The Guitar Chord – An analysis of Alberto Ginastera use of the guitar as a compositional source on *Sonata Op. 47* for Guitar¹

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Resumo: O presente artigo analisa o primeiro movimento da "Sonata Op. 47 for Guitar" de Alberto Ginastera, fazendo uso de ferramentas comuns da análise pós-tonal e da teoria dos conjuntos. O principal objetivo deste artigo é revelar o intrincado processo composicional por trás da aparência superficial que essa obra pode ter para o músico, mostrando como Alberto Ginastera faz uso de particularidades do violão para construir uma composição intrincada, usando como material principal para o seu desenvolvimento o "Guitar Chord"

Palavras-chave: Análise, Set Theory, Alberto Ginastera, Sonata Op. 47 for Guitar

Abstract: The present article analyses the first movement of "Sonata Op. 47 for Guitar" by Alberto Ginastera, using common tools from post-tonal analysis and Set Theory. The main goal of this article is to unveil the compositional process behind the superficial appearance it may have for the average performer, showing how Alberto Ginastera used the particular features of the guitar to construct an intricate composition, using as his main material the "Guitar Chord".

Keywords: Analysis, Set Theory, Alberto Ginastera, Sonata Op. 47 for Guitar

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1. Introduction³

Understanding the Guitar Chord (a term coined by Carlos A. Gaviria in his thesis "Alberto Ginastera and the Guitar Chord: an analytical study"), is of great importance for a more nuanced analysis of the work of the Argentine composer Alberto Ginastera (1916-1983). As Richard Wagner's Tristan chord or Igor Stravinsky's Petrushka chord, the Guitar Chord, based on the distinctive sonority of the guitar open strings, is one of the compositional hallmarks of Alberto Ginastera. Unlike these composers Alberto Ginastera did not use this feature in only one individual work; the Guitar Chord appears systematically in different works throughout his career, as a compositional leitmotiv, culminating in his only work for solo guitar - the Sonata for Guitar Op 47 -was composed during the mature period of his career, in the summer of 1976, seven years before the composer's death.

The Sonata for Guitar Op. 47 is divided in four movements - Esordio, Scherzo, Canto and Finale. These four movements make use of the Guitar Chord as a compositional source throughout, most obviously, in the first and last movements, thus framing the work with Guitar Chord. This article aims not only to summarize the work of Gaviria, but also review it and go beyond it. The main objective of this paper is to analyze the use of Guitar Chord in the Sonata for Guitar Op. 47, and the musical materials generated from this source, as well as some idiomatic properties of the guitar. To achieve this purpose we will analyze in detail the first section of the first movement, Esordio, from Sonata Op. 47 for Guitar.

2. The Guitar Chord in Alberto Ginastera's works

The Guitar Chord relies on the notes obtained from the six open strings of the guitar -E2, A2, D3, G3, B3, E4 (Fig. 1). The use of sound in Alberto Ginastera's works is a direct reference to the guitar and therefore a reference to Argentinian folklore, since the guitar is the typical instrument of gaucho music. However, the Guitar Chord used by Ginastera is the product of an intellectualization of the instrument; since gaucho music is tonally based and mainly composed of triads; the occurrence of a chord formed only by open strings on the quitar is extremely rare. The need for a more detailed analysis of this chord is due to its recurrence in Ginastera's works. Just as Wagner's leitmotiv distinguish different characters in his musical dramas, one can say that Guitar Chord is the *leitmotiv* of Ginastera.

³ I would like to thank Professor Don Traut, a theory instructor at the University of Arizona, for inspiring this work and providing assistance in preparing this article.

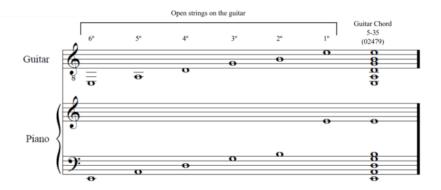


Figure 1: The Guitar Chord

We find two examples of the early use of the Guitar Chord in the works *Danza del Viejo Boyero* from *Danzas Argentinas*, *Op 2* (1937) and *Malambo for Piano*, *Op 7* (1940). In the *Danza de Viejo Boyero* the Guitar Chord appears at the end of the piece, arpeggiated and with sustained notes. The way that Guitar Chord is written with, sustained notes as they would sound on a guitar, makes it a clear allusion to the instrument (fig. 2.1). In *Malambo* the Guitar Chord appears in the first measure of the piece. Its use is identical to the previous example: it appears as an isolated entity, an idea not developed and without major consequences for the piece (Figure 2.2).



Figure 2.1 – A. Ginastera - Danza del Viejo Boyero from Danzas Argentinas, Op 2 (1937)

This straightforward use of the Guitar Chord - a single reference to Argentine folk music - is typical of Ginastera's early works. As Carlos A. Gaviria states: " In these earlier pieces, the guitar chord is usually presented in its original form... ...and its presentation is usually an isolated event never followed by any further development of the sonority "4 Other examples of the later use of Guitar Chord can be found in the works *Triste* from *Cinco Canciones Populares Argentinas*, *Op. 10* (1943), where the sonority appears in the middle of the song as an guitar accompaniment but without suffering transformations, *Cuadro I - El Amanecer, Introducción y escena* from the ballet *Estancia, Op. 8* (1941) and *Variaciones Concertantes Theme, Op. 23 per Violoncello ed Arpa* (1953). In the last two examples the use of Guitar Chord is much more sophisticated.

⁴ GAVIRIA, Carlos A. *Alberto Ginastera and the Guitar Chord: An analytical Study*, p. 21. Disponível em http://digital.library.unt.edu/ark:/67531/metadc33152/m2/1/high_res_d/thesis.pdf>. Acesso em 03 de maio de 2012.



Figure 2.2 – A. Ginastera - Malambo for Piano, Op 7 (1940)

3. The Guitar Chord properties

As shown in Figure 1, the Guitar Chord is the outcome sonority from the open strings of the guitar, resulting in set-class 5-35 (02479). We will call this particular presentation of the Guitar Chord as *original form*, as opposed to the transpositional changes it will encounter during the *Sonata Op 47*. This set has intrinsic properties that deserve further analysis; from these properties Ginastera will manipulate the chord and generate the musical material necessary for the development of the Sonata. Unlike other works (in which Ginastera uses the Guitar Chord without changes and usually arpeggiated as a way to make an allusion to the guitar) in *Sonata Op. 47* the treatment will be different. The Guitar Chord will be deeply transformed and varied, as an allusion to the guitar is not necessary since the work is written to it.

To better understand the use of Guitar Chord and its transformations, it is necessary to understand some technical aspects of the guitar. Like most stringed instruments the guitar is played either with open strings or with pressed strings. As previously mentioned, it is rare to find chords formed solely by open strings in the tonal repertoire (This use becomes more common in late romantic and modern repertoire, when some composers began to explore this peculiarity of the guitar.), indeed, chords formed solely by pressed strings or combinations of pressed strings and open strings is the norm for this instrument. When chords are made only with pressed strings an important feature needs to be noted: the transposition of these chords can be performed by changing the left hand position on the fretboard, but keeping the same fingering, altering the notes but keeping the same intervallic relationships (Figure 3.1 shows how this works for a G major chord and a B major chord).

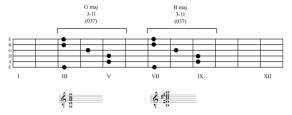


Figure 3.1: Transposition aspects of the guitar

However, if we make a chord that contains both pressed and open strings in its configuration, and move the left hand, it will not only produce different notes but a completely different set, since the pitch classes of the open strings will remain the same, while the pitch classes of the pressed strings will change, resulting in a different interval configuration (Fig. 3.2).

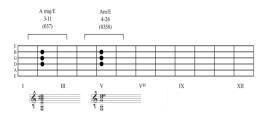


Figure 3.2: Transposition aspects of the guitar

Both complete and partial transposition of sets will be observed in the *Sonata Op 47*. In the latter case the result is usually achieved by partitioning the Guitar Chord in two different subsets, designated here as *low-subset* (E2, A3 and D3, the three lowest strings on the guitar) and *high-subset* (G3, B3 and E4, the three highest strings on the guitar). The *low-subset* is formed only by intervals of perfect fourths, resulting in the set-class 3-9 (027); the *high-subset* consists of a major third interval followed by a perfect fourth resulting in the set-class 3-7 (025) (Figure 4).

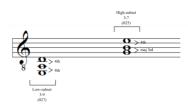


Figure 4: The Guitar Chord partitioning

Other interesting properties should be noted in relation to the Guitar Chord. The first is that if we eliminate the highest note E4, which is a repetition two octaves above of the lowest note E2, and transpose B3 two octaves below, we now have a cycle of perfect fourths (Figure 5).

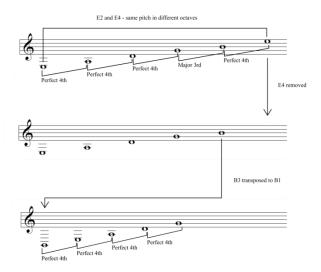


Figure 5: Circle of fourths transformation

Observing this cycle of fourths represented using clock face notation, we notice that it is symmetrical, having its inversional axis between 9 and 3, resulting in two sets of (025) (Figure 6).

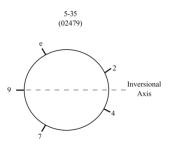


Figure 6: Inversional Axis

Although it is not a significant sonority in the *Sonata Op 47*, another resulting sonority from the Guitar Chord can be found when we reorganize this set in a scale form. From that process the pentatonic scale of G major / E minor emerges (Figure 7).



Figure 7: Intrinsic pentatonic scale

Finally, another feature of this set is that it is formed by a sequence of two whole tones, followed by one whole tone, divided by minor thirds. Thus we can recognize two different fragments of the whole tone scales in the same set: pitch-class 2 and 4 forming a small fragment of WT0, and pitch-class 7, 9 and e forming another fragment of WT1 (Figure 8).

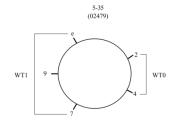


Figure 8: Intrinsic whole-tone collection fragments

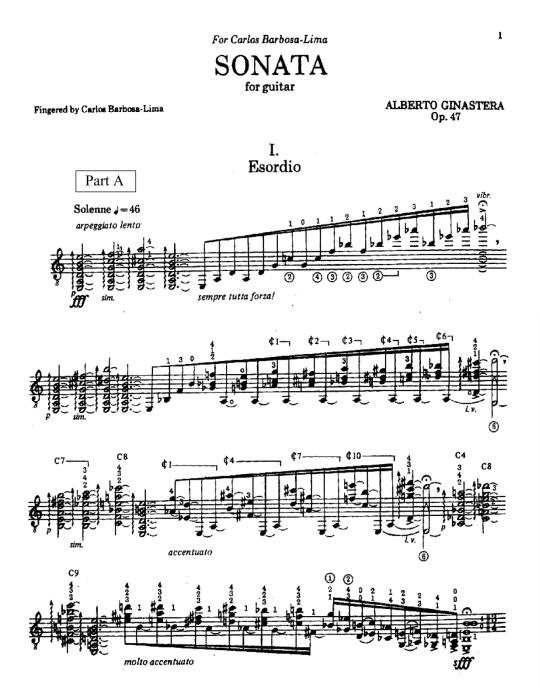
This property is subtle but rather important because it will be used in the first movement of the sonata.

4. The Guitar Chord in the Sonata for Guitar Op. 47

The Sonata for Guitar Op. 47 was composed in Geneva during the summer of 1976 and premiered that same year by the Brazilian guitarist Carlos Barbosa Lima, to whom the work is dedicated. About the composition Ginastera states: "Although I had been encouraged by the number of musicians to compose music for the guitar from the time I was a student, the complexity of the task delayed my creative impulse ..." Despite Ginastera's timidity, this work has been very well received by critics and performers since its premiere. It is considered one of the most important works written for the guitar, both for its modernism and its imaginative use of the guitar. In fact we will see in the following analysis that Ginastera makes a very intelligent use of the idiomatic features of the guitar. Below we will analyze the first movement of this sonata, titled "Esordio" which Ginastera describes as "...a solemn prelude, followed by a song inspired by Kecua music and which finds its conclusion in an abbreviated repetition of these two elements..."6 . As described by Ginastera this movement is divided in three sections: Part A covers the entire first page, while Part B consists of the first 15 bars of page 2. In bar 16 of page 2 we have the Part A'. Since this is a return to the initial theme, or a development of Part A (interrupted by Part B), this section does not show bar divisions again. At bar 17 begins Part C, a merger between Part A and Part B, which extends until bar 29. After Part C, in bar 30, we have a brief Coda that lasts for only one measure (Figure 9.1).

⁵ GINASTERA, Alberto. Sonata For Guitar, Op.47. London: Boosey & Hawkes, 1978.

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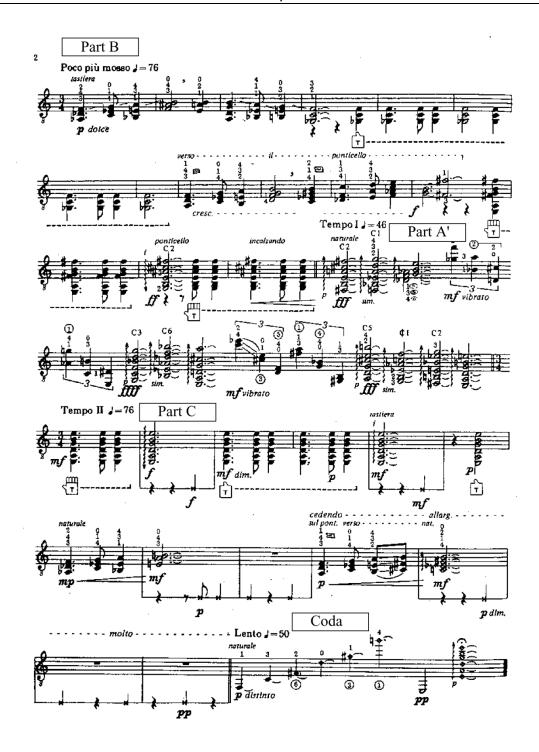


Figure 9.1 – A. Ginastera – Sonata Op. 47, First Movement Form

Because it has no bar lines, we will divide Part A into four phrases, Phrase 1, Phrase 2, Phrase 3 and Phrase 4 (Figure 9.2), based on their separation punctuated by fermatas and breathe marks.

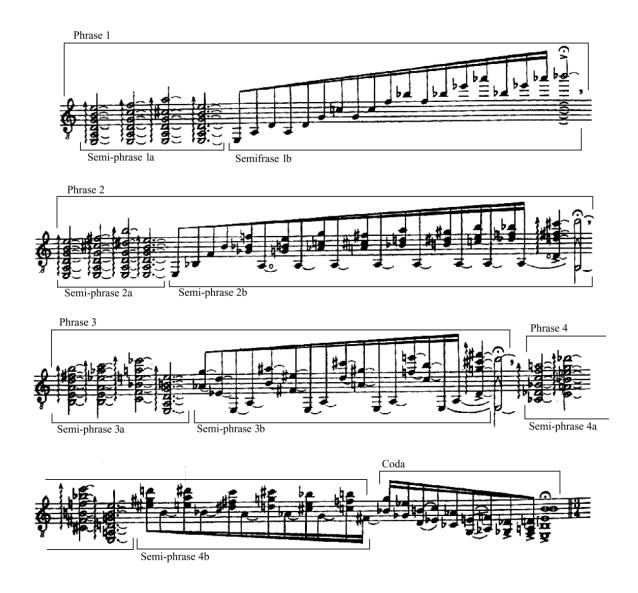


Figure 9.2- A. Ginastera - Sonata Op. 47, Phrase and semi-phrase subdivisions

As seen in Figure 9.2, each phrase of Part A divides into two semi-phrases or gestures. The first semi-phrase consists of four chords, while the second is composed of an ascending melodic gesture, with the exception of fourth and last phrase where the second semi-phrase is descending. Each semi-phrase is named according to its primary phrase (e.g. Semi-phrase 2a is the first semi-phrase of Phrase 2). Soon after the second semi-phrase of Phrase 4 we have the Coda that leads down to Part B of this movement.

Analyzing the first part of Phrase 1 (Figure 10) it can be seen that this movement begins with the Guitar Chord. This is followed by two chords and then the Guitar Chord reappears closing the Semi-phrase 1a, framing it with the Guitar Chord. This idea will go through the whole sonata, with the Guitar Chord serving as a frame for the work. The first Guitar Chord transformation happens in the second chord where the chord is transformed into a succession of fourths, keeping the four lower notes and changing the two high notes up one semitone. This new chord belongs to the set-class 6-32 (024579). Comparing the two

prime forms we can consider this new chord a superset the Guitar Chord. The third chord, set-class 5-29 (01368) undergoes a small change if compared to the Guitar Chord, indeed, only one pitch class is changed (B3 is transposed to C#4). At the surface it seems to be only a small change, but its prime form (01368) reveals that it is a partial aggregate completion in relation to the Guitar Chord (02479). The fourth and last chord of this semi-phrase is a return to the Guitar Chord in its original form, which will happen in the other three following phrases as well. Analyzing the four chords together we note that the low-subset is maintained in all four chords, with the addition of the note G3, an extension of the low-subset. The low-subset will be maintained in all four phrases, even if transposed, as we will discuss below. Another feature that will remain common in all first semi-phrases of each phrase is the melodic contour. The top line E-F-A-E forms contour segment <0120> (i.e., to ascending motions followed by a return to the original note), and this cseg will remain the same in the following phrases.

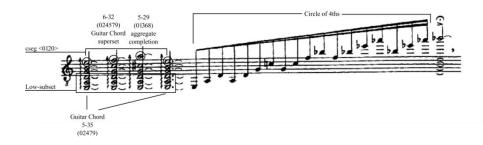
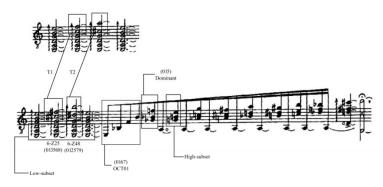


Figure 10 – A. Ginastera – Sonata Op. 47, Phrase 1

The second semi-phrase is a melodic gesture in *accelerando*. This semi-phrase is composed by a succession of fourths, again an extension of the Guitar Chord and one of its most obvious properties, the superposition of fourths. Phrase 2 (Figure 11.1) starts again with the Guitar Chord followed by its transformation. The second chord forms, 6-Z25 (013568). When compared to the second chord of the preceding phrase, we see that it is an abstract transposition of that chord, since the two higher notes are transposed at T1 level, while the low-subset and G3 are maintained. The same is true for the third chord in this phrase. When compared to the third chord of the preceding phrase we noticed that the two higher notes are transposed at T2 level. The low-subset in Semi-phrase 2a remains static in relation to the previous phrase.



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Figure 11.1 – A. Ginastera – Sonata Op. 47 Phrase 2

From this point the melodic phrases that occur after the succession of chords become more complex. In the case of the Semi-phase 2b it starts with an arpeggiated tetrachord (0167). This tetrachord, a member of OCT01, is composed of two augmented fourths separated by a perfect fifth; the 4th interval is maintained, but altered, and will serve as music material later. Following this tetrachord we have a trichorde (015) to which we can assign a dominant function in relation to the next chord (037). The (037) trichord is the highsubset of the Guitar Chord. The dominant relation between (015) and (037) is given by the fact that each note of the first chord is a leading tone to the next one. This resolution is interrupted by a pedal bass on A2 that is held along the semi-phrase and will resolve in D3. Once the resolution happens for the first time we have the first appearance of transposition based on the physical characteristics of the guitar, as discussed above. As we can see in Figure 11.2, after each resolution the chords will be transposed at T2 level, until the end of this semi-phrase, in upward motion. A profound analysis shows that this gesture is not just a simple transposition moving upwards on the fretboard - if we cross the two lower notes (Gb3 and Bb3) of the first trichord (015), with the highest note (E4) of the second trichord (037), as result we have three pitch classes of WT1 (Figure 11.3).

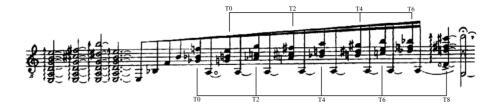


Figure 11.2 – A. Ginastera – Sonata Op. 47, Semi-phrase 2b - transpositions



Figure 11.3 – A. Ginastera – Sonata Op. 47 WT1 collection

When these chords undergo transposition at T2 the result is the aggregate completion necessary to have a complete WT1, achieved by transpositional combination. If we make the inverse process, we will observe that the highest note (F4) of the first trichord (015), together with the two lower notes of the second trichord (037) (G3 and B3), will form another whole-tone scale fragment. Thus through transpositional combination at T2 level, Ginastera reaches the aggregate completion (Figure 11.4). The result of these two chords is two whole-tone scales running in parallel. The chord that ends this semi-phrase is the first trichord (015) at T8 level.



Figure 11.4 – A. Ginastera – Sonata Op. 47, WT0 collection

Phrase 3 (Figure 12.1) begins with a transposition of the Guitar Chord at T7 level. The second chord, set-class 6-Z19 (013478) keeps the same function of creating aggregate completion seen between the first and third chord of Phrase 1. The third chord, set-class 6-Z17 (012478) can be related to the beginning of Semi-phrase 2b as the four highest notes of this hexachord are two augmented fourths, but this time separated by a perfect fourth instead of a perfect fifth. After the third chord we have the return of the Guitar Chord, now in its original form. Again, the low-subset is maintained, but modified by transposition. In the first chord the low-subset (027) appears at transposed T7 and is maintained in the second chord. In the third chord the low-subset is maintained, but transposed at T8, and again transposed at T0 when the Guitar Chord returns.

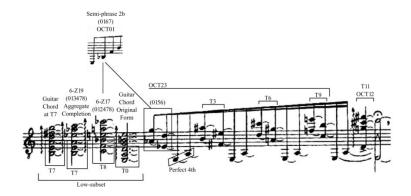


Figure 12.1 – A. Ginastera – Sonata Op. 47, Phrase 3

The Semi-phrase 3b begins with two major seventh intervals separated by a perfect fourth, resulting in the tetrachord (0156). Also as in the initial arpeggio of the Semi-phrase 2b, this tetrachord is a member of an octatonic scale, in this case OCT23. Following this tetrachord is a pedal in the bass again, this time consisting of two notes, E3 and A3, keeping a perfect fourth relation, a pervasive interval in this piece. Next we have the transposition of the previous tetrachord three times, at T3, always interrupted by the basses, culminating in another tetrachord (0156) coming from the transposition at T11. This tetrachord belongs to OCT12. Once again when we look at this passage we find the overlapping scales. In this case, if we take the high notes of these tetrachords we obtain OCT12, while the lower notes of the tetrachord form an OCT23, both achieved by transpositional combination, running in parallel motion (Figure 12.2).



Figure 12.2 – A. Ginastera – Sonata Op. 47, Octatonic collections

The fourth and last phrase of Part A breaks with some established patterns. The first one is that the Guitar Chord is not present at the beginning of Phrase 4. Instead, the opening chord is a transposition at T9 level of the second chord of Phrase 3 (Figure 13). The third chord of this phrase is also a transposition, in this case the third chord of Phrase 3, transposed at T1. Such transpositions strengthen the link between phrases and unify the ideas, since the pattern was broken with the lack of the Guitar Chord at the beginning of the phrase; however, the Guitar Chord returns as the last chord of this semi-phrase. The second chord of Phrase 4 does not have a direct relationship with the previous chords, but its unity is guaranteed by the maintained low-subset. As in the preceding phrases the low-subset remains, following the sequence of transpositions at T4, T8, T9 and T0.

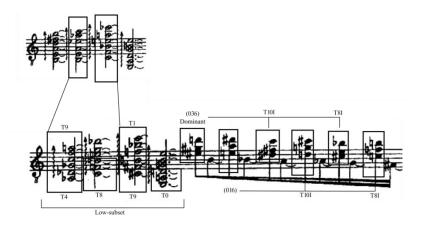


Figure 13 – A. Ginastera – Sonata Op. 47, Phrase 4

Ginastera breaks the pattern established in the previous phrases once more when he inverts the Semi-phrase 4b into a downward motion, unlike the previous phrases. This semi-phrase starts with a trichord (036) followed by a B3 on the bass descending chromatically to F#3. Once again the pattern is broken since at this semi-phrase the basses are not static anymore. The first trichord, as the first trichord of the Semi-phrase 2b, will have a dominant function over the next trichord (016), achieving resolution by leading tones. This time each chord is transposed at T10I. In this excerpt from the Semi-phrase 4b we do not find any scales in parallel. However this event will occur once again in the final gesture of Part A, the Coda.

The Coda is a descending gesture formed initially by three intervals of major sixths separated by major thirds, and the same gesture is transposed at T7I (Figure 14). The result of this sequence of six dyads will be two hexatonic scales in parallel, HEX34 in the higher notes and HEX23 in the lower notes. After that we have two more dyads and a triad. The first dyad is a transposition of the previous dyad at T1, a major sixth, the second dyad is a perfect fifth, and the triad that leads to the last chord of this section consists of a major third followed by a perfect fourth. This sequence of intervals suggests a compression of the major sixth interval that initiated the Coda. The last chord of this section is a dyad, but played using five strings of the guitar. As the major sixth interval this dyad can be considered a compression Guitar Chord, as suggested by Carlos A. Gaviria: " The second section (of Phrase 4) features a series of descending major sixths that culminates in the last chord of the phrase, which is a synthesis of the guitar chord using only pitch-classes E and B..."

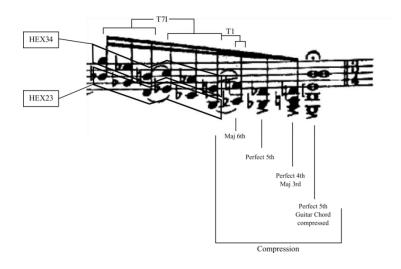


Figure 14 – A. Ginastera – Sonata Op. 47, Coda – hexatonic collections

The last example is a Schenkerian approach to this first section of the sonata. Although this is not the perfect excerpt for a Schenkerian analysis, if we analyze the most structural aspects of this section through this technique we will find a very concise inner form. Considering the Guitar Chord as our center of tonality we can imply a chord progression based on the low subset degrees: E2 = I, A2 = iv, D3 = ii; the dominant can be interpreted as the Guitar Chord transposition at T7 at the beginning of Phrase 3 as well as the first bass note of the Semi-phrase 4b (Figure 15). In this last example the chromatic descent emphasizes the idea of a tonic-dominant relation. The reason that this particular angle may be interesting for this analysis is that below many post-serialist musical approaches underlies a very tonally based structure supporting a great variety of compositional techniques.

⁷ GAVIRIA, Carlos A. *Alberto Ginastera and the Guitar Chord: An analytical Study*, p. 62. Disponível em http://digital.library.unt.edu/ark:/67531/metadc33152/m2/1/high_res_d/thesis.pdf>. Acesso em 03 de maio de 2012.

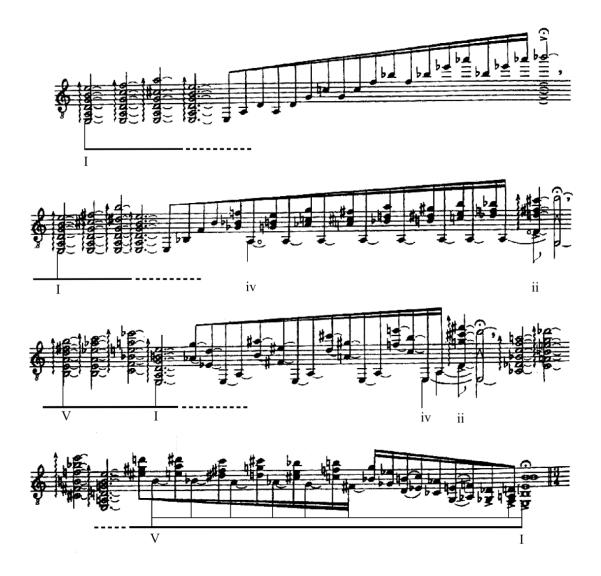


Figure 15 – A. Ginastera – Sonata Op. 47, a Schenckerian approach

5. Conclusion

Throughout this analysis it becomes evident that the Guitar Chord is the core for generating the music material for the first movement of *Sonata Op. 47*. The considerations about the Guitar Chord discussed here can be applied to the remaining movements of this sonata, and may be useful if not essential for a comprehensive future analysis of this work. Also the considerations on how Alberto Ginastera used the particularities of the guitar to compose this sonata may be of great utility for composers who seek tools and inspiration to write for this instrument. With such brilliant and imaginative work Alberto Ginastera proved that Hector Berlioz was wrong when he said that "one cannot compose for the guitar well unless one is a guitarist..." With creativity one can apply the ideas here discussed and go beyond them to overcome the instrument's limitations, thus uncovering a small universe of endless possibilities for this fascinating but yet neglected instrument.

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