"... and Words on Music": Transcribed Text as Basis for Musical Composition

João Ricardo

CESEM UÉvora

 joaodcricardo@gmail.com

Abstract: This investigation dwells on a composition support, or aid, as a methodology of transcription and codification of text, in an exploration of cryptographic examples and processes in music and how these results can be used as musical material to be developed artistically and creatively.

João Ricardo finished his master's degree in Musical Arts at FCSH/UNL in 2019. He studies composition under Luís Soldado and participated in masterclasses and workshops with the composers and scholars Jaime Reis, Vincent Debut, Ake Parmerud, and others. He holds a research grant at the University of Évora and is also a researcher affiliated with CESEM FCSH/UNL, investigating Opera and Contemporary Music.

Introduction

The influence literature has on music composition is heavy, but also diverse in possibilities – take as an example William Shakespeare's (1564-1616) tragedy *Romeo and Juliet,* written between 1591 and 1595 and published in 1597, regarding as inspiration for the homonymous works of Pyotr Ilyich Tchaikovsky (1840-1893), Hector Berlioz (1803-1869), Sergei Prokofiev's (1891-1953) ballet or Charles Gounod's (1818-1893) opera.

Setting aside the wide list of examples in which music requires the use of text, as in a lied, or uses the text as its main influence, as in a symphonic poem, what may at first seem like a poorly regarded drive or influence of literature on music is a cryptographic approach. Be it through letter codification on a motif, or through a sonification of large quantities of text or information, these seemingly hidden processes reveal themselves as a core component of many musical works, as one of many choices for the composer just as he decides on tone centers or harmonic progressions.

Following these ideas, what comes next is the presentation of a reduced number of musical outputs and results inspired by models and methodologies applied and developed throughout music history, composed through the translation of small texts into

musical settings, guidelines and/or structures, resulting in compositional fragments appropriated to support these ideas and processes.

Literary review

Such possibilities stand out prominently in Alban Berg's (1885-1935) *Lyrische Suite* (1925-1926), used here as the main example of the fine line between different views regarding literary inspiration for musical composition. At first, this string quartet was defined by its programmatic nature, almost an autobiographical description of a "[...] deep passionate love [...]" (Bruhn 1998, 57). Later on, another analysis of the manuscript unveiled passages alongside some literary fragments where "[...] the music seems to be a syllabic setting of the text [...]" (Jarman 1979, 228), which implies that these moments were intended for a singing voice.

Yet further analysis singles out four notes chosen by the composer: A, B-flat, B and F. This motif is repeated several times, in this order or with small variations, like a cunning letter code of a borderline erotic twelve-tone row, crafted by the composer: "In this piece, Berg uses the motif A, B-flat, B, F, which, in German notation, represents his initials and those of his lover Hanna Fuchs-Robettin […]" (Murray 2015, 77), therefore unfolding yet another application of text as inspiration or impulse for the creative process of the composer.

Far from being the first example of this musical codification, as many other composers "[...] have exploited the correspondences between notes and the ways in which they may be represented by letters or numbers." (Perle 1985, 18-19). J.S. Bach's (1685-1750) example might be the most famous one, with the B-A-C-H motif – comprising the notes B-flat, A, C, B – being used not only by Bach himself, as "[...] it becomes subject to numerous variations, be it by Robert Schumann, Max Reger or Hanns Eisler [...]" (González and Seising 2012, p. 431), Arnold Schoenberg (1874-1951), Arvo Pärt (1935), Alfred Schnittke (1934-1998), among many others.

Following this thread of homage, composers such as Maurice Ravel (1875-1937) and Arthur Honegger (1892-1955) codified different names within different motifs, like H-A-Y-D-N, G-A-B-R-I-E-L-F-A-U-R-E or A-L-B-E-R-T-R-O-U-S-S-E-L. But for these last pieces, the composers created and applied a cypher system in which notes, as before, were associated with letters, but repeating the diatonic scale to comprise the entire alphabet; just as in the late examples by Berg and Bach, the note' association with the first seven letters of the alphabet (A-*a*, B-*b*, C-*c*, and so on) is coined as rudimentary set (Shenton 2008, 73). Taking it further, Olivier Messiaen (1908-1992) developed his *language communicable,* associating not only the music note but also a duration or a

direction to a letter, creating a personal sonic alphabet, a rather unique tool for composing.

Systematization of processes

To many composers, using these cryptographic techniques may be regarded simply as a way to inscribe new meaning on their pieces, "[...] to express a private or admitted symbolism, a symbolism that alters nothing in the intrinsic character of the music [...]" (Perle 1985, 18). Aiming to explore and exploit the musical diversity of processes inspired by these approaches, the next few examples illustrate my musical results, a kind of cryptographic prototypes, following the mentioned methods of using text as musical data, regarding it as structure and guideline as much as a limitation, as part of my compositional process.

Jorge Mautner's (1941) quote "As brincadeiras eram múltiplas[35] [...]" (Mautner 1962, 1) was used as the first approach of this research[36]. The first experiments regarding note duration prevailed as a simple association of individual characters, each one with the value of an eight note. In this case, and somewhat in the shadow of spoken language, it was also applied a syllabic separation of the words used in the codification, resulting in different note duration for each syllable according to the number of letters in said syllable. As a result, a two-letter syllable holds the value of a quarter note, a three-letter syllable a dotted quarter note, a four-letter syllable a half note, and so on. Finally, the word "brin-ca-dei-ras" has a musical equivalent of half note-quarter note-dotted quarter note-dotted quarter note (or a numeric sequence of 4 2 3 3), as shown in Image I.
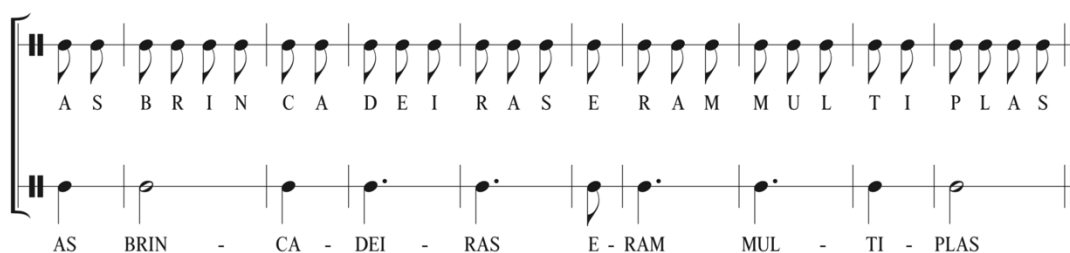

Image I: Note duration transcription of Jorge Mautner's text.
Source: Author

Regarding the specific note itself, the whole alphabet was comprised, and the letter *a* was associated with the A note, like in the previous examples of rudimentary

---

[35] "The games were numerous [...]"
[36] All text fragments used in this researched were in Portuguese. The author provides a translation for better understanding of the text itself.

sets. With the goal in mind to duplicate the notes resulting from a single note sequence, in this case, there's a sequence for the notes of the chromatic scale but also the circle of fifths, both with the note-letter A-*a* as the starting point. This way, in the chromatic sequence the letter *b* is transcribed as an A-sharp/B-flat, the letter *c* as a C, etc., simultaneously in the circle of fifths the letter *b* is transcribed as an E, the letter *c* as a C, and so on (*cf.* fig. II). At last, the musical note is given by the first letter of the syllable and its duration by the number of letters of the same syllable.
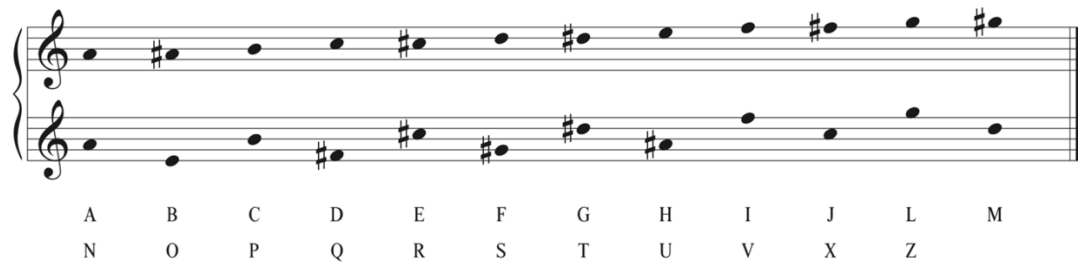

Image II: Cypher system with note sequence derived from the chromatic scale and circle of fifths, prime form, transposition in A.
Source: Author

Bellow, in Image III, the final result of the musical codification, explained in the last paragraphs, of the words by the Brazilian writer Jorge Mautner is as shown in this little musical motif.

Image III: Complete transcription of Jorge Mautner's text.
Source: Author

After the addition of some details such as dynamics, crescendos and decrescendos, Image IV illustrates the final result of the musical fragment achieved through this cryptographic process; unconsciously there's a separation between the phrase 'as brincadeiras' and 'eram múltiplas', almost as two sentences separated by respiration.

New questions have arisen regarding one of the final goals of this research – the transcription and codification of text in music pieces – one of which a kind of self-imposed limit, almost as a restriction, in the same manner as György Ligeti (1923-2006) in *Musica Ricercata* (1951-1953) "[...] forced himself to be creative with this limited set of pitches, allowing him to concentrate on the elements that he does have at his disposal [...]" (Sweet 2015, 116), but also as different options or guidelines; in this regard, we may also take as an example the use of a specific sequence of musical notes, as in any twelve-tone row applied in a dodecaphonic composition. Absorbing all this, a new set of experiments started, with a fresh look of these cryptographic motifs, trying as much as possible to create results beyond a mere text transcription.

Variations on transcribed text

I will now present a few case studies of the development and metamorphosis of this research, as musical results achieved through the application and experimentation of the examples and processes introduced on previous paragraphs, but also as musical pieces structured and limited by a cryptographic approach to the text of two poets. In both cases, the codification of text served as the predominant compositional tool, imperative to the creative process of these two pieces.

Outro nome para a solidão[37]

This first piece, *Outro nome para a solidão*, is one of a set of pieces for solo piano, composed through the transcription of poems by various Portuguese authors; in this case through a poem by Cláudia R. Sampaio. By now I was experimenting different note sequences in different cypher systems, and here the letter *a* is no longer associated with the A note. Words remained separated by their syllables and the cypher system was created with a whole tone note sequence, with the letter *a* being transcribed as a C note. The diversity of note sequences throughout the different pieces was a way to achieve discernable variety between different musical settings. Although sometimes using the same application of note duration and cypher system format, the results changed drastically with different note sequences, and this is why there's the possibility of a transposition of the sequences: transposition, in this context, being the association of a

---

[37] *Another name for solitude.*

different note, other than the A note, to the letter *a*, thus not applying the rudimentary set. Therefore, a cypher system transposed to F means that the letter *a* is an F, a transposition in B that the letter *a* is a B, and so on, creating at the same time 12 transpositions, both in its prime and retrograde form, for each cypher system.

A	B	C	D	E	F
G	H	I	J	L	M
N	O	P	Q	R	S
T	U	V	X	Z	

Image V: Cypher system with note sequence derived from the augmented scale, prime and retrograde form, transposition in C.
Source: Author

The structure of the piece comes down to the repetition of the sentences "[...] Também me custa / sobreviver a estes dias / mas o que ainda não chegou / é infinito." (Sampaio 2013, s.p.)[38] four times in total, outlining to the four sections of the piece, which in each section comprise the full codification of the four sentences above, with each letter representing a quarter note duration, and the first letter of each syllable being transcribed from the cypher system as the musical note for the whole syllable (*cf.* fig. V), in its retrograde, prime, prime and retrograde form, respectively. Image VI illustrates the result of the codification of the sentences 'Também me custa / sobreviver a estes dias' in the second section – notes from the cypher system in its prime form – starting on the C natural after the double bar line.

---

[38] "I also struggle / to live through these days / but what's yet to come / is endless."

Image a VI: Score fragment of the second section of the piece *Outro nome para a solidão*.
Source: Author

Redondo palpável[39]

In the next example, a woodwind trio, there's the cryptographic transcription of the text "Das flores ao mundo, do mundo às flores" (Poppe 2012, s.p.)[40]. The piece starts with a codification of note duration in which the syllables expand in sixteenth-note phrases, so in a three-letter syllable each letter extends the phrase throughout four quarter notes, while in a two-letter syllable each letter extends to three-quarter notes in total; all this for the sake of a greater rhythmical variety.

---

[39] *Tangible globular*
[40] "From flowers to the world, from world to flowers"

Image VII: First score fragment of the piece *Redondo palpável*.
Source: Author

In the image above, the syllable "-res" is visible on the saxophone starting on measure 4, and "ao" on the flute starting in the middle of measure 5. The slurs connect the codification of each letter, while the whole phrase is the codification of each syllable. The cypher system contains a note sequence devised from the octatonic scale, with transposition in F – letter *a* is an F note – both in prime and retrograde form.

Image VIII: Cypher system with note sequence derived from the octatonic scale, prime and retrograde form, transposition in F.
Source: Author

From section D onward the syllables get shorter: from here on each letter of each syllable has the value of two sixteenth notes. The flute and saxophone phrases are revealed, and the rest duration is the same as the duration of the syllable. The notes

71

derive from the same cypher system, with a small variation: for example, in measure 50, the last sixteenth note comes from the last letter, *s,* of the syllable "das", instead of the first, while in measure 41 the last sixteenth note comes from the letter *l* of the syllable "flo-". Bellow, there's an example of the words "flores" and "ao" played by the flute and the saxophone, on measures 41 and 43, respectively.

Image IX: Second score fragment of the piece *Redondo palpável*.
Source: Author

The application of the cryptographic approach change again in section G. Here there's an almost pure transcription, in which each note has the value of a single character. Each letter has the duration of a sixteenth note and all notes derive from a prime form cypher system; in addition, the space character is transcribed here as a sixteenth note rest. As the last point of innovation worth mentioning for the sake of this article, there's an experimentation of syllabic codification on the musical intervals, instead of restricting it to note duration. Representing a three-letter syllable, the notes between instruments are a third apart, and for a two-letter syllable, the notes are a second apart, varying between major, minor, augmented and diminished intervals throughout the section. Notice this on Image X bellow, between the flute and the oboe.

Image X: Third score fragment of the piece *Redondo palpável*.
Source: Author

Conclusion

The seemingly hidden cryptographic layer reveals itself as a key component of all these musical works and is scattered throughout music history in different ways, between the simple codification of letters in a musical motif and the more recent algorithmic compositions of large scale tomes that "[...] take advantage of inherently sound parameters for the creation of an output [...]" (Cardoso, Coelho and Martins 2016, 1) dwelling upon textual structures and characteristics for musical results.

I believe that, in a way or another, all this musicological research, analysis and creative outputs might stir at least the curiosity of its readers, and might even persuade them to experiment on their own, taking this research as a starting point; once they try to develop or one they intend to reject. Although at first glance these cryptographic processes might seem too restricted or at times too random, I tend to believe these musical pieces that stand for themselves, regardless of their cryptographic nature.

Lastly, I hope to have shared and explained that, although these cryptographic processes were fundamental for the conception of the pieces exemplified, the transcription of the text is pursued as an inspiration, as a starting point, as a path to obtain musical material for the composer to work with; all methodology and processes involving all these cryptographic approaches are but a part of the whole that is the compositional task.

Acknowledgements

References

Bruhn, Siglind. 1998. *Encrypted Messages in Alban Berg's Music*. New York and London: Garland Publishing, Inc.

Cardoso, Amílcar, Ângela Coelho, and Pedro Martins. 2016. "A Musical Sonification of the Portuguese Epopee". *MUME 2016 – The Fourth International Workshop on Musical Metacreation.* CISUC, Informatics Engineering Department, University of Coimbra.

González, Veronica, and Rudolf Seising (Eds.). 2012. *Soft Computing in Humanities and Social Sciences.* Berkeley: Springer.

Jarman, Douglas. 1979. *The Music of Alban Berg*. Berkley and Los Angeles: University of California Press.

Mautner, Jorge. 1962. *Deus da chuva e da morte*. Brasil: Martins.

Murray, Lucy Miller. 2015. *Chamber Music: An Extensive Guide for Listeners*. United States of America: Rowman & Littlefield.

Perle, George. 1985. *The Operas of Alban Berg: Lulu*. California: University of California Press.

Poppe, António. 2012. *Livro da Luz*. Portugal: Documenta.

Sampaio, Cláudia. 2018. *Outro nome para a solidão*. Portugal: Douda Correria.

Shenton, Andrew. 2008. *Olivier Messiaen's System of Signs: Notes Towards Understanding His Music*. New York: Ashgate Publishing.

Sweet, Michael. 2015. *Writing interactive music for video games: a composer's guide*. United States of America: Pearson Education, Inc.