a repeat sign. The second and third measures are separated by vertical bar lines. The Kpéssine staff has 'R.' markings above the notes in the second and third measures, and 'L.' markings below the notes in the first, second, and third measures. The Shaker staff has a dash in the first measure and a rhythmic pattern in the second and third measures. A small square icon is located in the top right corner of the score area.

# Káká 1

Gbeffa Djimey village (Bénin)

♩ = c. 180

Musical score for Káká 1, featuring four bells (Bell 1, Bell 2, Bell 3, Bell 4) in 12/8 time. The tempo is marked as ♩ = c. 180. The score is divided into two measures by a vertical bar line. Bell 1 plays a sequence of eighth notes with accents. Bell 2 plays a sequence of dotted eighth notes. Bell 3 and Bell 4 play more complex rhythmic patterns involving eighth and dotted eighth notes.

# Káká 2

Gbeffa Djimey village (Bénin)

♩ = c. 180

Musical score for Káká 2, featuring three parts: Bell 1 (with red skirt), Bell 2, and Kléon. The tempo is marked as ♩ = c. 180. The score is divided into two measures by a vertical bar line. Bell 1 starts with a triplet of eighth notes. Bell 2 plays a sequence of eighth notes. Kléon is written on a treble clef staff and plays a sequence of eighth notes. Annotations include 'Bell 1 (with red skirt)' and 'Bell 2'.

# Blékété

Gbeffa Djimey village (Bénin)

♩ = c. 320



Bell

Kleon

## 5. Studies of Pitch and Singing Voice Parts

(a pilot study in very beginning)

Gbessi Zolawadji Agbadja Genre pieces from Youtube

- Agbdja Zolawi: <https://m.youtube.com/watch?v=um7tGiSmZG4>
- La Meilleure Agbadja: <https://www.youtube.com/watch?v=t-wBXXoMLZU>
- Sodabi Agbadja: <https://www.youtube.com/watch?v=1suuyK4NCCY>

Pitches of the chorus parts of these songs has been analyzed by looping a certain pitch while tuning a triangle wave oscillator (with MaxMSP programming software) to exactly the same pitch. Then the reached MIDI-pitch have been read out. Eventually from the collected pitches a synthesizer instrument has been created, which offered the possibility to play along the song (for checking, if the found pitches sound right).

(The songtexts are purely phonetically written down, because the author don't know the language of these songs. It is just for orientation purpose. There are used Estonian language characters for the sponatnously recognized phonems, spontaneous grouping of syllables are not mentioned as word borders.)

# Agbadja Zolawi

## Gbessi Zolawadji

Measured pitches in MIDIcent (base 6900 = 440Hz): 5772 6046 6314 6463 7015 7203 7488 7699

Finalis

The Finalis section consists of eight notes on a single staff. The notes are: G4 (pitch -29, MIDIcent 274), A4 (pitch +46, MIDIcent 268), Bb4 (pitch +15, MIDIcent 149), C5 (pitch -38, MIDIcent 552), Bb4 (pitch +15, MIDIcent 188), A4 (pitch +3, MIDIcent 285), G4 (pitch -12, MIDIcent 211), and F#4 (pitch -2, MIDIcent 211).

Chorus

Metronome

$\text{♩} = 120$

ma - so - ma - so, jä - me - di - a kle - me - ja - ho -

The Chorus section is in 8/4 time and consists of two staves. The top staff contains the melody with lyrics: "ma - so - ma - so, jä - me - di - a kle - me - ja - ho -". The bottom staff is a metronome track with a tempo marking of 120 beats per minute. The melody starts with a sharp sign on the first note (F#4) and includes a 7-measure rest over the second and third notes. Pitch deviations are indicated above the notes: +4, +15, -12, +3, +15, -38, +15, -29, +46, +15.

3 +15

18/8

5

+15 -12 -2 -12 +3 +15 +3 -12 -2

8:7

ue - le, pos - ti to - li - vo foi fa voi vo - lu - le

22/8

6

+3 +15 -12 +3 +15 +3 +15 -38 +15 -29 +46 +15

3 6 6:7

do - de - <sup>3</sup>ge. me - dje rah - va vai - je di - va la - si - jo.

22/8

# La meilleure Agbadja

## Gbessi Zolawadji

Measured pitches in MIDIcent (base 6900 = 440Hz): 5776 6054 6293 6582 6783 7006 7288

Musical staff showing measured pitches in MIDIcent (base 6900 = 440Hz) for the introduction. The notes are: -24 (pitch 6676), -47 (pitch 6453), -7 Finalis (pitch 6893), -19 (pitch 6674), -18 (pitch 6654), +6 (pitch 6954), and -12 (pitch 6788). The MIDIcent values are written below the notes: 278, 239, 289, 201, 223, 282.

Chorus and Metronome section. Tempo: ♩ = 63. The Chorus part is in 3/4 time, then changes to 2/4. The Metronome part is in 3/4, then changes to 2/4. The lyrics are: ä - mi de de - e do - re. ä - mi de de - ve do - re dam ku - i mo pra - mo i - ja moa.

Continuation of the Chorus and Metronome section. The Chorus part is in 3/4, then changes to 6/4. The Metronome part is in 3/4, then changes to 6/4. The lyrics are: e - vi ded - je re do - re - a - jo. — e - na lo na lo a - lo - kom do - re nja - mo bo. —

# Sodabi Agbadja

## Gbessi Solawadji

Measured pitches in MIDIcent (base 6900 = 440Hz): 6009 6232 6480 6723 6966 7263 7448

Finalis

Intervals: +9, +33, -21, +23, -35, -37, +48

MIDIcent values: 223, 248, 243, 243, 297, 185

♩ = 300

Chorus

Intervals: +23, -35, +23, -21, +23, -37, +48, -35, +23

Lyrics: dži - ni - gul - ga džan - ko - noi no - ai džo mō - no so - da - bi.

Metronome

3 +33 +23 +33 +23 -21 a.s.o. +9

so - da - bi ku - fo - fo de vau so bõ - ne džo - a - me. m - gu - gi bla džä - džä - džä so - da - bi

5

bu - fo fo di rau - sog mi - li to - me

6

m - gu - gi bla džä - džä - džä ga ga - va braj dži - ga le - do ko - le

7

go - gu ku - no vja - do so džu - do so - da - bi - va

9

dže - go - a da - da me - o - mü se kau - kva so džu - ma.

11

džu - kva vi - vo - ja - je - si - na vil - ja me - le mu - ka - va dvoa vi - von - ja - va.

Merci pour votre attention !

