

Developing a Crossover Idiomatic Writing for the Double

Bass: Composing/Arranging & Playing, and ... *Da capo!*

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Resumo: A partir de obras de natureza crossover (erudito + popular) compostas ou arranjadas para a “2019 International Society of Bassists Convention”, discuto o desenvolvimento da escrita idiomática do contrabaixo acústico. A partir da interação entre três processos musicais criativos – compor, arranjar e tocar, em vários gêneros musicais (canção erudita, canção de musicais da Broadway, blues, rock, balada e samba), discuto (1) o refinamento da notação na partitura; (2) a heterogeneidade dos sete registros do contrabaixo; (3) a exploração do contrabaixo como instrumento harmônico; (4) a exploração do contrabaixo como um instrumento de percussão; (5) a exploração do binômio texto-música (6) a redução de instrumentações maiores (orquestra sinfônica, grupos de câmara, bandas de blues e rock) para grupos menores (duo, trio e quarteto com contrabaixo, voz, piano e percussão) e (7) o desenvolvimento de técnicas estendidas no contrabaixo não documentadas na literatura.

Palavras-chave: construção da performance, escrita idiomática para contrabaixo acústico, composição e arranjo no contrabaixo, performance no contrabaixo, música crossover e gêneros musicais.

Abstract: Based on works of crossover nature (classical + popular) composed or arranged for the “2019 International Society of Bassists Convention”, I discuss the development of idiomatic writing of the acoustic double bass. Departing from the interaction between three creative musical processes - composing, arranging and playing, in various musical genres (classical song, Broadway musical song, blues, rock, ballad and samba), I discuss (1) the refinement of the notation in the score; (2) the heterogeneity of the seven double bass registers; (3) exploring the double bass as a harmonic instrument; (4) exploring the double bass as percussion instrument; (5) the exploration of the text-music binomial (6) the reduction of larger instrumentations (symphony orchestra, chamber groups, blues and rock bands) to smaller groups (duo, trio and quartet with double bass, voice, piano and percussion) and (7) the development of extended techniques on the double bass not documented in the literature.

Keywords: music performance construction, idiomatic writing for the double bass, double bass composition and arrangement, double bass performance, crossover music and music genres.

This auto-ethnographic study¹ has three motivations: (1) the need to develop the idiomatic writing for the double bass,² especially in the interface between classical and popular music (the so-called crossover music); (2) an invitation for me to present a recital of new compositions and arrangements at the the “2019 ISB (International Society of Bassists) Convention”, which was held on the 6th of June, at Auer Hall, Jacobs School of Music, Indiana University, USA and (3) the receipt of the Grand Award in the “2018 ISB Research Competition”, a prize accompanied with the publication of an interdisciplinary paper (available at www.ojbr.com/volume-10-number-1.asp), co-authored with professor and researcher Guilherme Menezes Lage of UFMG’s School of Physical Education (BORÉM and LAGE, 2019). The paper abovementioned explains how the integration among the senses of vision, touch and hearing allows for greater control of pitch intonation in the double bass, what opens a window for expanding the compositional language of this instrument.

1. Composing/arranging and playing the double bass

In the narrow space of this exploratory article, I briefly address issues of the double-bass idiomatic writing in works taken from the program of this recital, namely “*Dream with me*” by Leonard Bernstein; “*My Melancholy Blues*” by Freddy Mercury; “*Surprise Samba*” by Bill Mays; “*Song of Love*” by H. Villa-Lobos and Dora Vasconcelos; “*Sol e Chuva*” by Chico Buarque and Edu Lobo; “*Sunset Blues*” and “*Gimme Five*” both by myself. The selection of the repertoire comprising the primary sources of this study was based on the following traits: (1) original twentieth-century music that includes the voice, (2) composers who transit between and mix classical and popular music, (3) diversity of styles and genres, (4) instrumentation based on small chamber formations with the double bass (duo, trio and quartet) and (5) idiomatic crossover writing, that is integrating classical and popular performance practices. In contemplates a repertoire and its compositional techniques

¹ As previously discussed (BORÉM and TAGLIANETTI, 2016, p. 195-196), I am very parsimonious about auto-ethnographic research in Music Performance. Auto-ethnography is still a controversial modality even in the areas it arose (Cultural Studies, Anthropology and Sociology; see SPARKES, 2000, p. 22). The reason is not only because of the possible researcher bias while evaluating his/her own results, but also due to the common lack of consolidated methods, methodological procedures, and the quality of research impacts.

² Idiomatic writing here refers to the compositional ability to effectively and comfortably explore the sound possibilities of an instrument.

that are not explained, let alone illustrated, in the relevant orchestration or instrumentation references to date.

In this process, three creative figures (the composer, the arranger, and the performer) were combined in one person, the present author of this text. It led, I feel, to a much more gradual, exploratory, and creative approach than what is observed in a traditional compositional process. Or even when the dual composer-performer collaboration occurs, which usually includes two or three versions of the score before the final cut of the work is presented. Like in a two-person collaboration, the situation presented here (either the composer-performer or the arranger-performer) has the privilege of intrinsic and/or concurrent feedbacks (MAGILL, 2000, p. 199), but with the plus of being more agile and challenging. The processes of composing/arranging and building a performance at the same time is an interdependent, continuous, and online one. When the performer is also the composer/arranger, there is a much more intense pursuit of an idiomatic language and, very often, it results in the development of new instrumental or vocal techniques. In fact, the music scores in the present study went through the process of having 6 to 10 versions each, with corrections, additions and cuts, all of which were documented through logbook notes on digitally printed scores. Two concepts from the *mAAVm* (Method of Analysis of Audios and Music Videos; Borém, 2019 and 2016), namely *EdiP* (Performance Edition, that is, a score edition notated with the performer's decisions) and *EdiPA* (Audiovisual Performance Edition, that is, the combination of music notation with graphic signs to indicate events of a performance), were used in the musical examples to present and describe relevant techniques used in my compositions and arrangements.

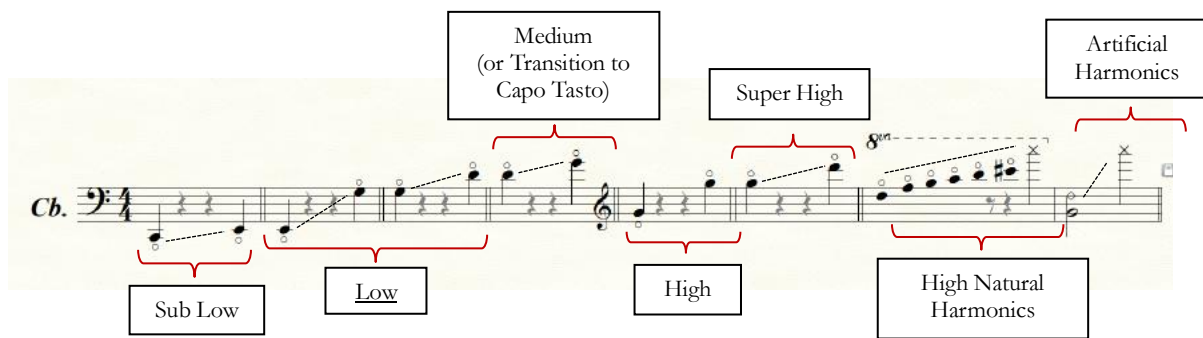
2. The Double bass: “seven instruments in one”

Differently from other violin family members, the double bass had a complex and controversial genealogy that mixed with the gamba family. Its very ambiguous terminology during the baroque and classical periods (SAS, 1999; PLANYAVSKY, 1998; BONTA, 1990; COHEN, 1967; SACHS, 1940), the constructive limitations of its materials and accessories generating confusing and almost superhuman patterns for over four centuries (BRUN, 1989; BONTA, 1988; BONTA, 1976) and the inconsistency of its performance practices and tuning types until the late nineteenth century (DREW, 1979; COHEN, 1967; BILLÈ, 1928) caused a historical delay in the formation of double

bass schools and a shortage of high level instrumentalists. An obvious and mistaken output in this scenario was the common belief that double bass players could manage well its instruments only in lower registers, which began to change punctually with virtuosi such as Domenico Dragonetti and Giovanni Bottesini in the first and second halves of the nineteenth century, respectively.³

Departing from a terminology presented in a previous study (BORÉM, 2011, p. 53), I propose the scheme below (FIGURE 1) to divide the double bass registers into seven different pitch regions,⁴ which marked differences in sound production and timber let us think of “seven instruments in one”.

FIGURE 1 – The double bass tessitura divided into seven pitch regions characterizes its heterogeneous tessitura.



Leonard Bernstein wrote “*Dream with me*” in 1950 as part of the musical “*Peter Pan*”, but a change of plans in its production cut off this and other soundtrack songs from its Broadway debut, which imposed a long period of ostracism over them. It was not until 1997 that Alexander Frey, conductor of the Rome Philharmonic Orchestra at the time, rediscovered “*Dream with me*”, recording it for the first time in 2005 with soprano Linda Eder (LACHER, 2008). The dreamlike

³ An exception was the so-called Viennese violone, which experienced a virtuosic period in the second half of the 18th century (COHEN, 1967).

⁴ The seven regions of the double bass I propose here are: (1) **Sub Low**: ranging from C₁ to E₁ (NOTE: the pitches here are sounding pitches as the double bass transposes one octave below all written notes. The octave designation used here considers the central C of the piano as C₄). Exceptionally, in some *scordature*, the double bass may go lower to Si₀ (as in Richard Strauss’s symphonic poem “*Also sprach Zarathustra*”; Cohen, 1989: 190) or even Si_{b0} (as in Richard Wagner’s opera “*Rienzi*”; Brun, 1989); (2) **Low**: going from E₁ (open 4th string on 4-string double basses) through G₂ (open G string) till D₂ (a perfect 5th above the open G string); (3) **Medium** (or **Transition to Capo Tasto**): ranging from D₂ on G string to G₂ on the same string, which coincides with the beginning of the traditional *capo tasto* position (1st partial of the harmonic series on each string); (4) **High**: ranging from the first octave above open strings (the beginning of the traditional *capo tasto* position; e.g., the G₂ on the G string) to two octaves above open strings, i.e. the 3rd partial of the harmonic series (e.g., the G₃ on the G string); (5) **Super High**: which goes from the 3rd partial of the harmonic series (e.g., the G₃ on the G string) till the end of the fingerboard, around (since there is no length pattern for the double bass fingerboard) the 5th partial of the harmonic series, e.g. around D₄ on the G string; (6) **High Natural Harmonics**: which goes from G₃ till the bridge; (7) **Artificial Harmonics**: theoretically, it ranges from the 1st octave of each string to the bridge.

atmosphere of this song refers to the platonic love of the character Wendy (already an adult in the play) for the adolescent protagonist who gives name to the musical. Thus, the flights of the main character with its “unreachable” and “dreamy” moods is represented by Bernstein via incessant modulations to distant tonalities. In the introduction, written especially for this arrangement (FIGURE 2), the at once fleeting, light and ethereal atmosphere is emphasized by (1) the use of all 7 double bass pitch regions, (2) the use of natural/artificial harmonics, (3) the use of *rubati* preceding and preparing modulations, (4) the use of artificial harmonics *glissandi*, (5) the use of *ponticello* in the Medium, High and Superhigh Regions of the double bass and (6) the timbral use of simultaneous *arco* and *pizzicato*. For a performance to this excerpt, please refer to [0:09-0:38], that is 0:05 to 0:38 seconds of the video, at youtu.be/b3s4q8_k7xQ (BORÉM, MEDEIROS and BERNSTEIN, 2019).

FIGURE 2 – Introduction to the arrangement for “*Dream with me*” by Leonard Bernstein using different techniques in phrases covering all seven double bass registers.

The image shows a musical score for "Dream with Me" by Leonard Bernstein, arranged for Voice and Double Bass. The score is annotated with various techniques and registers. Annotations include: "bowed natural harmonics" (red box), "ponticello in Super High Region" (green box), "natural harmonics" (red box), "arco gliss. of artificial harmonics" (green box), "ponticello in High and Medium Regions" (red box), "Sub Low Region" (red box), and "pizz. accompaniment in Low and Medium" (green box). The score includes markings for "Cb.", "Flowing!", "arco", "pizz.", "a Tempo", "rall.", and "III".

3. Composing/arranging, playing and ... *da capo!*

The definitive score version of a work rarely coincides with the first ideas that come to the composer's mind. When the figure of the instrumentalist mingles with that of the composer and/or arranger, the search for a mature and definitive version and the reach for a sophisticated idiomatic language may become a quicker and more intense process of experimentation. The following paragraphs narrate some of these auto-ethnographic experiences.

Freddie Mercury stood out as an eclectic and prolific singer, composer, lyricist and arranger for the rock group Queen. The blues “*My melancholy blues*”, one of his lesser known songs, is autobiographical in nature (“Another party is over...”). In the arrangement for voice and double bass, rhythmic swing sections (as in the Introduction) alternate with recitative-style sections based on dialogic phrases between the two performers. FIGURE 3 shows the beginning of Versions 1, 4, 7, and 8 of the arrangement, in which the evolution of idiomatic writing can be observed. In the still fledgling Version 1, the Introduction has only the idea of rhythmic realization with blues swing and a rising chromatic line drawn from Freddie Mercury’s original song. This chromaticism is placed in the double bass High Region along with harmonies (the G_6 and F° chords) spelled out by means of arpeggios or double stops. This chromaticism was used as a recurring motif throughout the arrangement. In Version 4, the double bass line drops from the High Region to the Low Region, which is more appropriate to the typical accompaniment instrumentation of the blues. A second line was also assigned to the double bass player, who must perform the extended technique of *arco* + *pizzicato*. In this version, one can observe the demand for the singer to also participate in the Introduction as a percussionist, performing the typical finger snap pattern, marking the 2nd and 4th beats of the 4/4 metrics, similar to the hi hat of the jazz drums. In Version 7, the left-hand mute and solo using double-stops in the High Region were added to the double bass. In Version 8, which is the final version of the arrangement, the rhythm of the percussion performed by the singer is refined with the addition of finger snaps alternating with thigh slapping in the swung repeated pattern of a dotted eighth note followed by a sixteenth note. In the double bass two-voice texture (*pizzicato* + *arco*), the effect of a *glissando* with bow on some notes in the lower voice was added. For a performance of this excerpt, please refer to [0:08-0:24] of the video at youtu.be/CkORRh5EuwY (BORÉM, MEDEIROS and MERCURY, 2019).

FIGURE 3 – Progressive idiomatic writing for the double bass in 4 versions of the arrangement to Freddie Mercury's “*My melancholy blues*”. Version 1: Rhythmic realization of the blues, chromatism and harmonies G₆ and F^o; Version 4: finger snap and *arco-pizzicato* texture, Version 7: left-hand mute effect and double stops; Version 8: finger snaps + thigh slapping, bow with *glissando*.

The image displays four musical score excerpts for the double bass part of "My Melancholy Blues" by Freddie Mercury, arranged by Fausto Borém. Each excerpt is labeled with a version number in a red box:

- Versão 1:** Shows a swing rhythm with chromaticism and harmonies G₆ and F^o. The score includes a voice line and a double bass line with various annotations.
- Versão 4:** Highlights finger snap and *arco-pizzicato* textures. The score includes a voice line and a double bass line with annotations like "finger snap" and "pizz.".
- Versão 7:** Features left-hand mute effects and double stops. The score includes a voice line and a double bass line with annotations like "mute" and "arco".
- Versão 8:** Includes finger snaps + thigh slapping, bow with *glissando*. The score includes a voice line and a double bass line with annotations like "finger snap", "thigh slapping", and "glissando".

4. “*The contrabass as a drum...*” and other instruments

In the late 1980s, Bertram Turetzky already announced the potential of the double bass as a percussion instrument in his treatise about the idiomatic writing for this instrument (1989, see chapter *The Bass a Drum*). Here, in the Introduction composed for the arrangement of Bill Mays' “*Surprise Samba*” (which I arranged for quartet of voice, double bass, piano and percussion), this possibility was used within a context of Brazilian samba. The sound ambience is scenic and mimics the beginning of a soccer game, exploring the percussive possibilities of the three instrumentalists (FIGURE 4). After the “soccer referee” (that is, the percussionist) blows the whistle loudly while seated in the audience with a samba tambourine, the double bass emulates a typical *cuíca* riff, performing short ascending and descending *glissandi* without indefinite pitches in the Super High Region. Simultaneously, the pianist strikes the piano wood with his/her hands, imitating a samba tambourine groove. And, before performing a *pizzicato* with the left hand, the double bass player mimics a samba *surdo* playing on the instrument's top in two distinct areas with his/her fist clenched to produce low sounds similar to those of a drum. For a performance of this excerpt, please refer to [0:08-0:17] of the video at youtu.be/Tuobi1XE6C8 (MAYS, BORÉM, MEDEIROS and FRONCEK, 2019).

FIGURE 4 – Introduction of the arrangement to Bill Mays' “*Surprise Samba*” with percussion references: soccer whistle and Brazilian samba instruments (*cuíca*, tambourine and *surdo*).

Samba de breque $\text{♩} = 88$

Voice

Double Bass

Piano

samba *surdo*

Intro: percussion on a samba instrument, your instrument or body

like a samba "cuíca"

samba *cuíca*

soccer whistle

arco

slap on body and bass fingerboard

"surdo"

raise one arm with index finger pointed up and blow a samba whistle

percussion on the piano wood like a samba "tamborim"

samba tambourine

pizz.

to Bill Mays at 1

5. The text-music relationship between the double bass and the voice

The sophisticated lyrics of Chico Buarque and Edu Lobo's “*Sol e Chuva*” deals with a woman's desire for freedom in love, what leaves room for images that suggest the developing drama of this song. In the arrangement for voice and double bass, the phrase “... Yes, a flood could come and wash away everything I had ...” [“*Sim, pode vir uma enxurrada e levar tudo que eu tinha*”] may be felt as an index of loss (both material and psychological) within a metaphor of a sudden weather change. Therefore, right after the word “flood” [“*enxurrada*”] (see FIGURE 5), this image is suggested by a virtuosic ascending *pizzicato* + *glissando* double-stop (the major 10th interval in the G₁-B₂ bichord), obtained with an unconventional left-hand shape, with fingers 1 and 3 pressing strings I and IV (G string and E string). It begins in the Low/Medium Regions and rises the fingerboard up to the High Region, leading to a descending chromatism, also in *pizzicato*. For a performance of this excerpt, please refer to [2:12-2:20] of the video at youtu.be/OprZ-M5qTI (BORÉM, MEDEIROS, BUARQUE and LOBO, 2019).

FIGURE 5 – Text-music relationship in the arrangement to Chico Buarque's “*Sol e Chuva*” [“Sun and Rain”]: the voice in “Yes, a flood may come [and wash away everything I had]...” is followed by a double bass ascending bichord in *pizzicato* + *glissando* and then by a descending chromaticism.

The image shows a musical score for the song "Sol e Chuva" by Chico Buarque. The top staff is the vocal line with the lyrics: "Yes, a flood may come". The bottom staff is the double bass line. The score includes chord symbols: Cm7(9,11), F7(13), Bb7M(6,9), and G7(#11). The double bass line features an ascending bichord in *pizzicato* + *glissando* and then a descending chromaticism. Red dashed circles highlight specific musical elements in the double bass line, and a green arrow points to a descending chromaticism. Handwritten notes "Sim," and "fa." are present in the double bass line.

“*Song of Love*” is one of four poems Heitor Villa-Lobos commissioned Dora Vasconcelos to fit melodies he had already written for the MGM film “*Green Mansions*” but decided to recycle them in the symphonic poem “*Amazon Forest*” (HATOUM, 2010, p. 12). One of the challenges to arrange this Brazilian *lied* was the need to drastically reduce its huge orchestration which represents “... one of his [Villa-Lobos’s] last major compositions” (HATOUM, 2010, p. 11). Thus, much information from the score for the full orchestra (which includes choir and additional Brazilian ethnic instruments) was filtered down to the much thinner texture of voice and double bass only. To preserve minimal instrumental variety, an exploration of extended double bass techniques was planned in order to emulate other instruments and textures and suggest more than one voice at a time. FIGURE 6 shows the use of a long stretch in natural harmonics on the double bass “being” a flute, while the double bass in the “bass function” occasionally punctuates this line with left-hand *pizzicati* (l.h. *pizz.*) in open strings in the Low/Medium Regions. Thus, this two-layer double bass provides, at the same time, counterpoint and accompaniment to the singer line. For a performance of this excerpt, please refer to [3:24-4:05] of the video at youtu.be/C8-jEwbtVtU (BORÉM, MEDEIROS, VILLA-LOBOS and VASCONCELOS, 2019).

FIGURE 6 – Two-layer double bass providing counterpoint (bowed natural harmonics) and accompaniment (open-string left-hand *pizzicati*) at the same time to the voice in the arrangement of “Love Song” [“*Canção de Amor*”] by H. Villa-Lobos and Dora Vasconcelos.

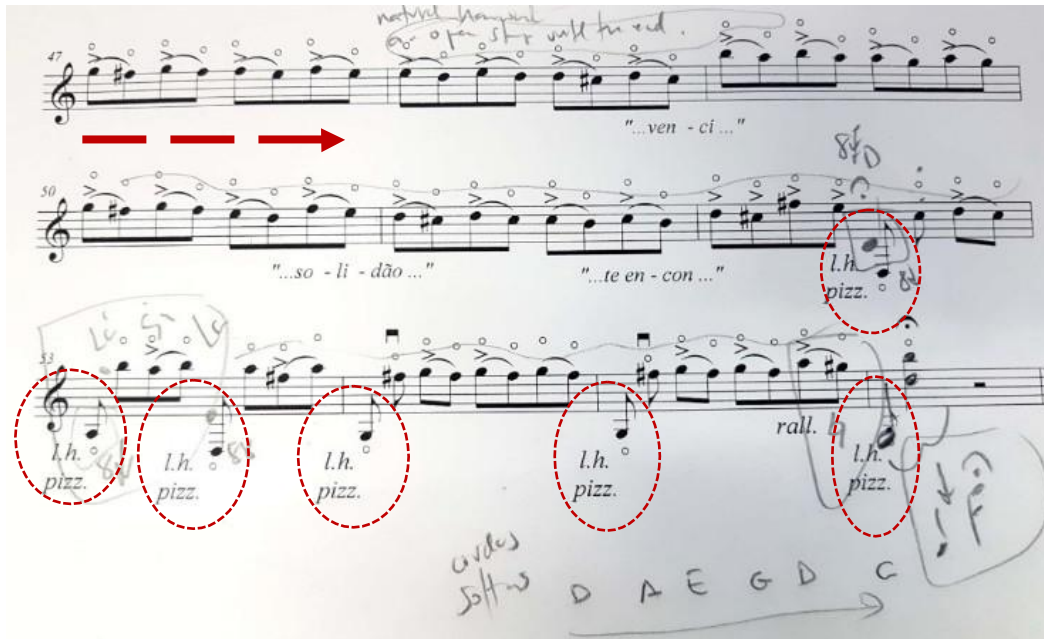
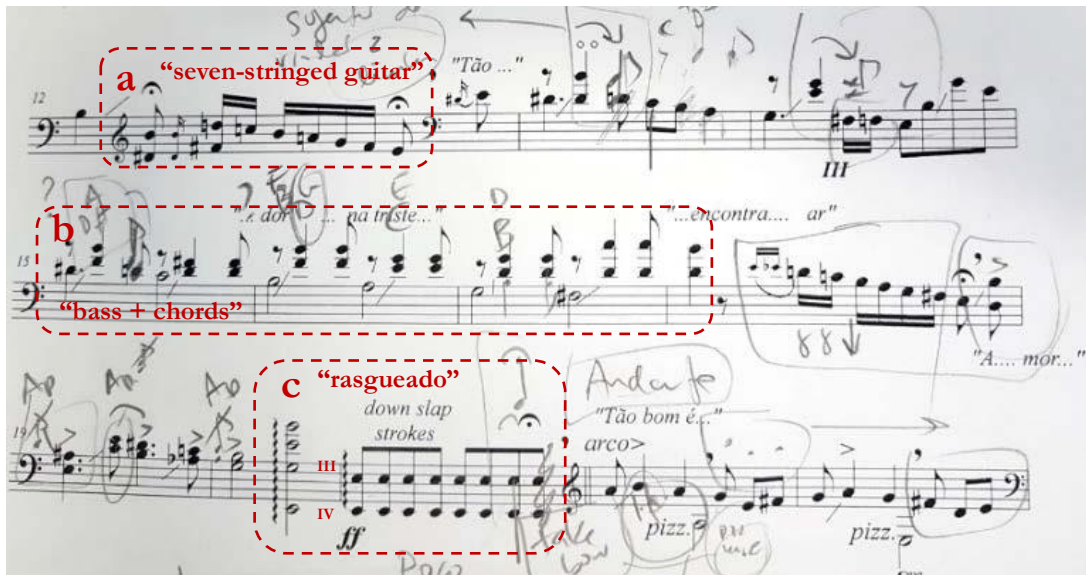


FIGURE 7 shows another instrumental emulation on the double bass, which is played like a guitar in various ways as an accompaniment to the voice. First, scalar fragments like the Brazilian seven-stringed guitar typical of the *choro* genre (FIGURE 7a). Second, the lowest bass line is articulated by the thumb and, above it, the syncopated bichords are articulated with right hand fingers 1, 2 and 3 (FIGURE 7b). And finally, an emphatic *rasgueado* is imitated with nail down strokes in the III and IV strings (FIGURE 7c). For a performance of this excerpt, please access [0:53-1:40] of the video at youtu.be/C8-jEwbVtU (BORÉM, MEDEIROS, VILLA-LOBOS and VASCONCELOS, 2019).

FIGURE 7 (a, b, c) – Double bass extended techniques emulating a guitar to accompany the voice in the arrangement of “Love Song” [“Canção de Amor”] by H. Villa-Lobos and Dora Vasconcelos.



6. Double bass, electric bass, EU bass and rock idioms

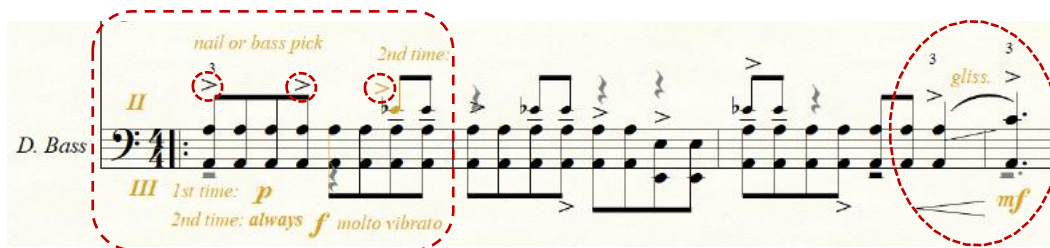
The orchestral double bass emerged around mid-sixteenth century and evolved in the interactions between the gamba and the violin family (BORÉM, 2011, p. 121),⁵ while the electric double bass guitar only emerged some four centuries later, in the early 1950s, with the advent of electric sound amplification and experiments of the Gibson and Fender makers (DENYER, 1983, p. 41, 100-101). If the double bass was embraced into the popular jazz realm, the electric bass guitar excelled into rock'n'roll bands. In the meanwhile, the EU bass (electric upright bass, also called stick bass), a hybrid instrument, appeared as an option to combine traits of the double bass (the curved bridge that allows the use of the bow, the lack of frets that allows regular *glissandi* and non-tempered intonation, and the upright playing position) and traits of the electric bass guitar (more efficient electric amplification of the sound, better mobility and more articulation and timber control of the sound envelope).

In the rock inspired *Gimme Five*, for voice and double bass, I exploited traits of these electric and acoustic bass instruments. For example, the introduction section of this song (FIGURE 8) shows the use of an electric bass pick (or a fingernail to emulate its timber) to continuously hit the strings

⁵ See concluding and divergent remarks in the thorough studies of Alfred Planyavsky (1998: 159-161; also in German, 1984) and in Irving Cohen (1967: 233-234).

in a typical octave double-stop rock groove, enhanced by the effect of *molto vibrato*. Otherwise, its percussive articulation, especially in *marcato* notes, could not be effectively done with the regular double bass *pizzicato*. FIGURE 8 also shows the use of a *glissando* to reach the interval of a minor 10th in the adjacent A and D strings (strings I and II). To listen to a sample of this excerpt, watch [1:20-1:25] of the video at youtu.be/cVJIuC_enD4 (BORÉM and MEDEIROS, 2019a).

FIGURE 8 – Use of pick/fingernail, *molto vibrato*, octave double stops and *glissando* to emulate the timber of the electric bass guitar in a typical rock groove.



Other idiomatic resources were used in *Gimme Five*, such as the *ponticello* to approximate the acoustic sound to the electric rock reference. Similarly, the ability of rock band musicians to also sing while they play was exploited as shown in FIGURE 9. In m.41-43, the double bassists should play a sequence of double stops of various intervals (minor and major 3rd, perfect 4th and 5th, tritone, and major and minor 6th) in the Medium and High Regions and, simultaneously, sing back vocal lines (“... gimme, gimme, gimme...” and “... Oh, oh, oh, oh!...”). Due to the fact the voice-limbs coordination in this extended technique is tricky, separate practice of both lines is advisable before trying to put them together. To listen to a sample of this excerpt, watch [1:20-1:25] of the video at youtu.be/cVJIuC_enD4 (BORÉM and MEDEIROS, 2019a).

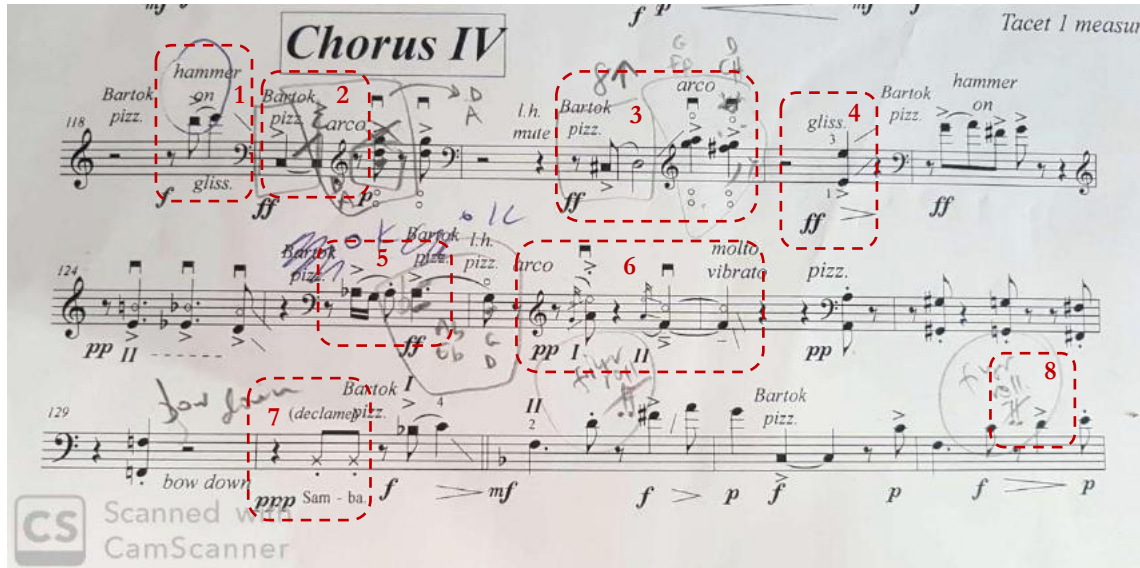
FIGURE 9 – High coordination demands in simultaneous singing and playing double-stops on the double bass in *Gimme Five*.

The image shows a musical score for the piece "Gimme Five". It consists of two staves: a vocal line (V.) and a double bass line (D.b.). The vocal line starts at measure 41 with the lyrics "gi - mme, gi - mme" and continues with "Should-we fit like a glo... o... ove Oh, oh, oh, oh!". The double bass line features complex double-stop patterns, including triplets and slurs, with annotations like "sing & play" and "sing Oh, oh, oh, oh!". The score is annotated with chords: B7(b5), Cm7, Bb7, Bbm7, F7(9), Eb7(9), D7(9), Db7(9), and Am7. The double bass line is divided into two sections by red dashed boxes, each labeled "sing & play".

7. The Search for new extended techniques

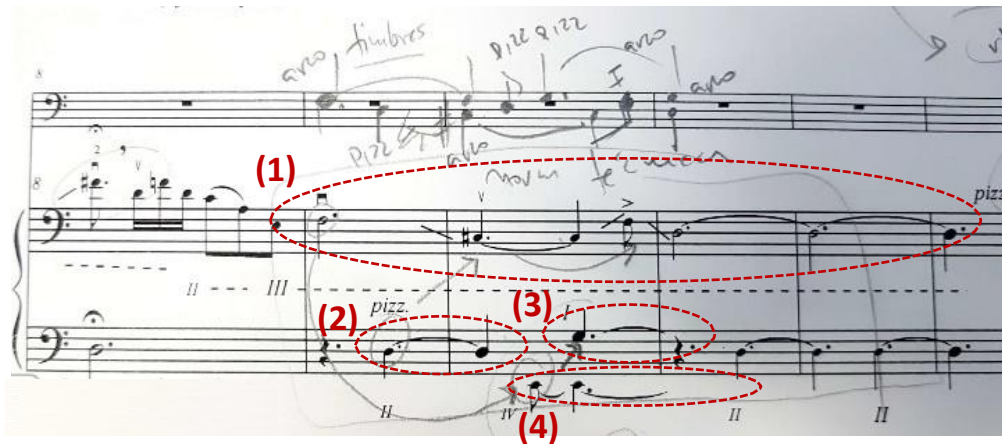
In the arrangement for Bill Mays' "*Surprise samba*", I started from a simple lead sheet to reach the quartet formation for voice, double bass, piano and percussion. I sought after an intense exploration of extended bass techniques to emulate a diverse instrumentation into a single instrument. This resulted in several short interventions with very different timber and articulation techniques which requires great motor coordination in their realization. The excerpt shown in FIGURE 10, taken from Version 8 of this arrangement (out of a total of 10 versions), shows many changes in compositional style, both pointillist and atonal, which is an intentional emulation of procedures and aesthetics of both Second Vienna School and free jazz, reflecting Bill Mays' versatile background and the crossover nature that permeated this project. In this short excerpt, I present an array of rarely used techniques on the double bass: (1) slap *pizzicato* followed by hammer-on and then followed by descending *pizzicato glissando*, (2) Bartok *pizzicato* with ascending *glissando*, (3) ascending *pizzicato glissando* up to natural harmonics double-stops in *arco*, (4) *glissando* of octaves in *pizzicato*, (5) two Bartok *pizzicati* followed by a pull-off reaching an open string, (6) ascending *glissando* of artificial harmonics followed by another one in descending motion with *molto vibrato*, (7) whisper declamation and (8) *pizzicato* roll. For a performance of this excerpt, please refer to [4:05-4:30] of the video at youtu.be/Tuobi1XE6C8 (MAYS, BORÉM, MEDEIROS and FRONCEK, 2019).

FIGURE 10 – Sequence of double bass extended techniques: (1) slap + hammer + descending *glissando*, (2) Bartok *pizzicato* + ascending *glissando*, (3) ascending *glissando* in *pizzicato* to double stops in natural harmonics, (4) *glissando* of octaves in *pizzicato*, (5) double slap *pizzicato* + pull off to open string, (6) ascending-descending *glissandi* of artificial harmonics, (7) whisper declamation and (8) *pizzicato* roll.



Another instance of developing systematically double bass extended techniques can be seen at the end of the *cadenza* that opens "*Sunset Blues*", a piece I composed for trio of voice, double bass and piano. FIGURE 11 shows a demand on the double bassist to play an embryonic four-strata texture using the left hand to simultaneously press the string down onto the fingerboard and articulate open-string *pizzicati* with finger 1 of the same hand. The whole sequence is better described as follows: layer 1: the bowed winding line $F_2-C\#_2-F_2-D_2$ should be played entirely on the A string with finger 2 only (alternatively, with finger 3 only) of the left hand; layer 2: the note D_2 should be played on open D string in *pizzicato*; layer 3: the note G_2 should be played on the open G string in *pizzicato*, and layer 4: the note E_1 should be played on the open E string in *pizzicato*. To listen to a sample of this excerpt, watch [0:23-0:36] of the video at youtu.be/sCgANI3QFsE (BORÉM and MEDEIROS, 2019b).

FIGURE 11 – Emulation of a four-strata texture (1, 2, 3 and 4) using the right hand to bow the string (1) and the left hand to both press the string (1) and play open-string *pizzicati* (2, 3 and 4).



8. Final considerations

In this study of creative nature, I aimed at refining and developing the idiomatic writing of the double bass repertoire in the cyclic process of composing/arranging and playing. It encompasses music genres centered on the interaction of this instrument with the voice, such as *lieder*, Broadway musical, blues, rock, ballad, and samba. Crossover aesthetics were explored, combining instrumental techniques from classical music (natural and artificial harmonics, traditional and Bartok *pizzicato*, extreme registers of the instrument, *ponticello*, double stops, declamation, and percussive techniques), and popular music (hammer-on, pull-off, finger snap, various *glissandi* and *pizzicati*). Also, there was an intentional pedagogical use of double bass extended techniques, such as several types of *pizzicato* (left-hand *pizz.*, *glissando pizz.*, simultaneous *arco* and *pizz.*); textures with two-, three- and four-voice strata; imitation of other instruments such as the flute, guitar and the samba's *cuíca*, tambourine and *surdo*; use of the double bass as a percussion instrument and the instrumentalist's voice while playing.

It is my hope that the repertoire developed here could serve as a reference to 1) a better understanding of the cyclical process experienced by the performer-composer-arranger; 2) the consolidation of a idiomatic writing for today's acoustic double bass; 3) the expansion of double bass extended techniques and, therefore, its performance practices; 4) adaptation procedures when reducing larger instrumentations; 5) the integration between classical and popular music in crossover repertoires.

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