

Adapting the marimba into Astor Piazzolla's music

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Submission date: April 7th, 2015

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1. Foreword

1.1 Motor and motivation

Since I was a child, I have been attracted to folk music with lyrical melodies, as they were enjoyable to listen to and easy to remember. This interest in folk music continued during my time at *Codarts*, Rotterdam (hereinafter “Codarts”). Throughout my Bachelor degree in classical percussion, I have played a wide range of traditional folk music from Argentinian Tango and Bulgarian folk music, to the traditional music of the Senegalese and Ghanaian regions.

The music that I was most interested in was by Astor Piazzolla because of the passion exposed through his music. I have played the following two of his compositions written for marimba:

- *Nightclub 1960* (third movement of the *Histoire du Tango*) for acoustic guitar and flute, played on marimba (guitar part) and vibraphone (flute part);
- *Libertango* arranged for marimba solo by Eric Sammut.

* DVD: score 1+2

Coming from the classical world and thus not familiar with Tango music, I would like to delve deeper into this rich and passionate musical genre. Fortunately for me, Codarts has a tango department from which I drew knowledge and experience.

1.2 Research Question

Defining the role of the marimba in Astor Piazzolla's music within a Tango quintet that includes bandoneon, violin, electric guitar and double bass.

1.3 Goal

It is common in the percussion world to play the music by Astor Piazzolla without being proficient in the Tango style. A lot of percussionists, including me, simply play the piano or guitar parts on the marimba without making any adjustments to the arrangement, because it sounds good to us and it is technically possible. By copying directly, we think we know about the style, but we are wrong. This issue can also be found in the marimba arrangements of Bach's *Cello Suites*. In my opinion, one should research about styles of the compositions if they were not originally written for percussion. Otherwise one will never be as close as possible to the intended style, which is essential for a good performance.

Since Tango is about arranging, my goal is to find a suitable role for the marimba in the music of Astor Piazzolla that is as closely aligned to the stylistic traits of Tango as possible.

I have divided my research into three intervention cycles, each consisting of the four following steps:

1. Zero recording – the starting point for each intervention cycle
2. Reflection and assessment
3. Research
4. Apply to my praxis - record and reflect upon the result

2. First intervention cycle

2.1. Zero/reference recording

The start of my artistic research is based on a recording of Piazzolla's *Nightclub 1960* (third movement of the *Histoire du Tango*). This piece was originally written for acoustic guitar and flute, but I copied the original notes to the marimba (guitar) and vibraphone (flute). Having performed this composition many times, it appeared to be an appropriate starting point for my research on the music of Piazzolla.

*DVD: track 1 (December 2013) + score 3

2.2. Feedback and assessment

The first person I have shown this recording to was *Gustavo Beytelmann*, one of the current leading Tango composers and Head of the Tango department at Codarts:

- *"The way Piazzolla writes for guitar works technically very well and sounds convincing on the marimba, since both instruments are harmonic instruments. The only difference is the missing sustain of the marimba, which is not a problem for the electric guitar with amplification. This might be an issue for a later moment.*
- *When arranging, be aware that the marimba can never imitate another instrument. Imitating notes is not imitating their sound and character.*
- *Make a selection of works by Piazzolla you really want to arrange."*

The second feedback I received was from *Santiago Cimadevilla*, a bandoneon player of the quintet *Trasnoche* and Master supervisor at Codarts:

- *"Choose a piece by Piazzolla you want to arrange. Before you start arranging, you first should analyze typical patterns which often occur in Piazzolla's music: yumba, milonga, walking bass, syncopation, only to mention a few. By understanding those patterns, you get more familiar with the Tango style. In order to find a suitable function for the marimba, start an arrangement for smaller line-up (duo or trio) to see how far you can go with the possibilities on the marimba."*

2.3. Do research

Data collection

Based on the feedback I received, I chose to start with an analysis and arrangement of a composition by Astor Piazzolla called *Otoño Porteño* for bandoneon, violin, electric guitar, piano, and double bass. In order to get more familiar with this composition, I explored the stylistic patterns that are important for this piece, which are:

1. *Yumba*
2. *Milonga campera*

* (See pages 6-12 for explanation of both terms)

The next step was to gather information about those patterns, therefore I decided to use the following two strategies: literature and case study

Based on those two strategies, I found the necessary information to arrange for a line-up where the marimba can fit in.

1) Literature

Bibliography

Books:

- Vervelde, Leo. Warman, Wim. *Transcription course*, 2001, pp 14-16, 19, 27, 31

*DVD: document 1

I haven chosen this book because it gave me an explanation and examples of many terms among *Yumba*, *Milonga*, *golpe* and *arrastre* in Tango music, which I did not know before and which were important to know for the begin of my research.

Transcription:

- Van Hemert, Christiaan. *Otoño Porteño*

* DVD: Score 3

The reason I have chosen this score, is that Christiaan van Hemert did a lot of transcriptions of Piazzolla's music. Being a violin as well as double bass player in classical and Tango music, he consider him as a specialist for my research, I used his transcription as a starting and reference point for my research and arrangements.

CD's:

- Piazzolla, Astor. *Adios Nonino* (1969) Trova Industrias Musicales, S.A Buenos Aires
- Piazzolla, Astor. *Muerte del Angel* (1997), Editions Milan Music, Italy

* DVD: track 2+3

Those are the 2 recordings of which Christiaan made a transcription.

2) Case study

The face-to-face interview is the method I employed in order to familiarize myself with those patterns.

On March 26th, 2014 I had a meeting with Victor Villena, bandoneonist of the Quinteto *El Después* and guest teacher at Codarts. During our meeting, Victor gave me explanations as well as a deeper understanding of the *yumba* and *milonga*. He told me about the historical context of the *yumba*, its development from Pugliese to Piazzolla and the function itself, including the division of the *milonga campera*.

Content analysis

With the received information I made a content analysis of these two patterns.

Yumba

a) Definition

Yumba is a figure of speech introduced by Osvaldo Pugliese who was looking for a way to accompany soloists on piano. One would pronounce it like:

“Shooom---baaa”.

On one hand, the elastic feeling of the pattern (“*shoom*”: effect of the double bass) is represented through the first and third beat, which are both stretched. On the other hand, the second and fourth beats (off-beats) are hit on the back of the double bass (“*baaa*”, short).

According to Victor Villena, this elastic long-short effect is very similar to the classical thinking: strong beats on one and three and soft beats on two and four. Pugliese uses the left hand of the piano, playing low clusters, as a short, sharp and soft percussive effect.

Moreover, Victor explicated that Osvaldo Pugliese played with the timing and tried to anticipate the second and fourth beat, by using legato and pedal, while Astor Piazzolla approached the yumba more as a basic rhythmic accompaniment.

An example of Piazzolla’s yumba in *Otoño Porteño* can be heard on the DVD: track

b) Function of each instrument

There are two different groups representing the yumba:

- Melody and chords: bandoneon, guitar, and right hand of the piano;
- Rhythm accompaniment: violin (chicharra), double bass, and left hand of the piano.

*Transcription by Christiaan van Hemert of diverse recordings of Astor Piazzolla. All following sheet examples of the quintet version of *Otoño Porteño* are also taken from this transcription.

The original Yumba can be heard in both recordings of Astor Piazzolla.

*DVD: Track 2+3

For every example in my content analysis you can refer to both recordings.

c) Harmonic function:

The yumba is harmonically based on three chords (I-II-V) that are spread over two bars: m.1 (I), m.2 (II-V).

This pattern consists of descending chromatic chords and rhythmic effects:

On one hand, the descending chromatic chords are played by bandoneon, guitar, and the right hand of the piano.

Bandoneon

Electric Guitar

Piano

The harmonic section (bandoneon and piano) has almost the same chords, except that the first and fourth chords vary. The most important feature is the close dissonances within the chords. Both pronounce each first and third beat with an accent, while the second and fourth beat are very short and subtle.

Bandoneon

Piano

The guitar has the same chord in a wider position, but with fewer dissonances. It has a glissando on each chord to connect the chords with the rhythmical effects happening on beats two and four in the other parts. By adding the glissando, one experiences the first and third beat longer than the short off-beats played in a percussive way. This is the idea of the *yumba*.

Electric Guitar

On the other hand, we have the rhythm/chord section consisting of violin, left hand of piano, and double bass.

Violin I

The image shows two staves of music. The top staff is labeled 'Piano' and the bottom staff is labeled 'Double Bass'. Both are in 4/4 time. The Piano part features a series of chords (A-B-E) with glissandos (marked with a 'v' and a horizontal line) on every first and third beat. The Double Bass part features a rhythmic pattern with root notes (A-B-E) and glissandos (marked with a 'v' and a horizontal line) on every first and third beat.

Starting at the last mentioned section, the double bass plays the root notes of the chords: A-B-E over two bars on every first and third beat. To start those beats, an *arrastre* (upbeat with a glissando) is added as a rhythmic effect.

The image shows a single staff of music for the Double Bass. It features a rhythmic pattern with root notes (A-B-E) and glissandos (marked with a 'v' and a horizontal line) on every first and third beat.

The off-beats (two and four) are played as *golpe* technique, where the performer has to hit the double bass with the hand on the back of the instrument. This idea is also meant as a light stroke in contrast to the stretched dissonances. The left hand of the piano has the same fundamental notes in the bass. On beats two and four, the pianist plays clusters, which have the same light effect as the golpe of the double bass.

The image shows a single staff of music for the Piano. It features a rhythmic pattern with root notes (A-B-E) and glissandos (marked with a 'v' and a horizontal line) on every first and third beat.

The violin is used as rhythmic instrument as it plays a non-pitched pattern called *chicharra*, similar to the guiro, a percussion instrument.

The image shows two staves of music. The top staff is labeled 'Violin I' and the bottom staff is labeled 'Electric Guitar'. Both are in 4/4 time. The Violin I part features a non-pitched pattern called *chicharra*, which is a rhythmic pattern of 'x' marks. The Electric Guitar part features a rhythmic pattern with root notes (A-B-E) and glissandos (marked with a 'v' and a horizontal line) on every first and third beat.

Conclusion:

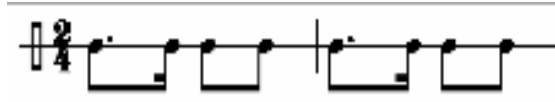
By analyzing the function of each instrument utilized in the yumba, I came to the conclusion that Piazzolla does not use the yumba in *Otoño Porteño* as an accompaniment but more as an independent two-bar pattern to start or end a piece. In other compositions, such as *Verano Porteño*, he uses it as an accompaniment pattern. The rhythm sections in *Otoño Porteño* are reminiscent of a drummer starting briefly with a groove before the band makes its entrance.

Milonga campera:

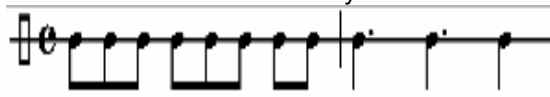
Definition:

The Milonga is another of the many rhythmic patterns found in the Tango tradition. There are two main forms of milonga:

- Milonga cuidana (city milonga), which is similar to the Habanera rhythm; usually written in a 2/4 signature.



- Milonga campera (country milonga), a slow form of milonga, which originates from the repertoire of the Payadores; where more performers compete to produce the most voluble verse. The Payadores has its roots in Chile, South America.



It is written in a 4/4 time signature and a typical rhythmical subdivision is usually presented in eight notes (3-3-2). In *Otoño Porteño*, this milonga type is used as an accompaniment pattern that is played on the piano, guitar, and double bass. The different registers of each instrument create more contrast in registers:

The double bass and guitar play a double stop fifth interval (A and E). The piano has an additional D sharp, a half step below the E to create a dissonance. To vary this pattern, the guitar plays a variation of this 3-3-2 pattern as we might see below:

20

Musical score for Milonga campera accompaniment. The score is for five instruments: Bd. (Double Bass), Vln. I (Violin I), Gtr. (Guitar), Pno. (Piano), and Db. (Double Bass). The key signature has one sharp (F#). The time signature is 4/4. The Bd. part starts with a 3-measure rest, then plays a sequence of eighth notes. The Vln. I part starts with a 3-measure rest, then plays a sequence of eighth notes. The Gtr. part starts with a 3-measure rest, then plays a sequence of eighth notes. The Pno. part starts with a 3-measure rest, then plays a sequence of eighth notes. The Db. part starts with a 3-measure rest, then plays a sequence of eighth notes.

Instead of the typical 3-3-2, Piazzolla writes a 2-1-2-3, which creates space for a glissando that leads into the next measure. The bandoneon plays the melody and the violin plays long tones that descend chromatically each measure (E – Eb –D –E).

Victor Villena stated that the first beat of the 3-3-2 is always the strongest one with the second division of the bar softer than the first, and the last (on the fourth beat of the measure) division being approached as an upbeat to the next bar.

2.4. Apply to my praxis

After having analyzed both the yumba and milonga patterns, I have been experimenting with how they could be best realized on the marimba. As a starting point, I directly copied the piano and guitar parts onto marimba. After that, I added different effects among glissando, playing on the tubes of the marimba and using a kick drum in order to find the best sounding version on the marimba.

*DVD track: 4-7 (yumba, February 2014) 8–11 (milonga campera, February 2014)

Yumba

Examples:

Yumba 1(track 4)

11 x= clusters of 4 notes

Yumba 2 (track 5)

17 x= kick drum stroke

Yumba 3 (track 6)

7 glissando on tubes

Yumba 4 (track 7)

x=cluster of 4

Milonga 1 (track 8)

15

Mar.

Marimba

The musical score for the Marimba part consists of two measures. The first measure contains three chords: a D4-F4-A4 triad, a D4-F4-A4 triad with a dotted quarter note, and a D4-F4-A4 triad. The second measure contains three chords: a D#4-F#4-A4 triad, a D#4-F#4-A4 triad with a dotted quarter note, and a D#4-F#4-A4 triad. The chords are marked with 'V' below them. The bass staff is empty.

Mar.

mf

The musical score for the Maracas part consists of two measures. The first measure contains a series of eighth notes in the right hand, starting on G4 and ascending to D5, with a *mf* dynamic marking. The second measure contains a series of eighth notes in the right hand, starting on D5 and descending to G4. The left hand is mostly silent, with a few notes in the first measure.

Feedback on the yumba and milonga recordings:

Gustavo Beytelmann about the yumba:

"The version containing a glissando is the most organic one. It connects the chords with the clusters and sounds best on your instruments. Emphasize more the first and third count to get more the feeling of the 'Piazzolla yumba'."

Wim Warman (composer, arranger and piano teacher in the Tango Department of Codarts) about the yumba:

"The version with the glissando sounds best on the marimba. However, it is the opposite of what the piano does. Instead of connecting the chords (strong beats) with the clusters (weak beats), the piano plays a glissando after having played the clusters. This is meant to be an upbeat to the first and third count.

Since the guitar also does a glissando on each first and third count, your version of the yumba seems to work as well."

Santiago Cimadevilla about the milonga campera:

"The version where the marimba plays all the eight notes works best. Accentuating each 3+3+2 followed by ghost notes in between brings a steadier groove for the entire ensemble. Rhythmical variations over two bars in this 3+3+2 are usually happening. Come one with one or two."

After trying out different possibilities and regarding the received feedback from Tango specialists, I came to the conclusion that the following recordings of the yumba and milonga were working best on the marimba:

* DVD track 7 (yumba, February 2014) + 11 (milonga campera, February 2014)

Depending on the result of those two patterns, I started an arrangement for violin, marimba and double bass. I realized that with the missing sustain, the marimba cannot be the primary melodic instrument in Tango music, but since it is similar to a piano and guitar, it can play more functions at once, and with its wide registers can create different colors and voices. To give more space to the marimba, I used the violin as a melodic instrument, the double bass as the rhythmic driving force, and the marimba to provide the harmonic basis of the groove.

*DVD: Track 12 (June 5th 2014) + score 3

3. Second intervention cycle

3.1. Zero/reference recording

I have decided to record my trio arrangement of *Otoño Porteño* for violin, marimba, and double bass as a starting point of my second intervention cycle. This recording is the same as the result of my first intervention cycle

The musicians I have been working and performing with are_Guilherme Marques on violin, Lorena Marcos on double bass.

DVD: track 12 (June 5th 2014) and score 3

3.2. Feedback and assessment

Gustavo Beytelmann:

"You have not yet found a suitable function for the marimba. You jump too much around between, melody, harmonic and bass accompaniment. Focus on one function."

Christiaan van Hemert (string player as well as Master supervisor at Codarts):

"You have the wrong information about when to use pizzicato and arco for the double bass. Research the relation between the techniques of the double bass and piano to have a correct fundament. Piazzolla's music is always thick in harmony and accompaniment. Functions are divided to more instruments than only one."

Santiago Cimadevilla:

"After having arranged for a trio line-up, try now to go ahead with a quintet line-up excluding piano. One keyboard instrument is enough."

Reflections on received feedback:

In this reflection, I summarized the feedback within the framework of issues to be investigated. The first is to analyze the function of each instrument in *Otoño Porteño*. During the first intervention cycle, I performed an analysis of the function of each instrument in the yumba. Now I go further by looking to the whole composition. Within this analysis, I will also research the function of the two different double bass techniques: *pizzicato* and *arco*. The analysis will also include a comparison of the original version with my trio arrangement, which in my opinion is necessary in order to ascertain what was successful and what has still requires improvement. Lastly, I will look as well for correlations between the instruments, for example if an instrument has a connection with another one, may it be sonically – or rhythmically related.

The second and last step is to find different ways to replace the piano. Experimenting with the different instruments that might serve the function of the piano will be essential.

3.3. Do research

In order to receive more information about the double bass techniques for my content analysis I will employ the following three strategies:

- 1) Case study
- 2) Literature
- 3) Experiment

1) Case study

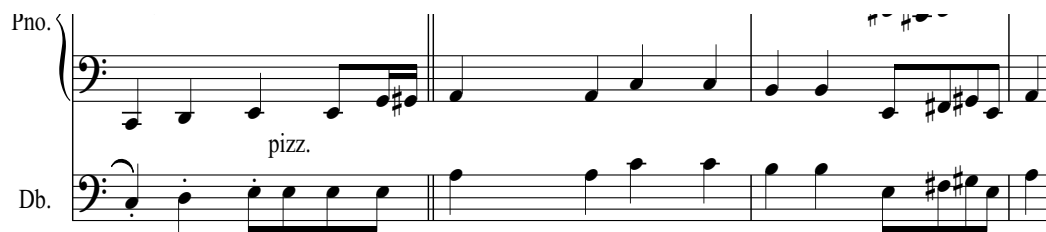
From this strategy I decided to have a face-to-face interview with Christiaan van Hemert. During this meeting I gained knowledge about the above-mentioned techniques and the situations in which Piazzolla made use of them.

Firstly he explained that the double bass has a correlation with the left hand of the piano. They combine to form the engine of the music, which providing the necessary drive and groove to the band. The double bass and left hand of the piano also work together in opposition, for example when the double bass plays pizzicato, the left hand on the piano plays legato. The result is a combination of the percussive sound of the double bass and the sustain of the piano.

Christiaan suggested that I further investigate these correlations between the instruments of the ensemble in my content research.

Content analysis

Example of the light accompaniment: pizzicato in the double bass and legato in the piano:



All examples from my content analysis can be heard in both recordings of Astor Piazzolla.

*DVD: Track 2+3

Pizzicato of the double bass = attack

Legato of the piano = sustain

Moreover, another correlation exists between the double bass and left hand of the piano; when the double bass plays with the bow, the piano plays one octave lower than the double bass.



This accompaniment has a denser texture, or heavy accompaniment, while the first accompaniment with the pizzicato-legato relation is thinner and lighter. This is partially due to the fact that playing with the bow has a much larger sound than pizzicato on double bass.

In both examples I realized that the piano always plays one octave lower than the double bass to achieve more sustain, as the double bass provides the attack.

During my content analysis I also researched the functions of each instrument in the whole composition and have divided the structure of the composition into eight parts:

- 1) Introduction (yumba) (m. 1-8)
- 2) Exposition A (m. 9-29)
- 3) Cadenza B (m. 29-47)
- 4) A' (m. 48-64)
- 5) Cadenza B' (m. 65-85)
- 6) Development C (m.86-98)
- 7) Recapitulation A'' (m.99-106)
- 8) Outroduction (yumba) (m. 107-117)

In my analysis I focused on the following three parts:

Introduction (yumba)
Exposition
Cadenza B and B'

Example 1: Yumba

Introduction (m. 1-8)

The musical score for the Introduction (m. 1-8) of 'Yumba' is written for five instruments: Bandoneon, Violin I, Electric Guitar, Piano, and Double Bass. The key signature is one sharp (F#) and the time signature is 4/4. The score is divided into two systems of four staves each. The first system contains measures 1-4, and the second system contains measures 5-8. The Bandoneon part features a melodic line with slurs and ties. The Violin I part has a rhythmic pattern of eighth notes. The Electric Guitar part has a series of chords. The Piano part has a series of chords. The Double Bass part has a series of eighth notes.

Exposition (m. 9-29 bandoneon melody)

8

Bd.

Vln. I

E. Gtr.

Pno.

Db.

pizz.

- Bandoneon: melody
- Violin: rhythm accompaniment
- Electric guitar: harmonic accompaniment
- Left hand of the piano: rhythm/harmonic accompaniment
- Right hand of the piano: bass accompaniment
- Double bass: bass accompaniment

Almost the same scheme occurs from m. 48-56. The only difference is that the violin is used here as a melodic support for the bandoneon. This is the development part where the melody has changed slightly. While the first instance of the melody was ascending, this second on is descending.

47

Bd.

Vln. I

E. Gtr.

Pno.

Db.

arco

pizz.

B \emptyset

E7

phaser off

C-9

E7b10

The recapitulation happens from m. 99-106.

Example 3: m. 33-47 (bandoneon cadenza)

- Bandoneon: soloist
- Violin: rhythmical accompaniment (from m. 41 on)
- Electric guitar: harmonic accompaniment
- Piano: rhythmical accompaniment (from m. 41 on)
- Double bass: rhythmical / bass accompaniment, (from m. 41-47 rhythmic/harmonic instrument)

Otoño Porteño

5

33

Bd.

Vln. I

E. Gtr.

Pno.

Db.

phaser

A- F/A F#ø/A

pizz.

During the first part of the bandoneon cadenza, the violin and piano do not play, joining at m. 41 to provide a rhythmical accompaniment.

From m. 41-47, the double bass changes its function from a rhythmical/bass accompaniment to a rhythmic/harmonic accompaniment, in the same manner. An almost identical copy of this cadenza occurs later from m. 70 to 85. This time the violinist has the cadenza, while the bandoneon player provides counterpoint.

In this part the piano is more active and is used as a harmonic accompaniment. The electric guitar keeps its harmonic function as well as the double bass, which changes its function again in the second part.

Comparison with my Trio arrangement:

In my arrangement I used the three above-mentioned instruments in the following roles:

Violin: melodic / rhythmic instrument

Marimba: melodic/rhythmic/harmonic and bass instrument

Double bass: rhythmic/ bass accompaniment

Comparison between my trio version and the original one:

In my arrangement, the bass accompaniment does not have the sustain as it does in the original. It only contains the attack of the double bass and marimba.

The issue I encountered with the piano and marimba is that the piano can execute multiple functions simultaneously with greater ease than the marimba.

Since both instruments are keyboard instruments, I tried to approach the marimba the same way as the piano, with both instruments having roughly the same technical limitations, with exception to sustain and large chords in the marimba. In my recording of my first year recital I

discovered that my arrangement was not successful and that I have to reconsider the function of the marimba. On one hand, I attempted to switch between all the possible functions of the marimba instead of sticking to one or two functions. On the other hand, I found out what functions work best for the marimba. The harmonic and rhythmic accompaniment is very precise and strong. While going lower in register, the sound of the marimba gets warmer and more resonant.

The marimba has a range of five octaves, which gives you more options for colours and voicing.

Lastly I discovered that Astor Piazzolla's compositions are always dense in instrumentation. Every instrument, except for the soloist is doubled:

- One soloist (bandoneon / violin)
- Two or three harmonic/rhythmic accompaniments (right hand piano, electric guitar, violin)
- Two bass accompaniments (left hand of piano, double bass)

2) Experiment

Upon reflection, I found that my utilisation of the marimba was not entirely authentic, and so I decided to focus more on finding a way for the marimba to enter the tango world. I approached this through experimenting with electric guitar and double bass. As I have previously analysed all the functions in the original version and made a comparison between the original and my trio arrangement, it was clear for me that I needed to make the next step more practical.

To start this strategy I chose to utilise **experiment vs. test in the arts**.

I began this method with a test in which the piano part is the primary concern. It is a reproduction of the original part, with the only difference being that the marimba performs the function of both the piano and the double bass.

I constructed three different tests (m.9-16) where the double bass (Lorena Marcos) continues to function as previously and the marimba's function adjusts as follows:

- Double bass and marimba play the bass part

*DVD track: 13 (December 2nd 2014)

The image shows a musical score for two instruments: Marimba and Kontrabass. The Marimba part is written in the upper staff, and the Kontrabass part is written in the lower staff. The Kontrabass part is labeled 'Pizzicato'. The score shows a bass line with various notes and rests, including a triplet of eighth notes in the Kontrabass part.

- Double bass plays the bass part and marimba plays the harmonic part

*DVD track 14 (December 2nd 2014)

Harmonic part

The image shows a musical score for a Marimba (labeled 'Mar.'). The score is in 2/4 time. It features a melodic line in the right hand and a bass line in the left hand. The right hand has a triplet of eighth notes marked with an '8' and a 'mf' dynamic. The left hand has a triplet of eighth notes marked with a 'mf' dynamic. The score includes various musical notations such as beams, slurs, and accidentals.

c. Marimba plays both harmonic and bass part

*DVD track 15 (December 2nd 2014)



How do the three examples sound?

a) Track 13: As I have already concluded in my comparison between the original version and my trio example, the marimba does possess the long sustain that the piano does. Due to this, the first recording in which both play the bass part does not authentic. In particular the light accompaniment (m.9-12) sounds out of place. The keyboard instrument produces a shark attack, which does not fit the style of the original light accompaniment.

However, when going to the second part (m.13-16) where the light accompaniment changes to a heavy one (characterized by the arco of the double bass), the marimba sound conforms well to the sound.

The low range of the piano and marimba are sonically comparable, although the latter is played one octave higher. In combination with the arco technique by the double bass we reach a heavier attendance in comparison with the previous light accompaniment. The lower one plays on the marimba, the warmer the sound gets and the more resonance we hear.

Thus for this part (m.13-16), the marimba can overtake the piano function in combination with the double bass.

b) Track 14: In the second recording, the harmonic part played by the marimba sounds similar to the original, where the electric guitar is the harmonic support.

The sharp attack, rapid delay and the use of glissandi on the marimba allow the instrument to be successfully used as a harmonic instrument in this setting.

c) Track 15: The last recording in which the marimba plays both parts is similar to the piano part, but does not fulfill its role successfully enough to be considered authentic to Piazzolla's composition. The resonance is still an issue, and one should first focus on one function in order to define it, instead of using many functions on the marimba.

In my opinion, the marimba cannot replace the piano alone by itself due to the lack of sustain. The second recording is an example where the double bass plays the bass part and the marimba the harmonic part. However in this instance, we miss the sustain of the piano, which could possibly provided by the guitar.

This idea led me to the experimental part in which I came up with new ideas to find a convenient place for the marimba within a tango quintet.

Which instruments could take over the function of the piano?

In theory, the bandoneon and electric guitar can be used as harmonic instruments.

Although the bandoneon has the ability to play, Astor Piazzolla employs in the critical role as a melodic instrument in his music.

The electric guitar has the more supportive role of a harmonic function and so I began to experiment within the harmonic/rhythmic and bass section of a tango quintet. The following instruments were part of this experiment:

- Marimba
- Electric guitar, and
- Double bass

Experiment with Lorena Marcos on double bass and Tim Panman on electric guitar

- I. Double bass and electric guitar play the walking bass while the marimba is responsible for the harmonic part.

Git. *f*

Mar. *mf*

Kb. *f* (Pizzicato)

*DVD: track 16 (December 2nd 2014)

The result is very close to the original: one hears the attack of the pizzicato played by the double bass and the sustain/legato of the electric guitar imitating the piano. This works very well from m.9-12. After that, we might need a heavier accompaniment, which brings me back to the idea that the marimba can play the bass part in conjunction with the double bass.

- II. Double bass and marimba play the bass part while the electric guitar focuses on the harmonic accompaniment. Indeed this would be from m.13-16 resulting in a sonically denser bass accompaniment.

(m.9-12)

Marimba

Elektro-Gitarre *mf*

Kontrabass *mf*

(m.13-16) Dense bass accompaniment (arco of double bass and double stop octaves on marimba)

E. Git. *mp*

Mar. *mp*

Kb. *mp* Arco

*DVD: track 17 (December 2nd 2014)

III. A combination of both examples:

Double bass plays the bass parts, switching from pizzicato to arco, with the marimba and electric guitar switching parts between bass and harmonic accompaniment.

*DVD: track 18 (December 2nd 2014)

Score: see point 3.4 *Apply to my praxis*, underneath track 20

Conclusion

After completing this experiment, I came to the conclusion that the electric guitar is able to solve the issue of sustain of the marimba. By sharing the function of the piano between the bass and marimba, an accurate interpretation of the piano part can be accomplished.

The double bass has an important role on both, as they need to adapt themselves to the sound of the two different double bass techniques.

Example: when the double bass switches from pizzicato to arco, the electric guitar having played the bass part switches to the harmonic accompaniment while the marimba does the opposite.

The addition of glissandi in the marimba part mirrors the guitar slide giving an illusion of more sustain. Furthermore I used *dead strokes** (muffled stroke) as percussive effects on the marimba.

(* Dead stroke example: DVD track 19 (March 2015))

3.4. Apply to my praxis

Reflection on my second intervention cycle

After researching, testing and experimenting, I can finally assert that I have found a suitable function for the marimba within a harmonic/rhythmic section of a tango quintet. The last step was to create a marimba solo so that the instrument can also shine in a soloistic role, and to record the entire arrangement with all the instruments.

*DVD: track 20 (December 2nd 2014)

Score example:

(m.9-12)

The musical score example for measures 9-12 is presented in three staves. The top staff is for the Electric Guitar (E. Git.), the middle for the Marimba (Mar.), and the bottom for the Double Bass (Kb.). The E. Git. staff begins with a forte (f) dynamic and features a melodic line with a glissando in measure 10. The Mar. staff starts with a mezzo-forte (mf) dynamic and includes a glissando in measure 10. The Kb. staff is marked (Pizzicato) and begins with a piano (p) dynamic, playing a steady bass line. The score is written in 2/4 time and includes various musical notations such as notes, rests, and dynamic markings.

(m.13-16)

E. Git.

Mar.

Kb.

mp

mf

mp

f

mp

mf

mp

Arco

mp

mf

mp

The musical score consists of three staves. The top staff, labeled 'E. Git.', is in treble clef with a key signature of two flats. It contains four measures of music with dynamic markings *mp*, *mf*, *mp*, and *f*. The middle staff, labeled 'Mar.', is in bass clef and contains four measures of music with dynamic markings *mp*, *mf*, *mp*, and *mp*. The bottom staff, labeled 'Kb.', is in bass clef and contains four measures of music with dynamic markings *mp*, *mf*, *mp*, and *mp*. The word 'Arco' is written above the third measure of the keyboard part. The score includes various musical notations such as chords, single notes, and rests.

4. Third intervention cycle:

4.1. Reference recording

My last intervention cycle started with the recording I used for the presentation of my second intervention cycle on December 9th, 2014. In this recording we can hear that I only recorded the rhythm/harmonic section of a tango line-up.

*DVD: track 20 (December 2nd, 2014)

4.2. Feedback and assessment

Santiago Cimadevilla:

"Always ask the maximum of your rhythm section. As you are not yet the most experienced Tango player, you should ask the opinion and advice of your fellow musicians who are more familiar with this style."

Example 1: You wrote a staccato in the guitar part, but he does not do it. Maybe you were not aware of it. But this is an example of the details that are currently missing,

Example 2: Ask the double bass player to play a softer pizzicato. Now she is almost exaggerating with the pronounced sound, which destroys the groove.

In my opinion, the last thing to work on now, would be finding a typical marimba solo for your arrangement. Look for a few marimba solos and research what techniques make it being a specific solo."

Reflection on received feedback

As said I have found a suitable place for the marimba within a Tango quintet. The last step will be to not make this keyboard instrument a slave of the Tango music, but instead use all its strengths for a marimba solo regardless of the missing. A recording will be then made of the final result.

4.3. Do research

For the purpose of finding out how a marimba solo looks and sounds like I chose the strategy **Literature** with its following two methods: **Bibliography** and **Content analysis**.

Literature

Bibliography

CD's:

- Piazzolla, Astor. & Burton, Gary. *The New Tango* (1987), WEA International Inc.

Scores:

- Sammut, Eric. *Libertango Variations on a Marimba* (2002), Keyboard Percussion Publications
- Hirose, Hayato. *Fantasy for marimba* (2010), De Haske Publications BV

I have chosen the recording of Astor Piazzolla playing together with the famous vibraphonist Gary Burton, with the aim of learning more about a mallet solo in Tango music. Next to this I performed a content analysis about both works written for marimba.

Content analysis

I listened to both tracks *Milonga is coming* and *Vibraphonissimo* of the recording *The New Tango* and listed a few selected techniques:

- Simple melody that is varied each time it appears
- Increasing complexity of motives/melodies, for example: a melody returns in a solo but in a more creative way
- The rhythm may be developed in a more complex virtuosic way. Also they chords may contain more dissonances.
- To connect the melodies and phrases, Burton plays rapid descending chromatic passages, consisting either of thirty-second notes or sixteenth note triplets.

DVD: track 21 (*Milonga is coming*) + 22 (*Vibraphonissimo*)

From the scores I have analyzed, I found different techniques utilized by both composers their respective compositions and arrangements.

a) *Fantasy for marimba* by Hayato Hirose

Commissioned by Fumito Nunoya, Odate Wind Ensemble and Odate City Band

Solo Marimba

FANTASY FOR MARIMBA

Hayato Hirose

Allegro *M2*

8 14 23

Solo

mp

- The melody appears as eight notes (highlighted in yellow). The composer adds the same notes one octave lower on the sixteenth notes off-beats, which creates more movement and adds color to the marimba. This technique is used to combat the ever-present issue of lack of sustain in the marimba.



Furthermore, the arpeggio technique (highlighted in green above) is a simple but effective technique that is very piano-like but transfers well onto the marimba. Instead of only playing single quarter notes, which are highlighted in green, the composer adds sixteenth notes from the harmonic structure to intensify the density of texture.

* DVD: track 24 + score 6

The French percussionist and composer Eric Sammut wrote a similar improvisation on the main theme of Piazzolla's Libertango for marimba.

b) *Libertango Variations on a Marimba* by Eric Sammut

One can see a lot of notes and fast rhythms.

This is a technique used by the marimba player and arranger of this tune Eric Sammut to compensate for the missing sustain of the marimba when the melody simple and slow moving.



In m.11 to 13 Sammut uses the ascending chromatic scale, with the important notes being accentuated in the right hand. The left hand is used to expand the texture and compensate for the lack of the sustain.

In addition to the melody (m.14) that uses a sixteenth pattern with varying accents to create a groove, Sammut also added the harmony to the marimba part. This enables the listener to follow both the melody and the descending chromatic harmony simultaneously.

* DVD: track 23 + score 2

4.4. Apply to my praxis

After having analysed both soli I have put everything into context by trying out the discovered techniques, resulting in the following arrangement of Otoño Porteño:

The musical score consists of three systems of piano accompaniment for 'Otoño Porteño'.
 System 1 (measures 93-96): The right hand plays a melody with sixteenth-note patterns and accents, while the left hand provides a descending chromatic harmony. Dynamics include *f* and *mf*.
 System 2 (measures 97-100): Continues the melodic and harmonic patterns, featuring triplets and a *mf* dynamic marking.
 System 3 (measures 101-104): Marked 'Pesante', this system features a more complex harmonic texture with many beamed notes in both hands.

In the first four bars, I have used the alternating octaves technique, which *Hayato Hirose* also uses. I extended this idea further by using the melody over three octaves instead of two. Also I added accents to this solo, not mainly on strong beats, but also on irregular spots to create a free feeling.

The following four bars I based on chromatic and passing notes depending on the fundamental chords on every first and third count. To end my solo with the last four bars, I used the technique that *Eric Sammut* uses in his variation on Astor Piazzolla's *Libertango*. Starting with a bass note, with the regular and repetitive accented melody on the top and harmonic material in the middle voice.

* DVD: Track 25 (March 16th 2015)

The final result of my arrangement for quintet including bandoneon, violin, electric guitar, marimba, and double bass can be heard on the accompanying DVD.

*DVD: Track 26 (March 9th 2015)

5. Conclusion

At the conclusion of my research I can assert that I have successfully developed a way to incorporate the marimba into a tango ensemble without piano. Although both are keyboard instruments, I realized that the marimba cannot replace the piano due to the lack of sustain and different acoustic properties. The piano can easily execute up to three distinct musical lines simultaneously however the marimba cannot. The final result is that I found a way to divide the harmonic, rhythmic, and bass functions of the piano to other instruments: double bass, electric guitar, and marimba, with the latter two providing the bass and harmonic accompaniment. With this we do not have the need of the piano anymore, as the result sounds quite convincing and authentic. This might be only the start of the marimba being part of a tango line-up as there is very little research on this topic at present. The marimba could be the next classical instrument to crossover into another style, as the flute and violin have in the Tango world.

For future arrangements I will certainly use the knowledge I have gained from this research. Probably when arranging a new composition by Astor Piazzolla it could be that I might discover unknown elements, as I am definitely not a tango specialist. Having explored this style extensively, I can assert that I have a much better understanding of the Tango style. I feel that I still have to learn a lot in Tango music, especially in terms of musical authenticity. The next step after my research would be to venture out of the student world, arrange more works by Piazzolla for a Tango line-up including marimba, and to play with musicians who are experts in this style of music. Actually, it does not have to be the same instrumentation as I have researched; for example excluding some instruments or including the piano. Solo marimba arrangements of Astor Piazzolla's compositions would also be an option. I have been working this year on Pius Cheung's arrangement of Piazzolla's *Verano Porteño*. By receiving lessons from Tango specialists on this piece, my approach towards the music has completely changed, and I have developed further as a musician. Through analyzing the different patterns, but especially working together with musicians from the Tango scene, my musical horizon has expanded.

Another thought is to assist other classical percussionist to access the Tango world by playing works of Piazzolla, as I did at the beginning. The only difference now is that I know the style much better than at the begin of my research, and I am certainly able help people with a classical background to understand the music better. During my research, I have been collecting strategies for how to facilitate entering the Tango world for people not from this field.

By putting those thoughts and strategies on a paper, my next goal is to write a marimba method for classical percussionists how to adapt the marimba into Astor Piazzolla's music.

6. Appendix

6.1. Agenda:

December 2013

- Zero recording: *Nightclub 1960* by Astor Piazzolla for guitar and flute, played on marimba and vibraphone
- Interview with Eric Sammut about arranging and improvising on marimba

First Intervention cycle:

February – June 2014

- Analyzing the following 2 patterns: yumba and milonga campera (mid February–begin March)
- Arranging lesson with Hans Koolmees on 18th March 2014
- Face-to-face interview with Victor Villena on 26th March 2014 about the yumba and milonga
- Experimenting with the yumba on the marimba: recording different possibilities how to play the yumba on the marimba (begin April)
- Receiving Feedback from Wim Warman, and Gustavo Beytelmann (mid April)
- Arranging first version of Otoño Porteño within a trio line-up (begin of April – begin of June)
- Recording of this arrangement done on 5th June 2014 during my first year Master recital

Second Intervention cycle:

September 2013– begin December 2014

- Face-to-face interview with Christian van Hemert on 13th October 2014
- Content Analysis of Christian van Hemert's Transcription of Otoño Porteño and comparison between my trio arrangement and the original version (end of October – end of November)
- Experiment with Tim Panman and Lorena Marcos as a rhythm section (9th December)
- Recording the first part of Otoño Porteño within this rhythm section (9th December)
- Receiving feedback on this recording by Santiago Cimadevilla during the AR3 feedback session

Third Intervention Cycle:

Mid December 2014 - begin of February 2015

- Analyzing two marimba soli: *Fantasy for marimba* and *Libertango* (begin–end of January)
- Analyzing vibraphone soli of Gary Burton of the recording *Nuevo Tango* with Astor Piazzolla
- Writing a solo for marimba within a quintet (begin February)
- Marimba method

Mid February – mid of March 2015:

- Writing down the whole research
- Correcting and adapting the last details
- Recording the final arrangement (March 9th, 2015)

6.2. Marimba method:

During my third and last intervention between January and February 2015 I started writing a marimba method for percussionists who would like to learn more about Tango music and play Astor Piazzolla's music within a Tango line-up. This is a start into this style for people who are not familiar with it. After having read it you should have got the basics about Piazzolla's music and understand the music better as well the functions of the instrument. This method is not finished yet as I have only put my thoughts on a paper during my last intervention cycle. The final cut will happen in the near future.

*DVD: Document 2

6.3. Network

- *Gustavo Beytelmann*: one of the current leading Tango composers and Head of the Tango department at Codarts
- *Santiago Cimadevilla*: bandoneon player of the quintet Trasnóche and Master supervisor at Codarts
- *Wim Warman*: composer, arranger and piano teacher in the Tango Department of Codarts
- *Christiaan van Hemert*: string player as well as Master supervisor at Codarts
- *Victor Villena*: bandoneonist of the Quinteto *El Después* and guest teacher at Codarts
- *Lorena Marcos*: double bass player, Second year Master student in the Tango Department of Codarts
- *Tim Panman*: guitar player, first year Master student in the Tango Department of Codarts
- *Theo de Jager*: guitar player, student in the Tango Department of Codarts
- *Gustavo Cabrera*: violin player, first year student in the Tango Department of Codarts
- *Guilherme Marques*: violin player, fourth year Bachelor student at Codarts
- *Hans Koolmees*: teacher for arranging at Codarts, conservatory of Rotterdam.
- *Eric Sammut*: percussionist, composer and arranger from France
- *Pius Cheung*: a marimba virtuoso, arranger and composer, being currently an assistant professor of percussion at the university of Michigan.

6.4. Music sheet

Verano Porteño for marimba solo Piazzolla, Astor. arranged by Cheung, Pius. 2014, Editorial Lagos

* DVD: Score 8

7. Tracking list

- 1) Zero Point recording
- 2) Otoño Porteño (*Adios Nonino* recording)
- 3) Otoño Porteño (*Muerte del Angel* recording)
- 4) Yumba 1
- 5) Yumba 2
- 6) Yumba 3
- 7) Yumba 4
- 8) Milonga campera 1
- 9) Milonga campera 2
- 10) Milonga campera 3
- 11) Milonga campera 4
- 12) Otoño Porteño (Trio arrangement)
- 13) Test 1
- 14) Test 2
- 15) Test 3
- 16) Experiment 1
- 17) Experiment 2
- 18) Experiment 3
- 19) Dead Stroke example
- 20) Rhythm section recording
- 21) Milonga is coming back (*Nuevo Tango* recording)
- 22) Vibraphonissimo (*Nuevo Tango* recording)
- 23) Libertango for marimba (*Marimba Classica* recording)
- 24) Fantasy for marimba (*From Ancient Times* recording)
- 25) Marimba solo recording
- 26) Otoño Porteño (final arrangement and recording)