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A POST-TONAL ANALYTICAL APPROACH TO *SYNCHRONISMS NO. 10 FOR GUITAR AND TAPE* BY MARIO DAVIDOVSKY

Andrew J. Serce

University of Kentucky, andrewjserce@gmail.com

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Andrew J. Serce, Student

Dr. Dieter Hennings, Major Professor

Dr. Michael Baker, Director of Graduate Studies

A POST-TONAL ANALYTICAL APPROACH TO
SYNCHRONISMS NO. 10 FOR GUITAR AND TAPE BY MARIO DAVIDOVSKY

D.M.A. PROJECT

A DMA/Musical Arts Project submitted in partial fulfillment of the
requirements for the degree of Doctor of Musical Arts in the
College of Fine Arts
at the University of Kentucky

By

Andrew Serce

Lexington, Kentucky

Co-Directors: Dr. Dieter Hennings, Assistant Professor of Guitar
and Dr. Michael Baker, Associate Professor of Music Theory

Lexington, Kentucky

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ABSTRACT

A POST-TONAL ANALYTICAL APPROACH TO *SYNCHRONISMS NO. 10 FOR GUITAR AND TAPE* BY MARIO DAVIDOVSKY

Mario Davidovsky is an American composer who was born in Buenos Aires, Argentina on March 4, 1934. Beginning in 1958, he was a student of Aaron Copland at the Berkshire Music Center (currently the Tanglewood Music Center) in Lenox, Massachusetts. At Berkshire, he also met American composer, Milton Babbitt, who persuaded him to work at the Columbia-Princeton Electronic Music Center (currently the Computer Music Center at Columbia University) in New York City. Davidovsky was appointed Associate Director of the Columbia-Princeton Electronic Music Center in 1960 where he inevitably began experimenting with the relationships between live instruments and electronic sounds.

Synchronisms No. 10 for guitar and tape (1992) is a piece for solo classical guitar and pre-recorded synthesized sounds. The piece was dedicated to David Starobin, the current Professor of Guitar at the Manhattan School of Music, who also edited the guitar part. This particular piece in the *Synchronisms* series shows that Davidovsky is aware of the limitations of the guitar in regard to dynamic range and decay of sound. Knowing these limitations, Davidovsky utilizes the various abilities of the instrument including its wide timbral range and use as a percussive medium. Although Davidovsky himself has been quoted as not using pitch-class sets of any kind, a post-tonal analysis can be applied to this piece in order to further understand individual sections and interaction between guitar and recording. Also, a review of the performance techniques necessary to approach this piece, and how said techniques are implemented, will help the musician perform at a higher level.

Keywords: Guitar, Classical Guitar, Mario Davidovsky, Electronic Music, Synchronisms
Multimedia Elements Used: JPEG (.jpg)

Andrew Jack Serce

July 20, 2017

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By

Andrew Jack Serce

Dr. Dieter Hennings
Co-Director of D.M.A Project

Dr. Michael Baker
Co-Director of D.M.A. Project

Dr. Michael Baker
Director of Graduate Studies

July 20, 2017

Dedicated to my parents Silva and Atilla Serce for their continuous support.
To my aunt, Suna Erganođlu, who bought me my first performance quality
classical guitar.

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Introduction

Mario Davidovsky is an American composer who was born in Buenos Aires, Argentina on March 4, 1934. In his youth he studied the violin, and later composition as early as thirteen years old. He furthered his musical studies in composition, theory, and history in his native town under the direction of Guillermo Graetzer, a student of Paul Hindemith.¹ Beginning in 1958, he was a student of Aaron Copland at the Berkshire Music Center (currently the Tanglewood Music Center) in Lenox, Massachusetts. At Berkshire, Davidovsky also met American composer, Milton Babbitt, who persuaded him to work at the Columbia-Princeton Electronic Music Center (currently the Computer Music Center at Columbia University) in New York City. In 1960, shortly after arriving in New York City, Davidovsky was appointed Associate Director of the Columbia-Princeton Electronic Music Center where he inevitably began experimenting with the relationships between live instruments and electronic sounds. His experiments led to the composition of *Contrastes No. 1* (1960) for string orchestra and *Electronic Study No. 1* (1961), a piece that can be found on the album titled *Columbia-Princeton Electronic Music Center* released in 1964. The album is a recording of a concert performed in McMillin Theatre (currently known as Miller Theater) at Columbia University on May 9 and 10, 1961. Side two of the album features *Composition for Synthesizer* (1961) by Milton Babbitt followed by Davidovsky's piece.

¹ Noel B. Zahler, "Davidovsky, Mario," *Grove Music Online, Oxford Music Online*, Oxford University Press, accessed February 18, 2017, <http://www.oxfordmusiconline.com.ezproxy.uky.edu/subscriber/article/grove/music/07281>.

Davidovsky composed *Synchronisms No. 1* in 1962. This piece was the first in a series of pieces geared toward the interplay between tape recordings and live instruments/choir.² To date, the *Synchronisms* series continues to grow and has reached a total of twelve compositions: *Synchronisms No. 1* (1962) for flute and electronic sound; *Synchronisms No. 2* (1964) for flute, clarinet, violin, cello and tape; *Synchronisms No. 3* (1964) for cello and electronic sound; *Synchronisms No. 4* (1966) for chorus and tape; *Synchronisms No. 5* (1969) for percussion players and tape; *Synchronisms No. 6* (1970) for piano and electronic sound (1971 Pulitzer Prize); *Synchronisms No. 7* (1974) for orchestra and tape; *Synchronisms No. 8* (1974) for woodwind quintet and tape; *Synchronisms No. 9* (1988) for violin and tape; *Synchronisms No. 10* (1992) for guitar and electronic sounds; *Synchronisms No. 11* (2005) for contrabass and tape; and *Synchronisms No. 12* (2006) for clarinet and tape.

Synchronisms No. 10 for guitar and tape (1992) is a piece for solo classical guitar and pre-recorded synthesized sounds. The piece was dedicated to David Starobin, the current Professor of Guitar at the Manhattan School of Music, who also edited the guitar part.³ This particular piece in the *Synchronisms* series shows that Davidovsky is aware of the limitations of the guitar in regard to dynamic range and decay of sound. Knowing these limitations, Davidovsky utilizes the various abilities of the instrument including its wide timbral range and use as a percussive medium. Utilizing the various abilities of the instrument, the composer focuses on displaying the strengths of the classical guitar while enhancing its sonorities through the addition of synthesized tones. Davidovsky uses these limitations and abilities of the guitar when composing the piece. He presents the

² Ibid.

³ Mario Davidovsky, *Synchronisms #10*, New York: C.F. Peters Corporation, 1995.

guitar without accompaniment in two staves in order to communicate that there are multiple prominent voices. The guitar remains a solo for the first 101 measures when the tape finally enters in m. 102. Sonorous chords, rapid scales, complex meters, challenging rhythms, varying articulations, sudden changes in dynamics and texture, and many more performance/musical elements are used in the music. The interesting features of the composition are also represented in the realm of electronic music. Features such as instrumentation, timbre, and more pertinently, Davidovsky's idea of creating a "hybrid instrument" by using the live instrument simultaneously with the recorded sound, are all aspects of this work.⁴

⁴ Peter Matthew Susser "Attack, Sustain and Decay: An Analysis of 'Synchronisms No. 3 for Cello and Electronic Sounds' by Mario Davidovsky, (with original composition)," Ph.D. diss., Columbia University, 1994.

Potential Issues for Analyzing *Synchronisms No. 10* using Post-Tonal Techniques

Analysis of *Synchronisms No. 10* using post-tonal techniques presents three distinct issues of varying importance. The first being whether or not the piece should even be analyzed using methods such as pitch-classes, pitch-class sets, Klumpenhouwer networks, etc. The problem stems from the claim that Davidovsky does not use sets. In his dissertation titled “*Synchronisms #10 for Guitar and Electronic Sounds and Festino: Seminal Works for Guitar by Mario Davidovsky*,” Daniel Lippel states that:

Analyzing Davidovsky’s music defies the application of unexamined models. Because his style is so individual, many of the technical explanations for the organization of musical material that are fruitful in analyzing the works of his contemporaries yield little insight when examining Davidovsky’s music.⁵

In addition to the statement by Lippel, Christopher Malloy presents a stronger stance against a theoretical analysis in his document titled “Cadential Procedures in Mario Davidovsky’s *Divertimento for Cello and Orchestra*”. Malloy states that Davidovsky clearly expressed, in an interview, that he does not use sets. Malloy also clarifies that all types of post-tonal analyses are not present in the works of the composer:

Not only is there no row, no array, no partitioning, no derivation of pitch-class sets; there is also no palindrome, no ostinato, no algorithm, no Golden Mean, no static phrasing, no metrical modulation, no aleatoric procedure, no repetitive formal plan, no thematic repetition without transformation, no fixed association between pitch and intervallic content and other elements, and no quasi-grammatical syntax of any kind.⁶

Both Lippel and Malloy relay in more depth that the musical compositions of Davidovsky do not utilize any pre-compositional processes and that each piece is unique in regard to language.

⁵ Daniel Lippel, “*Synchronisms #10 for Guitar and Electronic Sounds and Festino: Seminal Works for Guitar by Mario Davidovsky*,” (PhD diss., Manhattan School of Music, 2006), 7.

⁶ Christopher Malloy, “Cadential Procedures in Mario Davidovsky’s *Divertimento for Cello and Orchestra*” (Ph. D. diss., Brandeis University, 1988), 104.

Considering all of the statements above, it would seem that a post-tonal analysis would be a dead end and provide no real evidence of specific compositional techniques, but that is not the overall purpose of the present document. The choice to complete such an analysis is rooted in a curiosity of searching for pc-sets and potential similarities between said sets. The purpose of this document is *not* to disprove Davidovsky's claim that his music is free of any pre-compositional post-tonal processes or to discredit the analyses of the fellow authors that have also researched his works and written their own documents based on the composer. This document *does* aim to expose certain sets and relationships between sets in order to explore the possibility that such analytical techniques can be fruitful when applied to *Synchronisms No. 10*. The goal of this research project is to find relationships between sets throughout the piece and to discover, if any, relationships between the sets found and the overall form.

It is important to refer to the article titled "The Intentional Fallacy," by William K. Wimsatt Jr. and Monroe C. Beardsley.⁷ The article discusses a debate inherent in literary criticism pertaining to the "intention" of the author. Wimsatt and Beardsley say that "intention" corresponds to what an author intended and is a design or plan in the mind of the author.⁸

⁷ Wimsatt, William K. and Monroe C. Beardsley. "The Intentional Fallacy." *Sewanee Review*, vol. 54, No. 3 (1946): 468-488. Revised and republished in *The Verbal Icon: Studies in the Meaning of Poetry*, University of Kentucky Press, 1954

⁸ *Ibid*, 3

They go further into the topic by clarifying key points of the overall argument:

We argued that the design or intention of the author is neither available nor desirable as a standard for judging the success of a work of literary art, and it seems to us that this is a principle which goes deep into some differences in the history of critical attitudes. It is a principle which accepted or rejected points to the polar opposites of classical "imitation" and romantic expression. It entails many specific truths about inspiration, authenticity, biography, literary history and scholarship, and about some trends of contemporary poetry, especially its allusiveness. There is hardly a problem of literary criticism in which the critic's approach will not be qualified by his view of "intention."⁹

The conclusion that the design or intention of the author is neither available nor desirable as a standard for judging the success of a work of literary art should also be applied to the musical arts. Who is to say that the claims of a composer, in regard to his compositional process, should be treated as the only possible interpretation of the piece? When Davidovsky states that he does not use sets or that, "Attack, sustain, decay, timbre, modes of attack, register, and the particular sound spectrum of instruments become structural units and, as such, decide the form of the composition in the same manner as a harmonic scheme in a tonal work will do,"¹⁰ it should not limit the way in which research can be conducted on his works. Therefore, a post-tonal analysis of *Synchronisms No. 10 for guitar and tape* is still possible.

The second issue in regard to analyzing the piece is determining which types of analysis would be pertinent. Studying and performing the piece has exposed certain relationships that would benefit from discovering pc-sets, utilizing Klumpenhouwer networks, and Z-relationships. In the subsequent chapters of this document, tables consisting of the most frequent sets and their frequency within the piece are presented.

⁹ Ibid

¹⁰ Meir Serrouya, "An Analysis of Mario Davidovsky's Scenes from Shir-Hashirim." (Ph. D. diss. Brandeis University, 2000), 8.

The third issue is whether or not to combine notes and elements from both the guitar staves and tape staves while attempting to discover sets or similarities. There are instances where combining pitch-classes from both instruments show an overall pc-set relationship. Sets derived from combining both instruments can be seen in Appendix A, where all the sets are presented in table format (by measure, notes in the piece, forte classification, prime form, and interval class vector).

Important Sets and Relationships Among Sets

When deciding which post-tonal techniques to use in the analysis, it was important to start with the basics. The approach used depended on the passage in the music. If a motive or idea is presented in a melodic fashion, then a condensed version of the melody was extracted and a pc-set was created from it. Sometimes notes are played at separate times while indicated to let vibrate. This indication would create overlapping notes and a pc-set was created for the harmony. If a harmony or melody is comprised of three notes, Klumpenhouwer networks were created to compare with other trichords. To fully understand the approach used in this document, the reader will have to refer to both Appendix A and Appendix B with the score in hand. The more important sets and relationships among sets are discussed within this chapter.

Trichords

As stated above, trichords were analyzed using Klumpenhouwer networks, but also using frequency and placement in certain sections in the work. For all the sets and the varying cardinalities of sets, tables are provided below. The most common occurrence among sets lies in pc-set 3-5 (Forte classification number) with the prime form [016]. This set occurs fourteen times with instances of being used in close proximity. Refer to Table 1 on the following page for all the locations of [016]. Figure 1 shows mm. 42-50 of *Synchronisms No. 10* and the two occurrences of set 3-5. The brackets encompassing the notes G-G[#]-D [016] in mm. 45-46 can be compared to the notes A^b-A-E [016] in mm. 48-49. They are found in this passage that utilizes a quick succession of trichords.

Figure 2.1 Measures 42-50 of *Synchronisms No. 10*

Table 2.1: Frequency and Location of Trichords

Forte Classification	Prime Form	Frequency	Measure + Location
3-1	[012]	6	5, 8 (trichord), 31 (f dyad with lower neighbor), 50 (first three notes), 149 (beat 1) (Guitar + Tape), 149 (beat 4) - 152 (Guitar only)
3-2	[013]	10	23 (beat 3 trichord), 89-91 (beat 1), 140 (beat 3) - 142 (beat 1) (Guitar only), 143 (last note) - 144 (Guitar only), 145-146 (without E) (Guitar only), 155-157 (first three beats), 172-173, 200-204 (G+T), 281 (beat 4), 282 (G+T)
3-3	[014]	8	3, 46 (second chord), 46 (beat 1), 177-178, 195 (last two notes) - 196 (downbeat), 198-199, 251 (beat 2), 252
3-4	[015]	6	47 (last dotted quarter), 64 (second trichord), 118 (Octaves in Guitar), 130 (first three notes) (Guitar only), 212 (beat 1) (Guitar only), 227 (Guitar only), 280 (beat 4) - 281 (beat 1)
3-5	[016]	14	45 (beat 2) - 46 (first half note), 48-49 (beat 1), 64 (first trichord), 64 (last trichord) - 65, 112 (trichord in Guitar), 113 (trichord in Guitar), 114 (highest three notes of Guitar pentachord), 116 (Eb) - 117 (A, E) (Guitar only), 117 (last three notes in Guitar), 130 (C#) - 131 (first two notes) (Guitar only), 147 (last note) - 148 (first two notes) (Guitar only), 148 (last three notes) (Guitar only), 171 (last two notes) - 172 (downbeat) (G+T), 173-174

The previous page shows another important relationship among trichords found in mm. 48-50. When the trichord A^b-A-E [016] is compared to the first three notes in m. 50 (B-C-D^b) [012] using Klumpenhouwer networks, the analysis shows that they are strongly isographic. Two sets are considered to be strongly isographic if they possess identical inversive and transpositional qualities between corresponding elements of each graph. The Klumpenhouwer network graphs below show that the trichords share inversive similarities of I₁₁ between the lowest two notes and I₀ between the outer. Take into consideration that inversive relationships are indicated by curved lines with arrows at each end to show the point of inversion between the notes. A transpositional relationship of T₁ exists between the upper notes of each trichord. Transposition is indicated by a curved line with a single arrow to show a specific direction-based distance between two notes. The passage found in mm. 44-50 is comprised mainly of trichords and the analysis above shows that many of these chords are related even though they contain different notes and/or sets.

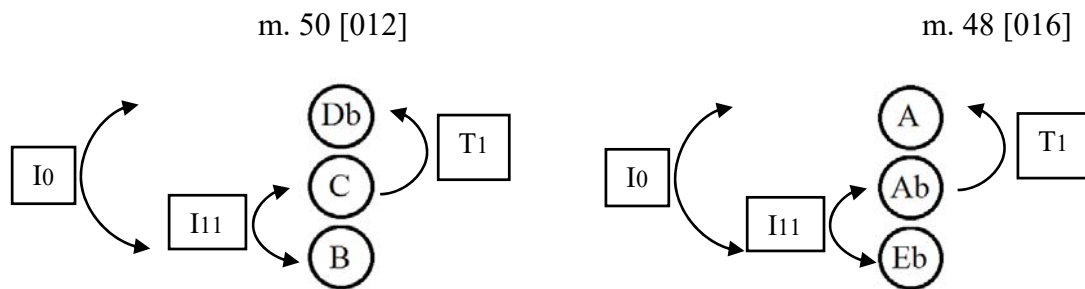


Table 1 shows that set 3-5 [016] appears five times in mm. 112-117 in the guitar part. As seen in Figure 2 below, the sustained chord in the tape is not considered in this part of the analysis and is simply a continuation of the material found in mm. 102-109. With the exception of the trichord in m. 114, [016] is presented in quartal, quintal, or quartal/quintal harmonies or arpeggiations. Unlike its former occurrences in mm. 45 and

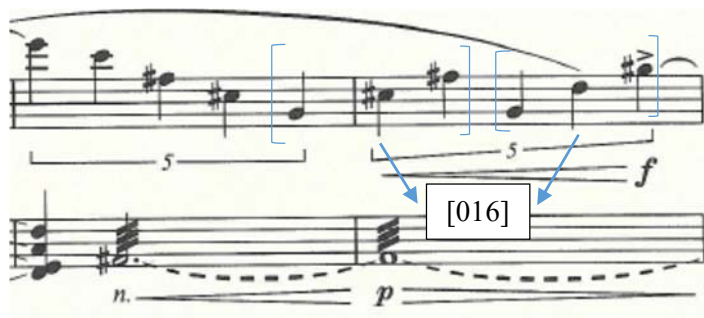
48, where the notes of [016] were presented in overlapping notes creating wide intervals, mm. 112-117 utilize the set with notes in closer proximity to each other, therefore, creating a different textural usage.

Figure 2.2 Measures 110-119 of *Synchronisms No. 10*

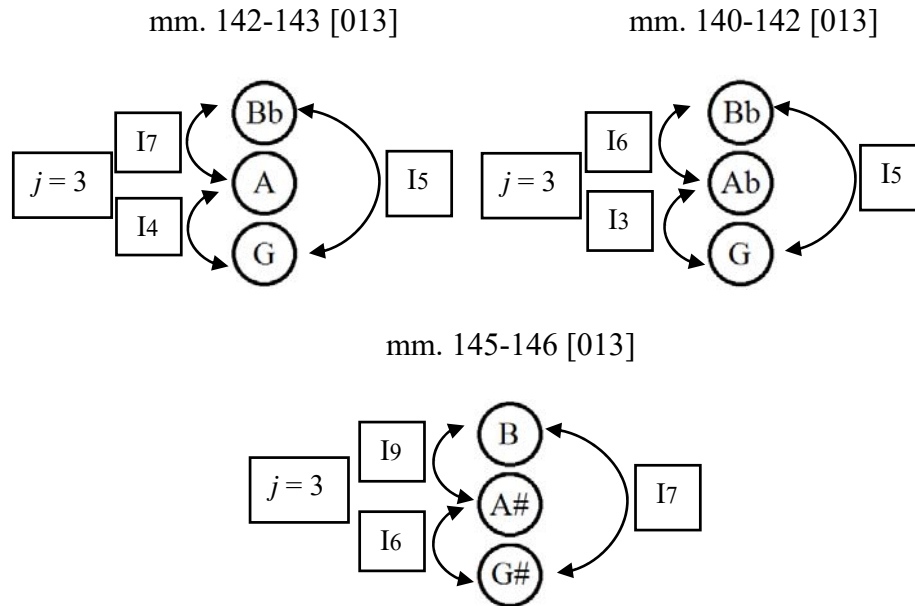
A passage similar to mm. 113-118 exists from mm. 145-149. The latter passage occurs in a closely-related inversion to the former, both beginning with a tied chord in the tape part which reduces to a single note acting as a pedal tone. The inversion is present in the guitar part and can be seen more specifically in mm. 116-117 and mm. 147-148 respectively. Figure 3 below shows mm. 147-148 and the usage of [016] in the inverted passage. Notice that in mm. 116-117 the trichord begins on an E^b for both descending

arpeggios while in mm. 147-148 ascending arpeggios begin on the note G. The set also exists in the passage starting in m. 171, but yields no major significance other than the similarity to mm. 116-117 and mm. 147-148 in that it is presented in disjunct quartal/quintal arpeggiations. Another dissimilarity is that the passage at m. 171 does not use a pedal tone, but instead, the disjunct arpeggiations occur in all parts.

Figure 2.3 Measures 147-148 of *Synchronisms No. 10*



The trichord of pc-set 3-2 [013] occurs ten times and, similarly to 3-5, is used frequently in a single section. Figure 4 below shows mm. 140-148 and considers three-note gestures in the guitar part. Measures 140-142 present a G-B^b-A^b gesture; mm. 143-144 consist of a G-B^b-A melody; and mm. 145-146 has a B-G[#]-A[#]. These short melodic ideas are all presented by utilization of leaps larger than an octave with a change of direction after the second note. The Klumpenhouwer graphs on the following page show how closely related these three instances of [013] are.



In the graphs above, j represents the distance between two inversional relationships. David Lewin explains the use of j in the first of five rules of *isography*.¹¹

1. Klumpenhouwer Networks (a) and (b), sharing the same configuration of nodes and arrows, will be isographic under the circumstance that: each T-number of Network (b) is the same as the corresponding T-number of network (a); and, each I-number of Network (b) is exactly j more than the corresponding I-number of Network (a). The pertinent automorphism of the T/I group is $F(1, j)$; $F(1, j)(T_n) = T_n$; $F(1, j)(I_n) = I_{n+j}$.

All three of the graphs above are positively isographic and not only because they share the same integer in j , they also share a T_3 relationship between the outer notes. If all shared the same inversional properties, then they would be considered strongly isographic, but this is not the case.

¹¹ David Lewin, "Klumpenhouwer Networks and Some Isographies that Involve Them," *Music Theory Spectrum* 12/1 (1990): 88.

Figure 2.4 Measures 140-148 of *Synchronisms No. 10*

The image shows a musical score for measures 140-148 of *Synchronisms No. 10*. It consists of two systems, each with a G (Guitar) staff and a T (Tuba) staff. The first system (measures 140-144) features a melodic line in the G staff with dynamics *mp*, *f*, *mp*, and *pp*, and a more rhythmic line in the T staff with dynamics *n.*, *p*, and *n.*. Annotations include 'espress. assai', 'lunga', and a 'PPPP' section with a wavy line. The second system (measures 145-148) continues the melodic line in the G staff with dynamics *mp*, *p*, *mf*, and *f*, and the T staff with dynamics *mp*, *n.*, and *p*. Blue brackets and arrows highlight specific tetrachordal structures labeled [013] and [0146]. A central box labeled 'Positively Isographic' has arrows pointing to the melodic lines in both systems.

Tetrachords

Tetrachords are used in various ways throughout the piece, including different approaches to texture such as: arpeggiation (mm. 28, 36, and 37), a single note held over a trichord (m.12), and as a single vertical chord (mm. 60, 88, 166). Sets with the cardinality of four saturate the work, but those listed in Table 2 below are the most frequently occurring and represent all of the textural uses of tetrachords previously stated.

Set 4-4 [0125] is found a total of eight times and is used in mm. 36-45 four times. Figures 5 and 6 show the set being used in a type of arpeggiation. In m. 36, the gesture starts at the *espressivo assai* and completes on the note G in m. 37. The G in m. 37 is also the first note in the next ascending gesture which happens to be [0125] and an elision of the arpeggiation gesture continues in the following measure. The elision can be seen as the note G connects each of the occurrences at their lowest points.

Table 2.2: Frequency and Location of Tetrachords

Forte Classification	Prime Form	Frequency	Measure + Location
4-4	[0125]	8	12, 36 (+ of beat 1) - 37 (first note), 37, 38, 44 (beat 2) - 45 (beat 1), 66 (tetrachord), 102 (without low E) - 103 (until F#) (Guitar only), 219 - 222 (beat 1), 225 (beat 2) (G+T)
4-9	[0167]	7	59-61 (first two beats), 70 (tetrachord), 86 (last four notes), 110-111 (Guitar only), 129 (last four notes) (Guitar only), 262 (beat 3) - 263 (beat 1), 279 (beat 3) (G+T)
4-z15 (4-z29)	[0146]	8	28 (beat 1), 100 (beat 3), 101 (beat 1), 101 (beat 2), 127-130 (beat 1) (Tape only), 146 (last note) - 147 (without G), 230 (Guitar only), 283-285 (G+T)
4-z29 (4-z15)	[0137]	2	166-168 (Tape, upper staff), 76 (G#) - 78 (until E harmonic)

Figure 2.5 Measures 36-37 of *Synchronisms No. 10*

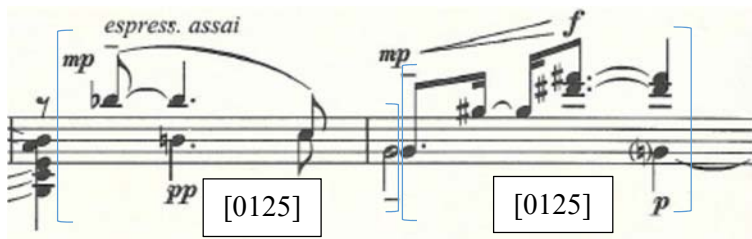
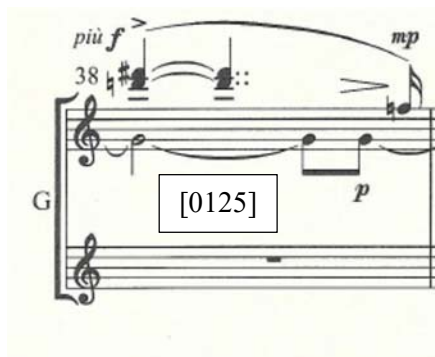


Figure 2.6 Measure 38 of *Synchronisms No. 10*



Measure 12 begins with a harmonic of E which lasts through the whole measure and is supplemented by a three-note chord at the end of beat 3. This is the only time that this particular type of tetrachord texture happens, but it touches on an important concept that is found throughout. The concept is resonance, which will be discussed in a later chapter concerning performance guidance. The E harmonic is plucked on beat 1 and should last for the entire measure or longer if plucked adequately enough. The harmonic occurs on the sixth string and the subsequent chord is plucked simultaneously on the fourth through second strings. If played properly, without accidentally touching any strings that are currently resonating a note, then the tetrachord can be heard. Figure 7 shows the measure described above. Take into consideration the dynamic marking of the trichord (*piano*) used to match the decaying volume of the harmonic (*mezzo forte*) at the beginning of the measure.

Figure 2.7 Measure 12 of *Synchronisms No. 10*



The third type of tetrachords are presented as single vertical chords. These vertical chords are presented in various ways utilizing different dynamic levels and types of articulation. Figure 8 shows two distinct uses of the tetrachord in mm. 230-231. The first chord starts *pianissimo* and as *rasgueado* while reaching *forte* through a crescendo. The second chord is *forte*, *staccato*, and performed *secco* (dry). The sets in Figure 8 are very similar according to Eric J. Isaacson's IcVSIM. The IcVSIM, or Interval-class

Vector SIMilarity, compares the interval-class material between two sets and places a value of 0.00-3.58 with 0.00 being most similar.¹² Set 4-z15 [0146] and 4-16 [0157] share an IdV (Interval-difference Vector) of 0.577. The IcVSIM upholds three criteria that Isaacson believes are necessary in measurement of intervallic similarity. He states that measurement of intervallic similarity should provide a distinct value for every pair of sets, be useful (not just usable) for sets of any size, and provide a wide range of discrete values.¹³

Finally, the set 4-z15 [0146] occurs eight times and is used consecutively at the end of the guitar solo. Figure 9 shows mm. 100-101 and the frequent use of [0146] in arpeggiation as well as a chord. As seen in the music, set 4-16 is present close to other tetrachords and, similar to m. 231, is present in the form of a chord.

Figure 2.8 Measures 230-231 of *Synchronisms No. 10*

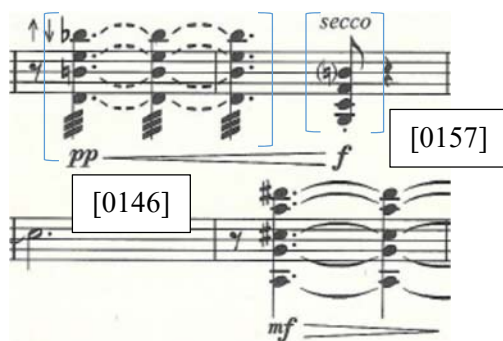
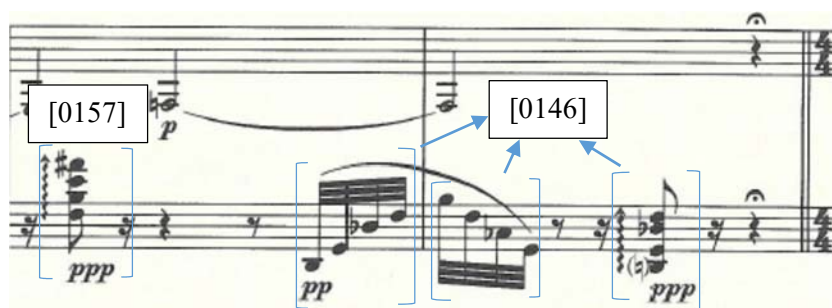


Figure 2.9 Measures 100-101 of *Synchronisms No. 10*



¹² Eric J. Isaacson, "Similarity of Interval-Class Content between Pitch-Class Sets: The IcVSIM Relation," *Journal of Music Theory* 34/1 (1990): 1.

¹³ *Ibid.*, 2.

Set 4-z15 is a set that shares a Z-relationship with 4-z29 [0137]. Two sets are considered to be Z-related when they share the same interval-class vector. This particular relation occurs between sets of the same cardinality and is presented as a six-digit array. The interval-class vector of sets 4-z15 and 4-z29 is <111111>. The latter set can be seen in Figure 10 as similar to the opening four-note motive of the entire piece (Figure 11). In mm. 76-78, a transformed version of the opening motive is presented. Comparing the opening motive (C-B-Bb-E) and the motive found in mm. 76-78 (G#-B-Bb-E), it can be seen that the first note is transformed into a G# and a registral displacement occurs with the notes Bb-E. Another clear iteration of the opening motive is found in mm. 273-274 (F-E-Eb-A) in the guitar part and, although it is presented with a different collection of notes, it is the same pc-set as the beginning of the piece, 4-5 [0126].

Figure 2.10 Measures 1-2 of *Synchronisms No. 10*

The image shows the first two measures of the piece. The top staff is for Guitar, marked *mf*, with a tempo of $\text{♩} = 96 \pm 100$. It features a triplet of eighth notes in the first measure and a half note in the second. The bottom staff is for Tape, marked *4-5 [0126]*. Fingering and vibrato markings are present in the guitar part.

Figure 2.11 Measures 76-78 of *Synchronisms No. 10*

The image shows measures 76-78. The top staff is for Guitar, marked *pp* and *mp*, with a tempo of $\text{♩} = 96 \pm 100$. It features a triplet of eighth notes in the first measure and a half note in the second. The bottom staff is for Tape, marked *4-z29 [0137]*. Fingering and vibrato markings are present in the guitar part.

Pentachords

Pentachords are used similarly to tetrachords in that they are found in arpeggiation (mm. 7, 13, 24-25, 133-136, 183-192, 243, 263-264) and as a single vertical chord (mm. 6-7, 53). More interestingly is how the pentachords in sets 5-4 [01236] and 5-7 [01267] act as supersets to the opening set of 4-5 [0126]. Most of the sets discussed so far have incorporated the guitar, but set 5-20 [01568] is found in a passage for the tape only. Table 3 shows the most frequent uses of five-note sets and describes their locations. Considering the usage of pentachords in the form of arpeggiations, mm. 7, 24, 271, and 286 are considered closely related, but more in the sense of musical gestures than interval content. Figures 12-15 show an arpeggiation motive found

Table 2.3: Frequency and Location of Pentachords

Forte Classification	Prime Form	Frequency	Measure + Location
5-4	[01236]	5	13-14 (repeated notes in scale), 127 (last two notes) - 128 (first three notes) (G only), 183-192, 243-244 (downbeat) (Guitar only), 263 (beat 2) - 265 (beat 1) (Guitar only)
5-7	[01267]	4	6-7, 30 (last dyad) - 31 (first two beats), 33 (beat 1, without low E string), 66 (first six notes)
5-20	[01568]	4	53, 133-136 (Tape only), 208-209 (Guitar only), 216 (G+T)
5-28	[02368]	4	15-16, 84 (beat 3) - 85, 97, 244 (beat 2) - 245 (Guitar only),
5-33	[02468]	3	24 (beat 2) - 25

Figure 2.12 Measure 7 of *Synchronisms No. 10*

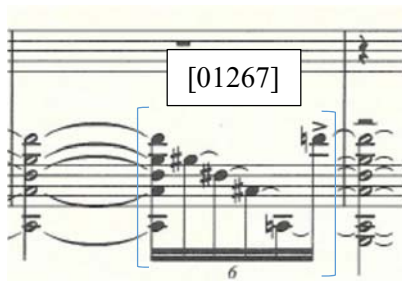


Figure 2.13 Measures 24-25 of *Synchronisms No. 10*

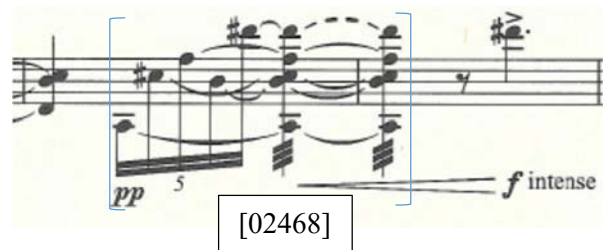
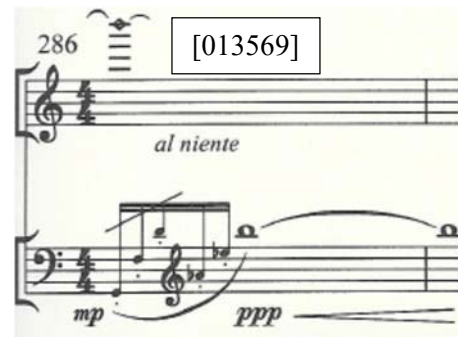


Figure 2.14 Measures 271-272 of *Synchronisms No. 10*



Figure 2.15 Measure 286 of *Synchronisms No. 10*



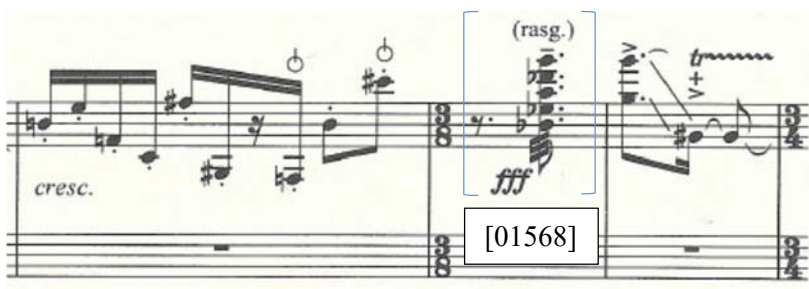
throughout the piece. Although Figures 13 and 14 are the only arpeggios that are the same, each arpeggio above shares a distinct musical similarity in that they all end with the highest note in their respective patterns. The first three are performed *lasciare vibrare* (let vibrate) as indicated by the tie markings on each note. In comparison to the first three arpeggios, the arpeggio in Figure 15 is marked with *staccato* indications so that only the note B is heard as it *crescendos* to match the B harmonic in the guitar. Isaacson's IcVSIM shows that sets 5-7 [01267] and 5-33 [02468] share an IdV (Interval-difference Vector) of 2.449, yielding more of a dissimilarity in regard to interval content. Sets 5-7 [01267] and 6-z28 [013569] (Figure 15) share an IdV of 1.772 while 5-33 and 6-z28 produce an IdV of 2.034, rendering more contrasts than similarities between all the arpeggios.

Pentachords are found as chords in mm. 6 and 53 and contain mostly quartal or quartal/quintal harmonies. Figures 16 and 17 show these chords and how they are used as loud statements of harmony. An IcVSIM comparison yields an IdV of 0.816 between sets 5-7 [01267] and 5-20 [01568] making these sets more similar than those discussed in Figures 12-15. Although the sets in Figures 16 and 17 are slightly different in terms of register, they are the loudest chords in their respective phrases and are both approached by passages in lower registers.

Figure 2.16 Measures 5-6 of *Synchronisms No. 10*



Figure 2.17 Measure 52-54 of *Synchronisms No. 10*



As mentioned above, sets 5-4 [01236] and 5-7 [01267] are supersets of the opening set of 4-5 [0126]. A superset is a set with a cardinality of at least one more than the subset in question. A superset must contain all the members from the prime form of the subset. In this case, [0126] is found in both [01236] and [01267]. Other pentachords

that act as a superset to 4-5 [0126] are: 5-6 [01256], 5-9 [01246], and 5-15 [01268]. Set 5-6 [01256] occurs in mm. 4 and 226 (beat 2), set 5-9 [01246] is found in mm. 131 (beat 2) – 132 (beat 1), and set 5-15 is located at 226 (first five notes) (G+T). A comparison of 4-5 [0126] with all of its supersets mentioned above does not discover any substantial similarity musically or motivically, but it does show the importance of the opening set as it is present in subsequent sets throughout the piece.

Hexachords and Septachords

Hexachords and septachords exist in *Synchronisms No. 10* and, although they do not saturate the piece in the same manner as the trichords and tetrachords found in this study, they do present some similarities in their usage. Other than appearing in mm. 62-63 during the guitar solo, set 6-z3 [012356] is found more frequently later in the work along with set 6-z36 [012347]. Sets 6-z3 and 6-z36 are Z-related and share an IcV of <433221>. They are used frequently beginning in mm. 246-249 and found as an important set in mm. 266-276. Refer to Table 4 for the most frequent hexachords and septachords.

Figure 18 shows a phrase that begins on beat 2 of m. 263 and ends in m. 272. This phrase contains sets 5-4 [01236], 5-24 [01357], and 5-33 [02468]. Sets 5-4 and 5-24 share an IdV of 1.155, sets 5-4 and 5-33 produce an IdV of 2.160, and set 5-24 and 5-33 yield an IdV of 1.414, therefore, not presenting any striking similarities. Measures 266-270 present consecutive usage of sets 6-z3 and 6-z36 which inevitably share an IdV of 0.000 as a result of being Z-related.

Table 2.4: Frequency and Location of Hexachords and Septachords

Forte Classification	Prime Form	Frequency	Measure + Location
6-z3 (6-z36)	[012356]	3	62 (beat 3) - 63 (beat 1), 246-249 (downbeat) (Guitar only), 268 (beat 4) - 270
6-z6	[012567]	1	34 (ff chord)
6-z12	[012467]	3	32, 80, 119 (beginning with harmonics) - 121 (beat 2) (G+T)
6-18	[012578]	3	50 (ascending notes in flourish), 164 (hexachord) - 166 (Guitar only), 237 (last eighth note) - 238 (beat 2)
6-z36 (6-z3)	[012347]	2	266 (beat 2) - 268 (beat 1), 276
7-30	[0124689]	2	241 (ascending), 241 (beat 3) - 242 (beat 1) (Tape only)

Figure 2.18 Measures 263-272 of *Synchronisms No. 10*

The figure displays a musical score for measures 263-272 of *Synchronisms No. 10*, featuring guitar (G) and tape (T) parts. The score is annotated with several chord forms in boxes:

- 5-4 [01236]**: Located in measure 263, spanning the guitar and tape parts.
- 5-24 [01357]**: Located in measure 264, primarily in the guitar part.
- 6-z36 [012347]**: Located in measure 265, primarily in the guitar part.
- 6-z3 [012356]**: Located in measure 268, spanning both parts.
- 5-33 [02468]**: Located in measure 270, primarily in the guitar part.

The score includes various musical notations such as dynamics (*dim.*, *p*, *mp*, *pp*, *f*), articulation (*n.*), and performance instructions like *cresc.* and *5:4*. Measure numbers 263, 268, and 270 are clearly marked at the beginning of their respective staves.

The passage in Figure 18 features chords comprised mainly of quartal intervals while melodic movement occurs in ascending seconds throughout. Ascending seconds in the melody occur in mm. 263-264 (G#-A#), m. 265 (F-G), mm. 266-268 (Bb-C-C#), and m. 268 (Eb-F#).

There are a total of eight different sets with the cardinality of seven. From the eight sets, 7-6 [0123478] and 7-30 [0124689] occur twice and share an IdV of 1.000. Sets 7-6 and 7-30 are similar in regard to their interval content, but they are found in different contexts musically. The former is presented in chordal fashion in mm. 8 and 222, whereas the latter is part of imitative scalar passages between guitar and tape in mm. 241-242. Figure 19 displays the scalar passage in the guitar which is then imitated in the tape. Sets 7-27 and 7-30 share an IdV of 0.816, being more similar than dissimilar. The scales built with 7-30 are the only times that this particular set is present in the piece, and even though the melodic interval content between the two iterations are not exactly the same, they both start with consecutive minor seconds and are primarily ascending.

Figure 2.19 Measures 241-243 of *Synchronisms No. 10*

The image shows a musical score for measures 241-243 of *Synchronisms No. 10*. It consists of two staves: a guitar staff (G) and a tape staff (T). The guitar staff begins at measure 241 with a dynamic marking of *f*. A bracketed section of the guitar staff is labeled with the interval set 7-27 [0124579]. The tape staff begins with a dynamic marking of *mf*. A bracketed section of the tape staff is labeled with the interval set 7-30 [0124689]. The tape staff ends with a dynamic marking of *dim.*. The guitar staff ends with a dynamic marking of *cresc.* and a series of notes with accidentals (b, b, b, e, e, b, b, b).

The Specifics of Lippel's Form

There are many sets in the piece and relationships between sets, as seen in preceding chapters and the appendices at the end of this document, but the main questions that arise from the research of this project are ones that relate to form. Are the sets indicative of a larger musical form? Does that form coincide with the structure of the piece or perceptions of the form of *Synchronisms No. 10* by other authors? In beginning to answer these questions, it is important to revisit sets and relationships between sets among those which have a cardinality of three or four. The reason for reviewing these sets is based on the fact that sets with a cardinality of three or four are found extensively throughout *Synchronisms No. 10* and, more pertinently to form, the opening set of 4-5 [0126] may signify larger points of interest in the form.

Preliminary research shows that a form for *Synchronisms No. 10* has already been mapped by Daniel Lippel in a section titled "Discussion of Dramatic Structure of *Synchronisms #10*" in his dissertation.¹⁴ In this section of his document, Lippel discusses four large sections inherent in the work: the solo guitar section, guitar and electronics section, structural climax, and coda. During his analysis, he focuses on motives, phrases, solo sections (what he labels as soliloquys), intervallic relationships, and guitar techniques. Each section of Lippel's analysis will be summarized briefly and supplemented with an analysis by the current author of this document.

Lippel begins his analysis of the solo guitar section (mm. 1-101) by stating that, "The intervallic characteristics of the phrase that introduces motive x help to frame the

¹⁴ Daniel Lippel, "*Synchronisms #10 for Guitar and Electronic Sounds and Festino: Seminal Works for Guitar* by Mario Davidovsky," (PhD diss., Manhattan School of Music, 2006), 67-95.

melodic material for the rest of the piece.”¹⁵ Motive x is simply referring to the first rhythm found in the anacrusis measure at the beginning. More specifically, he is referring to the first four notes of the piece (C-B-B^b-E) and the intervals between them (C [major seventh] B); (C [minor seventh] B^b); (B^b[tritone]E), as being important intervals throughout the piece. Many of his musical examples show how these intervals exist between notes in subsequent chords and melodies. Lippel continues by arguing that Davidovsky explores the register of the guitar via a combination of motive x and the intervals mentioned above. He brings attention to the various rhythms found early in the guitar solo and states that, “In m. 11 and m. 13, contrasting material appears that will be developed and stratified later in the work.”¹⁶ In this case, he is referring to the quintuplet motive in m. 11 and the scalar material of m.13. Motive x is discussed further as being integrated (mm. 19-22), presented with inverted intervals (mm. 30-31), found over a pedal (m. 40), utilized with a crescendo (mm. 42-44), as developed into longer rhythms (mm. 66-69), and found in transposition (mm. 76-77). See Figures 3.1-3.6 below.

Figure 3.1 Measures 19-22 of *Synchronisms No. 10*

The image shows a musical score for measures 19-22 of *Synchronisms No. 10*. The score is written for guitar (G) and bass. The guitar staff features a quintuplet in measure 19, followed by a series of notes with dynamics ranging from *mp* to *ff*. A blue arrow points to a specific rhythmic pattern in measure 21, which is labeled as the "Integrated Rhythm of Motive x". The bass staff provides a harmonic accompaniment with notes and rests. The score includes various musical notations such as slurs, accents, and dynamic markings.

¹⁵ Ibid, 68.

¹⁶ Ibid, 70.

Figure 3.2 Measures 30-31 of *Synchronisms No. 10*



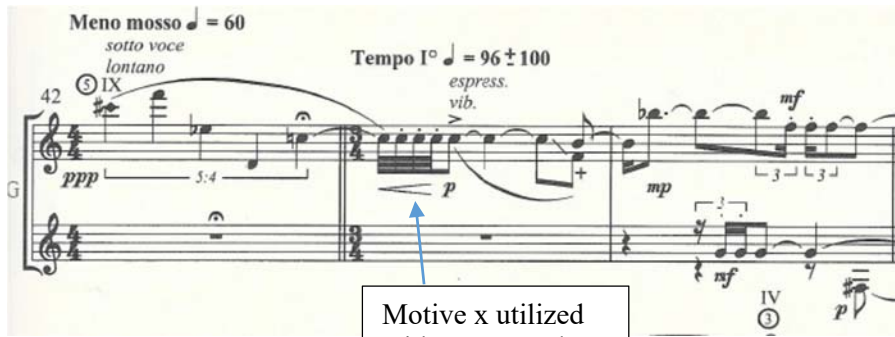
Motive x presented with inverted intervals

Figure 3.3 Measure 40 of *Synchronisms No. 10*



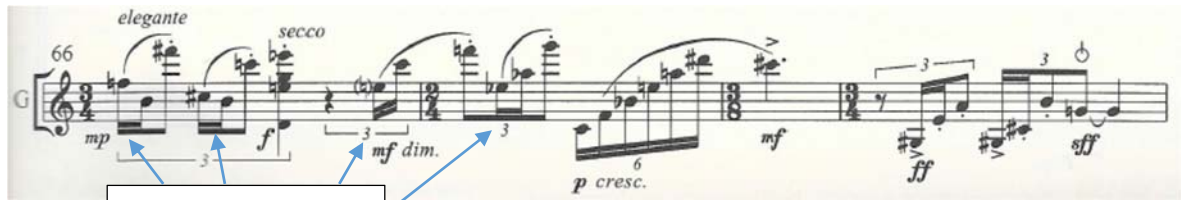
Motive x presented over a pedal

Figure 3.4 Measures 42-44 of *Synchronisms No. 10*



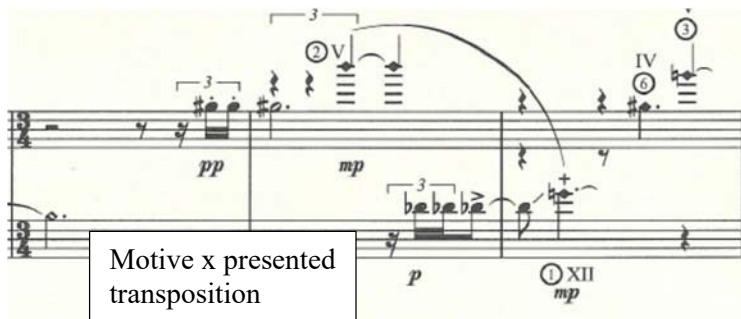
Motive x utilized with a crescendo

Figure 3.5 Measures 66-69 of *Synchronisms No. 10*



Motive x developed into longer rhythms

Figure 3.6 Measures 76-77 of *Synchronisms No. 10*



Motive x presented transposition

Lippel quickly mentions the development of the quintuplet motive (mm. 80-86) and implies that, “The sudden emphasis on the quintuplet motive lends this moment instability, suggesting that the piece may be entering a transitional stage.”¹⁷ He clarifies this idea of instability by stating that music based on a chromatic language needs alternative methods for indicating changes in the music as opposed to tonal music where changes in harmonic areas create instability.

Figure 3.7 Measures 80-86 of *Synchronisms No. 10*

The image shows a musical score for measures 80-86 of *Synchronisms No. 10*. It features two staves: a guitar part (G) and a piano part. The guitar part begins with a quintuplet of eighth notes marked with a '5' and a bracket, starting at measure 80. The piano part provides harmonic support with chords IV and XII. The score includes various dynamics such as *p*, *mf*, *pp*, and *mp*, along with performance instructions like *dolce*, *vib.*, and *espress.*. A blue arrow points to the quintuplet in the guitar part, and a text box below it reads "Development of the Quintuplet Motive".

In the final paragraphs about his analysis of the guitar solo, Lippel adds that instability is reinforced by a change in texture through the use of octaves that transform into minor ninths combined with harmonics in mm. 89-97. He explains the effect that these changes and instabilities have on the piece while stating that, “Davidovsky momentarily reorients the expressive content of pitch language of the piece,”¹⁸ and clarifies this by adding that the octaves are utilized in a manner of transforming the musical language of *Synchronisms No. 10*. Lippel makes it evident that this change in texture is important to the structure of the piece by implying that a transitional passage is extant, “Here, as an expansion and compression of the more common vertical octave,

¹⁷ Ibid, 76.

¹⁸ Ibid, 77.

these sevenths and ninths sound more wrenching, as if the purity of the octave is being stretched and then magnetically is pulled back to an octave,” referring to mm. 89-97.¹⁹ In his closing remarks about the guitar solo, he draws attention to the use of *pizzicato* and describes them as playful interjections. He concludes this section of the analysis by stating that, “All of the new sounds and reorientations of old sounds lay the groundwork for a major shift in the direction of the work.”²⁰

Figure 3.8 Measures 89-93 of *Synchronisms No. 10*



Figure 3.9 Measures 94-97 of *Synchronisms No. 10*



Lippel begins his analysis of the guitar and electronics section (mm. 102-223) by making remarks on Davidovsky’s transition from the guitar solo to the new section and how he links the material from the end of the guitar part to the beginning of the tape part. He makes it apparent that the octaves found in mm. 89-97 are utilized again at the

¹⁹ Ibid

²⁰ Ibid

beginning of the tape entrance mm. 102-107, but at this point are used as a means to introduce the tape. It could be said that the octave doublings found in mm. 102-107 provide a smooth transition sonically as the combination of both decaying guitar notes and sustained electronic sounds are presented by Davidovsky for the first time at nearly the midpoint of the piece.

Figure 3.10 Measures 102-109 of *Synchronisms No. 10*

The image displays a musical score for measures 102-109 of *Synchronisms No. 10*. It features two systems of music. The first system, measures 102-107, is marked 'Giusto' with a tempo of $\text{♩} = 60$ and includes the instruction 'intimo, espress.'. The guitar part (G) begins with a 'TAPPE' box indicating the start of the tape, followed by a 'gliss.' and a 'pp' dynamic. The tape part (T) is marked 'pppp'. The second system, measures 106-109, is marked 'Giusto' with a tempo of $\text{♩} = 120$ and includes the instruction '*liberamente'. The guitar part (G) is marked 'nobile' and 'p', with dynamics ranging from 'f' to 'mp'. The tape part (T) is marked 'mp' and includes a 'cue:' instruction. A footnote at the bottom states: '* Repeat in any order until tape enters on C# on beat three.'

Measures 108-113 are considered by Lippel as the “Transition to the electro-acoustic section”. It can be viewed that the tape begins to create its own character in m. 109 where the term “cue” is located because this is first instance when it does not match or mimic the guitar. He revisits the quintuplet motive that is expanded in mm. 116-117 and

explains that the intervallic structure is heavily based on tritones. Motive x begins to be found in different textures than occurrences from the guitar solo section including being utilized as an accompaniment (mm. 118-120) and within an interactive texture (mm. 122-124). Lippel mentions an important moment in which the roles of the guitar and tape are reversed, referring to many layers of the piece.

It would be a mistake to analyze this piece in a one-dimensional fashion, as if the electronics' only role would be to enhance the guitar. This moment illuminates Davidovsky's interest in developing a symbiotic relationship between the two parts, one in which they complement each other, and perhaps even absorb characteristics from one another.²¹

Figure 3.11 Measures 116-124 of *Synchronisms No 10*

The figure displays two systems of musical notation. The upper system covers measures 116-120, and the lower system covers measures 120-124. Each system consists of a guitar (G) staff and a tape (T) staff. In the upper system, a box labeled 'Quintuplet Motive' points to a five-note sequence in the guitar staff. Another box labeled 'Motive x utilized as an accompaniment' points to a similar sequence in the tape staff. The lower system features a box labeled 'Motive x within an interactive texture' pointing to a sequence in the tape staff. The score includes various musical notations such as dynamics (p, mp, mf, f), articulation (accents), and performance instructions like '3' and '5:3'.

Measures 153-159 mark a significant moment when the first soliloquy occurs in the guitar part. Lippel adds that the opening rhythm is influenced by motive x and that the intervallic content is also influenced by those found in the opening motive. He continues

²¹ Ibid, 82.

by labelling mm. 160-164 as “tolling bells” and clarifying that the listener is to be intrigued by the alternating off-beats between guitar and tape. The quintuplet motive returns in mm. 166-167 and is expanded to a ten note passage in the guitar.

Figure 3.12 Measures 153-158 of *Synchronisms No. 10*

Opening rhythm influenced by Motive x

Figure 3.13 Measures 159-167 of *Synchronisms No. 10*

lunga a tempo legato assai

lunga

Tolling Bells

Quintuplet Motive

Lippel delves further into the quintuplet motive and discusses mm. 210-215 and the five-note groupings found in the passage. He explains that the idea of the quintuplet motive is transformed into a rhythmic parameter of five sixteenth notes that dictates entrances in the tape. The quintuplet motive plays an important role in an overarching idea of the electro-acoustic section. As seen in Figure 3.14, the idea of the hybrid instrument, created by combining the guitar and tape, is enhanced by the quintuplet motive in m. 216 as both instruments share the same rhythm and pitch-class material.

Figure 3.14 Measures 204-216 of *Synchronisms No. 10*

The image displays a musical score for measures 204-216 of *Synchronisms No. 10*, featuring guitar (G) and tape (T) parts. The score is divided into two systems. The first system covers measures 204-211, and the second system covers measures 212-216. The guitar part in measure 204 begins with a *pp* dynamic and includes a quintuplet of sixteenth notes. The tape part in measure 204 starts with a *mf* dynamic and also features a quintuplet. A blue arrow points from the guitar quintuplet in measure 204 to the tape quintuplet in measure 216. In the second system, measure 212, a box labeled "5 sixteenth-note entrances" points to five specific sixteenth-note entries in the tape part. A blue line connects these entries to the guitar part in measure 216. A box labeled "Hybrid Instrument and Quintuplet Motive" is positioned at the bottom right, with a blue line pointing to the guitar part in measure 216. Dynamics include *pp*, *mf*, *mp*, and *p*. Performance markings include accents, slurs, and a *cresc.* marking.

Lippel’s analysis continues with a section he labels as the Structural Climax (mm. 224-270). He begins by discussing the character shift in mm. 224-228 while comparing the expressive texture to m. 34 and m. 72. The guitar technique of *dedillo* is present in mm. 229-232 (refer to the *dedillo* section of the Necessary Techniques for Performance chapter of this document).

Figure 3.15 Measures 224-232 of *Synchronisms No. 10*

The image displays a musical score for guitar (G) and tape (T) for measures 224-232 of *Synchronisms No. 10*. The score is written in 7/8 time. The guitar part (G) features complex rhythmic patterns, including triplets and sixteenth notes, with dynamic markings such as *mp*, *sf*, *mf*, *pp*, *ff*, *p*, and *mf*. The tape part (T) provides a rhythmic accompaniment with similar dynamic markings. A blue box labeled "Dedillo" points to a specific hairpin in the guitar part, indicating a dynamic change.

Lippel explains that the chords found in the guitar during mm. 233-236 reflect the intervallic structures from the beginning of the work. Material from the guitar solo begins to resurface in mm. 241-242 with a restatement of scalar material from m. 13. The tape interrupts the scale on beat 3 of m. 241 in what Lippel calls cooperative scale material. He takes a moment to explain his choice of labeling mm. 224-245 as the structural climax by listing specific characteristics.²²

In these climactic twenty measures, Davidovsky manages to bring together several of the strata that exist throughout the piece. The scalar material in m. 241, the tape *crescendi* extending the guitar sustain, the *dedillo* hairpin in the guitar, and rhythmic fragments of primary motive x all coexist in a very short span of musical time, synthesized into a culmination of the accumulated energy of the work.

²² Ibid, 90.

Figure 3.16 Measures 233-248 of *Synchronisms No. 10*

The image displays a musical score for measures 233-248 of *Synchronisms No. 10*, featuring guitar (G) and tuba (T) parts. The score is annotated with several key features:

- Measures 233-240:** The guitar part begins with a fortissimo (*ff*) dynamic and a *secco* articulation. The tuba part includes a *p sub.* (piano subito) dynamic and a crescendo leading to a fortissimo (*ff*) dynamic. A box labeled "Climactic Point" points to a specific measure in the guitar part.
- Measures 241-243:** The guitar part features a *f* (forte) dynamic and a *cresc.* (crescendo) marking. A box labeled "Material from Guitar Solo Section" points to this passage. The tuba part includes a *mf* (mezzo-forte) dynamic and a *dim.* (diminuendo) marking. A box labeled "Cooperative scale material" points to the tuba part.
- Measures 244-248:** The guitar part starts with a *(cresc.) ff* dynamic and includes a *mp* (mezzo-piano) dynamic. A box labeled "End of Structural Climax" points to the end of this section. The tuba part includes a *p* (piano) dynamic and a *dim.* marking. A box labeled "Second Guitar Soliloquy" points to the guitar part.

Other annotations include "a tutta forza" and "gliss." (glissando) in the guitar part, and "6" and "3" (triplets) in the tuba part.

Lippel comments on mm. 246-258, which he calls the second soliloquy, stating that the material is representative of measures from the opening solo section, but similar to mm. 133-144 in regard to occurring after a climactic section. Measures 259-264 is what Lippel considers a “seamless integration of electronics,” probably because the tape part doubles the guitar in pitch and similar dynamics.

Figure 3.17 Measures 256-267 of *Synchronisms No. 10*

The image displays a musical score for measures 256-267 of *Synchronisms No. 10*. It features three staves: two for guitar (G) and one for tape (T). The guitar part is written in treble clef, and the tape part is in bass clef. The score includes various dynamic markings such as *pp*, *p*, *cresc.*, *mf*, *dim.*, *p*, *mp*, and *ppp*. A text box with a white background and black border is placed over the guitar staff in measure 257, containing the text "Seamless Integration of Electronics". The score also includes fingering numbers (e.g., 7, 4, 2, 1) and a circled XII indicating a double stop.

The final section of Lippel’s analysis is called the Coda (mm. 271-290). The coda begins with a return of the opening motivic material which is presented in a transposed form. Following the return of the opening material, a tremolo chord occurs in the guitar with a large crescendo in m. 279. Lippel brings attention to m. 281, stating its humorous nature and adding that multiple extended techniques are utilized within the measure including *glissandi*, *Bartók pizzicato*, and guitar percussion.

Figure 3.18 Measures 271-273 of *Synchronisms No. 10*

The image shows a musical score for two staves. The top staff is a guitar part, and the bottom staff is a tape part. The guitar part has a 5:4 ratio indicated below it. The tape part has a box labeled "Beginning of Coda" at the start. Both parts feature complex rhythmic and pitch structures with various accidentals and dynamics like "p" and "n".

The piece concludes with some harmonics in the guitar and a final gesture by the tape. As the final harmonic in the guitar part fades away, the last note of the tape passes through a dynamic swell in order to take over the guitar harmonic with the same pitch. The piece ends with a guitar pizzicato under the fading harmonic in the tape. In Lippel's conclusion of his analysis, he makes final remarks about *Synchronisms No. 10*.

As an electro-acoustic piece, Davidovsky ingeniously explores the sonic world of the guitar, and the ways that the electronic element can complement those characteristics. The level of motivic, rhythmic, and pitch integration of the piece is highly comprehensive, while still allowing for the necessary introduction of contrasting material to provide the piece with a sense of linearity. Perhaps most importantly, Davidovsky's sense of structural drama in *Synchronisms #10* is masterful. He takes a considerable risk by waiting several minutes into the piece to introduce such a crucial element as the electronics. The risk pays off as it illuminates not just the unique sonic aspects of the guitar, but also the narrative versus collaborative strains in the work. His awareness of the emotional impact of the extended solo guitar introduction allows him to stretch the expressive boundaries of the work in its second half.²³

²³ Ibid, 95.

Sets and Form

The analysis within this document would not be complete without a discussion of the sets and how they are or are not related to the form. For this particular study, the form that has been mapped out by Daniel Lippel will be used as a point of departure. His discussion of form and specific ideas within each section can be found in a chapter titled “Discussion of Dramatic Structure of *Synchronisms #10*.”²⁴ An abridgement of Lippel’s form can be found in the previous chapter of this document.

Beginning with the solo guitar section (mm. 1-101), it is important to shed light on the set 4-5 [0126] as it serves a significant purpose to both Lippel’s form and the analysis found in earlier chapters of this document. On page 69 of his dissertation, Lippel clarifies the motive found in the opening measures as containing key intervals that are used throughout the piece. The intervals of the major seventh, minor seventh, and tritone are considered to be structural intervals used to move motive x through the guitar register. Set [0126] is representative of all of these intervals: major seventh (1 up to 0); minor seventh (2 up to 0); tritone (6 up to 0). This set is also pertinent to the analysis found in this document because of the properties it holds as a subset/superset to other frequently occurring sets such as: 3-1 [012]; 3-5 [016]; 5-4 [01236]; 5-7 [01267]; 6-z3 [012356]; 6-z6 [012567]; 6-z12 [012467]; and 7-30 [0124689]. When the motive x statement returns in mm. 76-78, it is presented in transposition and contains set 4-z29 [0137]. Although it is rhythmically identical to the beginning of the piece, the set class content does not create an overpowering similarity between the two instances.

²⁴ Daniel Lippel, “*Synchronisms #10 for Guitar and Electronic Sounds and Festino: Seminal Works for Guitar* by Mario Davidovsky,” (PhD diss., Manhattan School of Music, 2006), 67-95.

Figure 4.1 Measures 1-2 of *Synchronisms No. 10*

Figure 4.2 Measures 76-78 of *Synchronisms No. 10*

The next vital point discussed by Lippel is the first instance of the quintuplet motive in m. 11. The quintuplet motive is comprised of set 5-19 [01367] which is not found in the remaining quintuplets within the solo guitar section. The other quintuplets can be found in m. 42 (5-2 [01235]), m. 80 (5-7 [01267]), and m. 86 (5-z18 [01457]), which contain similar attributes to 5-19, but not enough to signify anything more than sharing the same cardinality.

Figure 4.3 Measures 10-12 of *Synchronisms No. 10*

Figure 4.4 Measure 42

Figure 4.5 Measure 80

Figure 4.6 Measure 86

This solo guitar section can be seen as having mini sections, therefore, creating a smaller form within the piece. Measures 1-41 can be viewed as a section because of the fading away of sound in m. 41 and the tempo indication at the beginning of m. 42. The material found in m. 42 until m. 88 is the second section. In the second section, many rhythms are presented in relation to sextuplets and triplets. Although it can be disputed, the relative dynamics used in the first section as compared to the second section may support the claim of their respective points of demarcation. The first section mostly contains dynamics on the louder side of the spectrum (*mezzo forte* or louder) while the second mainly contains the opposite (*mezzo forte* or quieter). The solo guitar section ends with closing material that starts in m. 89 and lasts until the *fermata* found in m. 101. Octaves and harmonics make up most of the closing material with instances of *pizzicato* and quiet *tremolos*.

The guitar and electronics section (mm. 102-272) is larger in size than the solo section, but does not exceed it by much when compared to the amount of time it takes to perform each. When listening to recordings of *Synchronisms No. 10*, the average time it takes to complete the solo guitar section averages between 4' to 4' 30". Since the coda section (to be discussed in subsequent paragraphs) is about 1' in length and knowing that the suggested performance length for the piece is 10', it is safe to state that remaining time of about 4' 30" is dedicated to the guitar and electronics section.

Measures 102-109 (beat 2) serve as an introduction to the new section. Omitting the low E that initiates the *glissando* in m. 102, the next four notes found in the guitar part (A^b-E^b-G-F[#]) create set 4-4 [0125]. Set 4-4 is strikingly similar to the opening set of the piece 4-5 [0126], but differs because of the lack of a tritone interval.

Figure 4.7 Measures 102-109 of *Synchronisms No. 10*

The image shows a musical score for measures 102-109 of *Synchronisms No. 10*. It features two staves: a guitar (G) staff and a tape (T) staff. The guitar part begins at measure 102 with a tempo marking of *Giusto* and a quarter note equal to 60 (♩ = 60). The tape part starts at measure 109 with a tempo marking of *Giusto* and a quarter note equal to 120 (♩ = 120). The score includes various musical notations such as triplets, fermatas, and dynamic markings like *pp*, *pppp*, *f*, *mf*, *mp*, and *p*. There are also circled Roman numerals (IX, XII, VII) and a box containing the number 4-4 [0125].

The first large section of the guitar and electronics section begins at the *Giusto* tempo marking at m. 109 (beat 3) and lasts until the end of m. 152. Lippel refers to the return of the quintuplet motive in mm. 116-117. The quintuplet in m. 116 is set 5-19 [01367], exactly the same as the set found in the first quintuplet motive in m. 11. Measure 117 is made up of set 5-7 [01267], exactly like the set found in m. 80. Lippel indicates a switching of roles between the guitar and tape at m. 124-125. The tetrachords found in the guitar part in mm. 124-127 are made up of set 4-25 [0268], indicating no substantial connection to the initial set of the piece or even the initial set of the guitar and electronics section.

Figure 4.8 Measures 116-128 of *Synchronisms No. 10*

5-19 [01367] 5-7 [01267]

Switching of Roles

4-25 [0268]

Set 4-25 does act as a subset to the material found in the guitar part from the last note in m. 143 until the end of m. 144 (5-33 [02468]). Figure 4.9 show measures 145-152 which are similar to the material starting at m. 115 with the quintuplet motives presented in inversion. The quintuplet found in m. 147 is set 5-19 [01367], the same as in m. 116 and m. 11. The set of 5-7 [01267] is found in the following measure, similar to m. 117 and m. 80 which shows a trend in the sets found in quintuplet sections.

Figure 4.9 Measures 145-152 *Synchronisms No. 10*

The second section of the guitar and electronics section begins at m. 153 and lasts until m. 206. This differs from the form mapped out by Lippel where the third large section of the piece begins at m. 224. This second section begins with what Lippel labels as the first soliloquy and the set 4-13 [0136], which does not imply any strong connection to previous tetrachords found at the beginnings of sections. This instance of set 4-13 may imply that it stems from set 5-19 [01367], acting as a subset. At m. 179, the opening gesture of the soliloquy is presented again, but this time is transposed down a perfect fourth (T_5) below. Measures 179-206 are almost a transposed repetition of mm. 153-178 with some slight differences.

Figure 4.10 Measures 153-155 *Synchronisms No. 10*

Figure 4.11 Measures 179-181

Measures 207-272 become the structural climax section of this analysis. It begins with material resembling that from m. 115 and another quintuplet motive spanning mm. 208-209. The quintuplet motive is comprised of set 5-20 [01568] and although is different than the typical occurrence of 5-19 [01367], the sets share an IdV of 0.816, making them more similar than different.

Figure 4.12 Measures 204-211 of *Synchronisms No. 10*

The image shows a musical score for measures 204-211 of *Synchronisms No. 10*. It consists of two staves: a guitar (G) staff in the upper part and a tape (T) staff in the lower part. The guitar staff begins with a treble clef and a key signature of one flat. The tape staff begins with a bass clef. The score includes various musical notations such as dynamics (pp, mf, mp, cresc.), articulation (accents), and phrasing slurs. A blue box highlights a quintuplet in the tape part, which is labeled '5-20 [01568]'. The quintuplet is a five-note chord. The guitar part features a melodic line with several triplets and a crescendo towards the end of the section.

Initiated by the antiphonal motive x entries in m. 228, a section of rapidly changing dynamics signifies the climactic moment of the piece. The culmination of *crescendos* and percussive chords lead to the loudest attack of notes in the piece at beat 3 of m. 238. This moment contains a five-note chord in the tape and a six-note chord in the guitar, all of which are attacked directly on the beat. As seen in Figure 4.13, the chord creates the set 10-3 [012345679t], one of the largest sets in the piece. The only set that is bigger occurs in mm. 194-195 (downbeat) in the guitar part. In mm. 194-195, the set created is 11-1 [0123456789t], but does not create as much intensity as set 10-3 of m. 238 because of its presentation as a melody instead of a vertical chord, and also, because of its lower dynamic level. Measures 246-258 (Figure 4.14) contain what Lippel labels the “second soliloquy.” This section is full of trichords, including sets 3-3 [014] in m. 251 (beat 2) and m. 252 as well as set 3-6 [024] in m. 261 (beat 1).

Figure 4.13 Measures 233-240 of *Synchronisms No. 10*

Figure 4.13 shows measures 233-240 of *Synchronisms No. 10*. The score is for guitar (G) and tuba (T).
 - Measure 233: Guitar part starts with *ff* and *a tutta forza*. Tuba part has dynamics *p sub.*, *f*, *p*, and *ff*.
 - Measure 237: Guitar part has *(a tutta forza)* and *mf gliss.*. Tuba part has *ff*, *p*, and *mf*.
 - A box labeled "10-3 [012345679t]" is placed over the guitar staff in measure 237, with a blue arrow pointing to a specific chord.

Figure 4.14 Measures 249-262 of *Synchronisms No. 10*

Figure 4.14 shows measures 249-262 of *Synchronisms No. 10*. The score is for guitar (G) and tuba (T).
 - Measure 249: Guitar part starts with *mp*. Tuba part has *(dim.) n.*.
 - Measure 256: Guitar part has *pp*, *p*, *cresc.*, and *mf*. Tuba part has *pp*, *ppp*, and *mp*.
 - A box labeled "3-3 [014]" is placed over the tuba staff in measure 249, with a blue arrow pointing to a specific chord.
 - A box labeled "3-6 [024]" is placed over the tuba staff in measure 262, with a blue arrow pointing to a specific chord.

The coda section is the fourth and final large section of the piece and begins at m. 273 with a transposed restatement of the opening motive. Lippel states that the coda begins in m. 271 with the quintuplet figure, which is also a possible beginning to the coda section. If the sets are being considered as a cog in determining where the coda starts, then it would also be acceptable to see m. 273 as the beginning of the coda. The motive found at mm. 273-274 (beat 2) is the same as the opening set of 4-5 [0126], what will be considered the beginning of the coda section for this analysis.

Figure 4.15 Measures 273-275 of *Synchronisms No. 10*

The image shows a musical score for three staves: Guitar (G), Tape (T), and another instrument (likely another guitar or piano). The score covers measures 273, 274, and 275. A box highlights the interval 4-5 [0126] in measure 273. The score includes various musical notations such as triplets, dynamics (ppp, mp, p, mf), and articulation (gliss.).

Another interesting passage exists from mm. 280-282 where hidden trichords are masked by a hocket-like texture between guitar and tape. The trichords found in mm. 280 (beat 4) – 281 (beat 1) and m. 281 (beat 2) are sets 3-4 [015] and 3-7 [025] respectively. Klumpenhouwer network analysis shows that the trichords in these measures are positively isographic as well as the trichords that exist in m. 281 (beat 4, G+T) and m. 282 (G+T).

Figure 4.16 Measures 277-285 of *Synchronisms No. 10*

The image shows a musical score for measures 277-285 of *Synchronisms No. 10*. It consists of two staves: G (Guitar) and T (Tape).
 - Measure 277: G staff starts with a *secco* marking. A 7:5 ratio is indicated above the staff. Dynamics include *p*, *fff*, and *f*. A *gliss.* is marked at the end of the measure.
 - Measure 281: G staff is marked *nuckle box*. Dynamics include *gliss.*, *sf*, *f*, *mf*, *pizz f*, and *f*. A circled VII is marked above the staff.
 - T staff: Dynamics include *mp* and *ff*. A circled VII is marked above the staff. A *loco* marking is present. A circled 3 is marked above the staff. A circled 8ba is marked below the staff.

The piece ends with a *pizzicato* G in the guitar under a decaying B in the tape, creating an interval of a major third. When compared to the opening intervals of the piece (major seventh, minor seventh, and tritone), it would seem as if Davidovsky is implying some sort of resolution to the piece by ending it on a consonant interval primarily associated with tonal, triadic harmonies. There could be another explanation for the piece ending on a major third. Considering that the opening motive begins on a C and ends on an E (a major third above), is Davidovsky alluding to some traits of tonality by ending on G-B major third? Is he suggesting some kind of I (C major) to V (G major) relationship? Probably not, since his compositional approach to the piece was purely sonic.

Conclusion

The purpose of this study was to analyze *Synchronisms No. 10* using post-tonal analytical techniques and find relationships between sets formed by the analysis. This study was *not* to prove that Davidovsky used twentieth century compositional techniques while composing this piece and it was *not* to discredit the analyses of the fellow authors that have also researched his works and who have written their own documents based on the composer. Analysis of the work has uncovered many similarities between certain sets, phrases, and motives. A preliminary analysis of the sets can be found in Appendix A and more frequent sets in Appendix B.

Strong relationships were found between sets of trichords and sets of tetrachords. The trichords of [016] and [013] and the tetrachords [0125] and [0167] contained similarities found in phrases. Some similarities were found in sets of pentachords, hexachords, and septachords. The use of Isaacson's IcVSIM was used to find similarities between sets with the same cardinality or a cardinality that differs by one. The most similar sets discussed in this research, ones that do not share a Z-relationship, were sets 4-z15 [0146] and 4-16 [0157] that share an IdV (Interval-difference Vector) of 0.577. Guitar techniques discussed in Appendix E include *dedillo*, *figueta castellana*, *glissando*, harmonics, *Bartók pizzicato*, *tambura*, *rasgueado*, and percussive use of the body of the guitar.

Further research could be possible on the piece in regard to an even more extensive comparison of sets using other similarity indexes, an in-depth breakdown of every phrase, and an analysis of potential serialistic use of musical topics including

dynamics, articulations, and performance indications. Before any further research is completed on *Synchronisms No. 10*, other research projects, articles, and dissertations should be read in order to avoid overlapping of research topics. “The Intentional Fallacy” teaches us that the intention of an author, including the author of this research project, does not hold final say on the topic in question, but rather, that the points and statements made by the author should be considered in creating one’s own interpretation of said topic. *Synchronisms No. 10*, as stated by Mario Davidovsky himself, was not composed using any predetermined atonal compositional techniques, but that does not mean that musical relationships cannot be discovered by using the same techniques the composer did not use to create the piece. It is the onus of the reader and/or performer researching this document to extract or refute any or all of the elements discussed above, and from proposed deduction, create a performance or interpretation of a performance of their own.

Appendix A: Synchronisms No. 10 (Score with All Sets)

to David Starobin
SYNCHRONISMS NO. 10

Edited by David Starobin Mario Davidovsky
IX (1992)

♩ = 96 ± 100

4-5 [0126] **3-3 [014]** **5-6 [01256]**

Guitar *mf* *mf* *mf* *pp*

Tape

3-1 [012] **5-7 [01267]** **3-1 [012]**

G *ff* *mf* *mp*

8-5 [01234678] **7-29 [0124679]** **4-4 [0125]**

G *ff* *mf* *p*

8-19 [01245689] **8-24 [0124568t]** **5-4 [01236]**

4-19 [0148] *as fast as possible* *cresc.* *a tempo*

4-5 [0126] (Repeated notes only)

5-28 [02368] **6-32 [024579]**

G *dolce più f* *mp* *secco* *vib.* *ambura secco* *coarse!* *sf* *sf* *sf*

4-23 [0257]

* Grace note on the beat

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2

19

4-7 [0145]

6-7 [012678]

6-16 [014568]

4-3 [0134]

3-5 [016]

3-2 [013]

5-33 [02468]

4-2 [0124]

23

4-2 [0124]

5-7 [01267]

3-2 [013]

28

4-18 [0147]

4-z15 [0146]

4-27 [0258]

4-10 [0235]

4-6 [0127]

32

6-z12 [012467]

5-7 [01267]

5-14 [01257]

5-z37 [03458]

34

6-z6 [012567]

6-z24 [013468]

5-z17 [01348]

4-4 [0125]

4-4 [0125]

38

4-4 [0125]

5-10 [01346]

Meno mosso $\text{♩} = 60$
sotto voce lontano

Tempo I° $\text{♩} = 96 \pm 100$
espress. vib.

42 IX

4-4 [0125] 3-5 [016]

5-2 [01235] 4-6 [0127]

3-3 [014] 3-4 [015] 3-5 [016] 3-8 [026] 3-1 [012] 6-18 [012578]

46

4-25 [0268]

51 *a tempo*

7-20 [0125679]

7-24 [0123579] 5-z36 [01247] 5-20 [01568]

55

5-14 [01257] 4-2 [0124] 5-25 [02358]

60

4-9 [0167] 6-5 [012367] 6-z3 [012356]

63

3-5 [016] 3-4 [015] 3-5 [016]

6-5 [012367]

5-7 [01267] 4-4 [0125] 7-z38 [0124578] 6-z46 [012469]

66 *secco*

6-14 [013458]

The image shows a page of musical notation for guitar, spanning measures 42 to 66. The score is divided into two main sections: 'Meno mosso' (measures 42-50) and 'Tempo I°' (measures 51-66). The notation includes treble clef, key signature of one sharp (F#), and various dynamics such as ppp, p, mp, mf, f, and sfz. There are numerous annotations in blue boxes, each containing a chord diagram and a numerical label (e.g., 4-4 [0125], 5-2 [01235]). Some annotations have arrows pointing to specific notes in the score. Performance instructions like 'sotto voce lontano', 'espress. vib.', 'a tempo', 'secco', and 'cresc.' are also present. The page number '3' is in the top right corner.

4

70

6-z24 [013468]

4-9 [0167]

4-12 [0236]

4-24 [0248]

4-19 [0148]

4-2 [0124]

75

4-z29 [0137]

4-5 [0126]

6-z47 [012479]

80

6-z12 [012467]

4-11 [0135]

5-2 [01235]

85

5-28 [02368]

6-z10 [013457]

4-9 [0167]

4-2 [0124]

5-19 [01367]

89

3-2 [013]

5-16 [01347]

4-24 [0248]

tambura secco
a tutta forza secco
tambura secco

with r.h. thumb knuckle on box

rit. poco a poco

rit. dolce
vib.
espress.
dolce

liber calm
Più mosso ♩ = 60
cresc.

Detailed description: This is a musical score for guitar, spanning measures 70 to 89. The score is written in G major and 3/4 time. It features various musical notations including triplets, slurs, and dynamic markings such as *mp*, *fff*, *pp*, *mf*, *ppp*, and *pppp*. Chord diagrams are provided for many chords, with some labeled in boxes with alphanumeric codes (e.g., 4-9 [0167], 6-z24 [013468]). Performance instructions include *tambura secco* (with right-hand thumb knuckle on the box), *rit. poco a poco*, *rit. dolce*, *vib.*, *espress.*, *dolce*, *liber calm*, and *Più mosso* (♩ = 60). The score is divided into systems, with measure numbers 70, 75, 80, 85, and 89 marking the beginning of each system. The guitar part is indicated by a 'G' in a circle at the start of each system.

5

94

4-24 [0248]

5-19 [01367]

5-13 [01248]

5-28 [02368]

98

5-29 [01368]

5-24 [01357]

5-24 [01357]

4-z15 [0146]

102

TAPE

start

Giusto $\text{♩} =$

intimo, espres

4-4 [0125]

4-23 [0257]

4-27 [0258]

106

nobile

3-7 [025]

6-22 [012468]

4-18 [0147]

Giusto $\text{♩} = 120$

cue:

mp

* Repeat in any order until tape enters on C# on beat three.

The image shows a page of musical notation for guitar (G) and voice (T). The score is divided into systems, each with rehearsal cues in boxes. The first system (measures 94-97) includes cues 4-24 [0248], 5-19 [01367], 5-13 [01248], and 5-28 [02368]. The second system (measures 98-101) includes cues 5-29 [01368], 5-24 [01357], 5-24 [01357], and 4-z15 [0146]. The third system (measures 102-105) includes cues 4-4 [0125], 4-23 [0257], and 4-27 [0258], and is marked 'TAPE start' and 'Giusto ♩ ='. The fourth system (measures 106-109) includes cues 3-7 [025], 6-22 [012468], and 4-18 [0147], and is marked 'nobile' and 'Giusto ♩ = 120'. Performance markings include dynamics (p, pp, ppp, mp, mf, f), articulation (pizz., gliss.), and fingering (circled numbers). A 'cue:' marking is present at the end of the fourth system.

6

110

4-9 [0167] 5-10 [01346] 7-4 [0123467] 5-z38 [01258]

(rasg.) *mp* *sf* *ff* *marcato* *ff* *mf*

3-5 [016] 6-z25 [013568]

8-12 [01345679]

116

3-5 [016] 3-4 [015]

5.3 *p* *mp* *mf* *f* *mp*

① V ④ V XII ③

120

6-z12 [012467] 5-32 [01469] 6-32 [024579]

④ V XII ③

124

5-4 [01236] 5-z38 [01258]

ff *gliss.* *p* *sf* *f* *mf*

4-25 [0268] 4-z15 [0146] *pp sub.*

The image displays a musical score for guitar (G) and tenor guitar (T) across four systems. The score includes various musical notations such as notes, rests, and dynamic markings. Several chord diagrams are highlighted with boxes and labeled with alphanumeric codes: 4-9 [0167], 5-10 [01346], 7-4 [0123467], 5-z38 [01258], 3-5 [016], 6-z25 [013568], 8-12 [01345679], 3-5 [016], 3-4 [015], 6-z12 [012467], 5-32 [01469], 6-32 [024579], 5-4 [01236], 5-z38 [01258], 4-25 [0268], and 4-z15 [0146]. Annotations include performance instructions like 'rasg.', 'marcato', 'gliss.', and 'pp sub.', as well as fingering and phrasing markings like '5.3', '3', and '3'. The score is numbered 110, 116, 120, and 124 at the beginning of each system.

4-9 [0167] 3-4 [015] 3-5 [016] 5-9 [01246] 6-5 [012367]

129 G (cresc.) 4-z15 [0146] *sfp* *sfp* *ff*

133 G 5-20 [01568] *mp* *mf* 4-10 [0235]

140 G *espress. assai* 3-2 [013] *f* 5-33 [02468] *lunga* *p*

4-14 [0237] 3-2 [013] *lunga*

145 G 3-2 [013] 4-z15 [0146] 3-5 [016] *mp* *p* *mf* *f*

T 4-5 [0126] *mp* *n.* *p*

149 G 4-3 [0134] 3-1 [012] *mf* *mp* *n.* *mf* *n.* *pppp*

T *n.* *mf*

8

4-13 [0136]

Ⓛ XII

3-2 [013]

4-3 [0134]

153

G

p

mp

mf dim.

mp

T

(PPPP)

5-10 [01346]

159

G

lunga a tempo legato assai

p

T

p

6-18 [012578]

Only missing pc-9

4-z29 [0137]

164

G

cresc. assai

fff

fff

T

cresc.

ff

ff

mp

4-13 [0136]

3-5 [016]

168

G

mf

mp

mp

legato, calmo

T

p

3-2 [013] 3-7 [025] 3-10 [036] 3-3 [014] 9
 3-5 [016] 3-8 [026]
 3-10 [036] ② XII ② XII
 4-13 [0136] 5-4 [01236] *p*
 ② XII ② XII
 188 Only missing pc-7
marcato 10:6
 3-3 [014] 3-11 [037]
 195 3-9 [027] 3-3 [014] *mp*
 5-z18 [01457] 3-2 [013]

Musical score with annotations for intervals and fingerings. The score is divided into systems of three staves (treble, middle, and bass clefs). Annotations include interval numbers in brackets (e.g., 3-2 [013], 3-7 [025], 3-10 [036], 3-3 [014], 3-5 [016], 3-8 [026], 4-13 [0136], 5-4 [01236], 3-11 [037], 3-9 [027], 3-3 [014], 5-z18 [01457], 3-2 [013]) and fingering numbers (3, 6, 10, 12). Performance markings include *mf*, *p*, *pp*, *dim.*, *mp*, *marcato*, and *n.*. A circled area in the first system highlights a specific passage, and another circled area in the second system highlights a passage marked *marcato* 10:6. A box labeled "Only missing pc-7" points to a specific note in the second system.

10
204

4-12 [0236] 5-2 [01235] 5-20 [01568] 4-6 [0127]

G
T

pp mf cresc.

212

3-4 [015] 4-16 [0157] 4-10 [0235] 4-18 [0147] 5-20 [01568]

G
T

mf pp

217

4-12 [0236] 4-4 [0125] 7-6 [0123478]

G
T

mf mp ppp

5-15 [01268] 5-15 [01268]

224

4-4 [0125] 3-4 [015]

G
T

mp sf 3

5-3 [01245]

228

4-11 [0135] 4-16 [0157] 4-z15 [0146] 4-25 [0268]

G
T

mp mf p mp secco f

4-16 [0157]

* Grace note on the beat

233 *a tutta forza* *ff* *secco*

6-z43 [012568] 4-16 [0157] 4-18 [0147]

p sub. *f* *p* *ff* *ff*

237 *(a tutta)* *mf gliss.* *gliss.*

6-18 [012578] 6-27 [013469]

ff *p* *ff* *mf*

241 *f* *mf* *cresc.*

7-30 [0124689] 7-27 [0124579] 5-4 [01236]

mf *dim.*

244 *(cresc.)* *ff* *mp* *mp* *espress* *mf* *dim.*

5-28 [02368] 6-z3 [012356]

p *p < mf* *p* *dim.*

* As high as possible

12

249 *mp* **6-z13 [013467]** **3-3 [014]** **6-1 [012345]** *dim.*

(dim.) n.

256 **5-11 [02347]** **3-6 [024]** **5-16 [01347]** **4-9 [0167]** *pp* *p* *cresc.* **Ⓢ XII** *mf*

263 **5-4 [01236]** **5-24 [01357]** **6-z36 [012347]** *dim.* **Ⓢ XII** *p* *mp* *p* *cresc.* *pp* *pp*

268 **6-z3 [012356]** **5-33 [02468]** *f (dim.)* *mp* *pp* *p* **5:4** *p* *n.*

The image shows a musical score for guitar (G) and tenor (T) instruments. It consists of four systems of music, each with a guitar staff and a tenor staff. The score is annotated with various chord diagrams in boxes, such as '6-z13 [013467]', '3-3 [014]', '6-1 [012345]', '5-11 [02347]', '3-6 [024]', '5-16 [01347]', '4-9 [0167]', '5-4 [01236]', '5-24 [01357]', '6-z36 [012347]', '6-z3 [012356]', and '5-33 [02468]'. The score includes dynamic markings like *mp*, *dim.*, *pp*, *p*, *mf*, and *f*, as well as performance instructions like *(dim.) n.* and *n.*. There are also tempo or style markings like **Ⓢ XII** and **5:4**. The guitar staff uses a treble clef and the tenor staff uses a bass clef. The music features complex chordal textures and melodic lines.

273

G XII

gliss.

4-11 [0135]

6-z36 [012347]

4-5 [0126]

mp

p

mf

p

f sub.

f

ppp

ppp

5-25 [02358]

5-32 [01469]

5-23 [02357]

4-9 [0167]

3-4 [015]

277

G secco

fff

p

sfff

gliss.

mp

p

ff

3-7 [025]

3-2 [013]

281

G on box

gliss.

gliss.

mf

sf

f

mf

piu f

f

4-z15 [0146]

mf

3

(loco)

8ba

286

G al niente

pizz.

p

ppp

n.

6-z28 [013569]

N.Y. March 19, 1992

Appendix B: Synchronisms No. 10 (All Sets)

Measure	Notes in Score	Forte Classification	Prime Form	Interval Class Vector
0 – 2	C, B, Bb, E	4-5	[0126]	<210111>
3	G, F#, D#	3-3	[014]	<101100>
4	G, F#, D#, D, C#	5-6	[01256]	<311221>
5	B, Db, C	3-1	[012]	<210000>
6 – 7	A, A#, D#, G#, D	5-7	[01267]	<310132>
8	A, A#, D#, G#, D, F#, G	7-6	[0123478]	<533442>
8 (trichord)	G#, F#, G	3-1	[012]	<210000>
9 – 10	G, G#, F#, A, C#, B, E#, C	8-5	[01234678]	<654553>
10 - 12 (harmonics only)	B, D, A, G#, F#, D#, E	7-29	[0124679]	<344352>
12	E, E#, F#, C#	4-4	[0125]	<211110>
13 (tetrachord)	A, E#, C#, F#	4-19	[0148]	<101310>
13 (ff dyad + first ascending run)	G, B, A#, C, D#, E, F#, G#	8-19	[01245689]	<545752>
13 (second ascending run until B)	A, Bb, C#, Eb, F, F#, G, B	8-24	[0124568t]	<464743>
13 - 14 (repeated notes)	B, E, Bb, C, Db	5-4	[01236]	<322111>
13 (repeated notes only)	B, E, Bb, C	4-5	[0126]	<210111>
15 – 16	A, Db, Eb, G, E	5-28	[02368]	<122212>
17 (hexachord on the + of beat 1)	E, A, D, G	4-23	[0257]	<021030>
18 (hexachord at the end of measure)	F#, B, E, A, C#, G#	6-32	[024579]	<143250>
19 (first five notes)	C, Eb, B, E	4-7	[0145]	<201210>
19 (beat 3) - 20 (all of beat 1)	Eb, A, D, G, Db, G#	6-7	[012678]	<420243>
20 (beat 2- beat 3)	G#, C, A, G, C#, F	6-16	[014568]	<322431>
21	F, G#, E, G	4-3	[0134]	<212100>
22 (beat 3 trichord)	E, Bb, B	3-5	[016]	<100011>
23 (beat 3 trichord)	D, B, C#	3-2	[013]	<111000>
24 (beat 2) - 25	A, C#, F, B, D#	5-33	[02468]	<040402>
26 - 27 (all of beat 1)	F#, G#, A, Bb	4-2	[0124]	<221100>
27 (last triplet) - 28 (first note)	B, G, Bb, E	4-18	[0147]	<102111>
28 (beat 1)	E, C#, F#, C	4-z15	[0146]	<111111>
28 (beat 2)	C#, D#, F#, A	4-27	[0258]	<012111>
29	G, E, D, F	4-10	[0235]	<122010>
30 (beat 1 - beat 2)	B, A#, A, E	4-6	[0127]	<210021>

Measure	Notes in Score	Forte Classification	Prime Form	Interval Class Vector
30 (last dyad) - 31 (first two beats)	C#, D, G#, G, C	5-7	[01267]	<310132>
31 (f dyad with lower neighbor)	E, E#, F#	3-1	[012]	<210000>
32	E, F#, G, C#, D, C	6-z12	[012467]	<332232>
33 (beat 1, without low E string)	Eb, A, C#, D, Ab	5-7	[01267]	<310132>
33 (beat 2, without low E string)	Bb, F#, C, G, F	5-14	[01257]	<221131>
33 (beat 3) - 34 (first note)	A, D, B, F#, A#	5-z37	[03458]	<212320>
34 (ff chord)	F, Bb, E, A, Eb, Ab	6-z6	[012567]	<421242>
34 (F# and fff chord)	F#, G#, C, E, A, B	6-z24	[013468]	<233331>
35	G#, C, E, A, B	5-z17	[01348]	<212320>
36 (+ of beat 1) - 37 (first note)	Bb, B, C, G	4-4	[0125]	<211110>
37	G, G#, D#, F#	4-4	[0125]	<211110>
38	G, F#, F, D	4-4	[0125]	<211110>
39 – 41	E, G, F#, A, Bb	5-10	[01346]	<223111>
42	C#, F, Eb, D, C	5-2	[01235]	<332110>
43 - 44 (beat 1)	C, B, F, Bb	4-6	[0127]	<210021>
44 (beat 2) - 45 (beat 1)	Bb, G, F#, F	4-4	[0125]	<211110>
45 (beat 2) - 46 (first half note)	G, D, G#	3-5	[016]	<100011>
46 (second chord)	G, B, Bb	3-3	[014]	<101100>
46 (beat 1)	G, B, Ab	3-3	[014]	<101100>
47 (last dotted quarter)	Ab, G, Eb	3-4	[015]	<100110>
48- 49 (beat 1)	A, Eb, Bb	3-5	[016]	<100011>
49 (last half note)	A, Eb, Db	3-8	[026]	<010101>
50 (first three notes)	Db, C, B	3-1	[012]	<210000>
50 (descending notes in flourish)	Eb, A, F, B	4-25	[0268]	<020202>
50 (ascending notes in flourish)	C#, G, C, F#, Bb, F	6-18	[012578]	<322242>
51	D, F#, G#, E, D#, Bb, C#	7-24	[0123579]	<353442>
51 (last note) - 52	C, B, E, F, F#, G#, C#	7-20	[0125679]	<433452>
53	Bb, Eb, A, Db, G	5-20	[01568]	<211231>
54 – 55	G, G#, A, E, D	5-14	[01257]	<221131>
56 (second chord)	A, D, G#, B, G	5-z36	[01247]	<222121>
57 (first three beats)	A, D, G#, B, F#	5-25	[02358]	<123121>
57 (harmonic dyad) - 59 (beat 2)	D, E, Db, C	4-2	[0124]	<221100>

Measure	Notes in Score	Forte Classification	Prime Form	Interval Class Vector
59- 61 (first two beats)	C#, G, C, F#	4-9	[0167]	<200022>
61 (beat 3) - 62 (beat 2)	B, C, A#, C#, G, F#	6-5	[012367]	<422232>
62 (beat 3) - 63 (beat 1)	G, F#, B, A#, C, A	6-z3	[012356]	<433221>
63 (beat 2) - 64 (beat 1 until Bb)	E, F, G, F#, B, Bb	6-5	[012367]	<422232>
64 (first trichord)	Bb, B, E	3-5	[016]	<100011>
64 (second trichord)	C, B, E	3-4	[015]	<100110>
64 (last trichord) - 65	C, G, F#	3-5	[016]	<100011>
66 (first six notes)	F, B, F#, C#, C	5-7	[01267]	<310132>
66 (tetrachord)	D, E, G, Eb	4-4	[0125]	<211110>
66 (last beat) - 67 (beat 1)	E, C, F, Eb, Ab, G	6-14	[013458]	<323430>
67 (beat 2) - 68	C, F, Bb, E, A, D#, C#	7-z38	[0124578]	<434442>
69	G#, E, A, C#, B, G	6-z46	[012469]	<233331>
70	Bb, Gb, E, C#, B, D	6-z24	[013468]	<233331>
70 (tetrachord)	G, C#, F#, C	4-9	[0167]	<200022>
70 (last note) - 71 (first chord)	A, C#, G, F	4-24	[0248]	<020301>
71 (first trichord and low E)	C#, G, F, E	4-12	[0236]	<112101>
71 (low E) - 72 (lower staff)	E, Eb, C, Ab	4-19	[0148]	<101310>
72 - 76 (without G#)	A, F, Ab, G	4-2	[0124]	<221100>
76 (G#) - 78 (until E harmonic)	G#, B, Bb, E	4-z29	[0137]	<111111>
78 (last two harmonics) – 79	G#, G, B, C#, F#, E	6-z47	[012479]	<233241>
80	D#, F#, C, F, B, C#	6-z12	[012467]	<332232>
81	C#, D, D#, G	4-5	[0126]	<210111>
82	B, A, C, G	4-11	[0135]	<121110>
83 - 84 (first two beats)	G, B, Bb, A, C	5-2	[01235]	<332110>
84 (beat 3) - 85	E, D, C#, Bb, Ab	5-28	[02368]	<122212>
86 (first six notes)	F, Bb, F#, A, D#, G	6-z10	[013457]	<333321>
86 (last four notes)	G, D, Ab, Db	4-9	[0167]	<200022>
87 (first four notes)	E, G, D#, F	4-2	[0124]	<221100>
87 (last eighth note) - 88	C#, F, Bb, E, B	5-19	[01367]	<212122>
89 - 91 (beat 1)	Bb, Ab, B	3-2	[013]	<111000>
91 (beat 2) - 93 (beat 2)	Bb, D, B, C#, G	5-16	[01347]	<213211>
93 (second 16th note of beat 2) - 95 (downbeat)	F, E, F#, C, G, D, Bb, Ab	8-21	[0123468a]	<474643>
93 (beat 2) - 95 (downbeat) (melody only)	E, C, Bb, Ab	4-24	[0248]	<020301>
95 - 96 (beat 1)	A, G#, D, C, Eb	5-19	[01367]	<212122>
96	E, C, Eb, D, Ab	5-13	[01248]	<221311>

Measure	Notes in Score	Forte Classification	Prime Form	Interval Class Vector
97	Eb, Db, E, G, A	5-28	[02368]	<122212>
98 - 99 (beat 1)	D, G, C, F#, A	5-29	[01368]	<122131>
99 (beat 3) - 100 (beat 1)	D, G, C, F#, E	5-24	[01357]	<131221>
100 (beat 2) - 101 (beat 1)	F, B, E, Bb, D, G	6-z50	[014679]	<224232>
100 (beat 3)	B, E, Bb, D	4-z15	[0146]	<111111>
101 (beat 1)	G, D, Ab, E	4-z15	[0146]	<111111>
101 (beat 2)	B, E, Bb, D	4-z15	[0146]	<111111>
102 (without low E) - 103 (until F#) (Guitar only)	Ab, Eb, G, F#	4-4	[0125]	<211110>
103 (last half note) - 104 (until F-nat) (Guitar only)	C, G, D, F	4-23	[0257]	<021030>
105 (Guitar only)	C#, A#, G#, E	4-27	[0258]	<012111>
106 - 107 (beat 2) (Guitar only)	C, Eb, F	3-7	[025]	<011010>
107 (last two notes) - 108 (No F#) (Guitar only)	B, C#, D, G, D#, A	6-22	[012468]	<241422>
109 (Guitar only)	F#, F, B, D	4-18	[0147]	<102111>
102 - 109 (Tape + Guitar F# from m. 109)	Eb, G, D, F, G#, C#, B, F#	8-z29	[01235679]	<555553>
110 - 111 (Guitar only)	Bb, A, E, Eb	4-9	[0167]	<200022>
110 - 114 (Tape only)	Eb, G, D, F, G#, C#, B, E	8-12	[01345679]	<556543>
112 (Guitar only)	E, Eb, G, C#, F#	5-10	[01346]	<223111>
112 (trichord in Guitar)	G, C#, F#	3-5	[016]	<100011>
113 (Guitar only)	Bb, B, G, G#, C#, D, C	7-4	[0123467]	<544332>
113 (trichord in Guitar)	G, G#, C#	3-5	[016]	<100011>
114 (Guitar only)	A, D, C, F#, C#	5-z38	[01258]	<212221>
114 (highest three notes of Guitar pentachord)	C, F#, C#	3-5	[016]	<100011>
115 - 116 Guitar + Tape, No Eb)	C, G, F#, Bb, E, A	6-z25	[013568]	<233241>
116 (Eb) - 117 (A, E) (Guitar only)	Eb, A, E	3-5	[016]	<100011>
117 (last three notes in Guitar)	Eb, Ab, D	3-5	[016]	<100011>
118 (Octaves in Guitar)	F, Gb, Bb	3-4	[015]	<100110>
119 (beginning with harmonics) - 121 (beat 2) (G+T)	Ab, E, Db, D, G, F#	6-z12	[012467]	<332232>
121 (beat 4) - 123 (A) (Guitar + Tape)	F, Eb, C, G#, A	5-32	[01469]	<113221>
123 (G+T)	A, C, B, D, E, G	6-32	[024579]	<143250>
124 (first guitar tetrachord)	D#, A, C#, G	4-25	[0268]	<020202>

Measure	Notes in Score	Forte Classification	Prime Form	Interval Class Vector
124 - 127 (beat 1) (Guitar only)	G, C#, F, B	4-25	[0268]	<020202>
127 - 130 (beat 1) (Tape only)	F#, Bb, E, A	4-z15	[0146]	<111111>
127 (last two notes) - 128 (first three notes) (G only)	C, D#, E, Gb, F	5-4	[01236]	<322111>
128 (last four notes) - 129 (downbeat) (Guitar only)	E, G, A#, B, C	5-z38	[01258]	<212221>
129 (last four notes) (Guitar only)	Eb, Ab, A, D	4-9	[0167]	<200022>
130 (first three notes) (Guitar only)	G, B, C	3-4	[015]	<100110>
130 (C#) - 131 (first two notes) (Guitar only)	C#, G, F#	3-5	[016]	<100011>
131 (beat 2) - 132 (beat 1) (Guitar only)	C#, D#, F#, G, F	5-9	[01246]	<231211>
132 (last six notes) (Guitar only)	E, Eb, Ab, D, G, Db	6-5	[012367]	<422232>
133-136 (Tape only)	D, F#, B, C#, G	5-20	[01568]	<211231>
136 (beat 2 Guitar) - 139 (G+T)	F, G, D, E	4-10	[0235]	<122010>
140 (beat 2) - 142 (beat 1) (G+T)	Eb, G, Bb, Ab	4-14	[0237]	<111120>
140 (beat 2) - 142 (beat 1) (Guitar only)	G, Bb, Ab	3-2	[013]	<111000>
142 (beat 2) - 143 (beat 1) (Guitar only)	G, Bb, A	3-2	[013]	<111000>
143 (last note) - 144 (Guitar only)	G, F, A, B, Eb	5-33	[02468]	<040402>
145 - 147 (beat 1) (Tape only)	Db, Eb, A, D	4-5	[0126]	<210111>
145 - 146 (without E) (Guitar only)	B, G#, A#	3-2	[013]	<111000>
146 (last note) - 147 (without G)	E, C, F#, C#	4-z15	[0146]	<111111>
147 (last note) - 148 (first two notes) (Guitar only)	G, C#, F#	3-5	[016]	<100011>
148 (last three notes) (Guitar only)	G, D, G#	3-5	[016]	<100011>
149 - 151 (beat 1) (Guitar only)	G, G#, B, Bb	4-3	[0134]	<212100>
149 (beat 1) (Guitar + Tape)	F#, G#, G	3-1	[012]	<210000>
149 (beat 4) - 152 (Guitar only)	B, Bb, A	3-1	[012]	<210000>
153 - 155 (Guitar only)	D, B, F, C	4-13	[0136]	<112011>

Measure	Notes in Score	Forte Classification	Prime Form	Interval Class Vector
155 - 157 (first three beats)	E, C#, D#	3-2	[013]	<111000>
157 (beat 3) - 158 (Guitar only)	C, A, G#, B	4-3	[0134]	<212100>
159 - 165 (G+T)	F#, C#, E, G, D#	5-10	[01346]	<223111>
164 (hexachord) - 166 (Guitar only)	A, D, G, C#, F#, C	6-18	[012578]	<322242>
166 - 168 (Tape, upper staff)	C, Eb, Ab, D	4-z29	[0137]	<111111>
166 (G+T)	C, Eb, Ab, D, A, G, C#, F#	8-9	[01236789]	<644464>
167 (G+T)	Only note missing is pc-9			
168 (beat 3) - 170 (Guitar only)	A, F#, C, G	4-13	[0136]	<112011>
171 (last two notes) - 172 (downbeat) (G+T)	Bb, B, E	3-5	[016]	<100011>
172 - 173	C#, D, E	3-2	[013]	<111000>
173 - 174	F#, F, C	3-5	[016]	<100011>
174 - 175	G#, B, F#	3-7	[025]	<011010>
175 - 176	G, C#, A	3-8	[026]	<010101>
176 - 177	D, F, B	3-10	[036]	<002001>
177 - 178	E, G, Eb	3-3	[014]	<101110>
179 - 181 (Guitar only)	A, F#, C, G	4-13	[0136]	<112011>
182	A, F#, Eb	3-10	[036]	<002001>
183 - 192	B, G#, A#, F, A	5-4	[01236]	<322111>
194 - 195 (downbeat)	Only note missing is pc-7			
195 (last two notes) - 196 (downbeat)	F#, G, Bb	3-3	[014]	<101100>
196 - 197	C, D, G	3-9	[027]	<010020>
197 - 198	C#, A, E	3-11	[037]	<001110>
198 - 199	G, Eb, F#	3-3	[014]	<101100>
195 (beat 2) (Tape only)	B, E, C, Eb, A	5-z18	[01457]	<212221>
200 - 204 (G+T)	C, A, B	3-2	[013]	<111000>
205 - 206	A, B, C, Eb	4-12	[0236]	<112101>
207 (Guitar) + 208 (Tape)	Eb, Fb, F#, C#, D	5-2	[01235]	<332110>
208 - 209 (Guitar only)	F#, D, G, C#, A	5-20	[01568]	<211231>
210 (G+T)	D, A, Eb, Fb	4-6	[0127]	<210021>
212 (beat 1) (Guitar only)	Bb, Eb, D	3-4	[015]	<100110>
212 (beat 2) (Guitar only)	A, D, G, Db	4-16	[0157]	<110121>
212 (beat 3) (Guitar only)	D, G, E, F	4-10	[0235]	<122010>
213 - 215	F, D, Ab, Db	4-18	[0147]	<102111>
216 (G+T)	F#, B, E, Bb, Eb	5-20	[01568]	<211231>

Measure	Notes in Score	Forte Classification	Prime Form	Interval Class Vector
216 - 217 (first three notes)	F#, B, E, Bb, Eb, A, C, C#	8-13	[01234679]	<556453>
217 - 218	E, F, G, C#	4-12	[0236]	<112101>
219 - 222 (beat 1)	F, C#, C, D	4-4	[0125]	<211110>
222 (beat 3) - 223 (Tape only)	Ab, Bb, E, G, B, Eb, A	7-6	[0123478]	<533442>
225 (beat 2) (G+T)	Bb, F#, G, F	4-4	[0125]	<211110>
225 (beat 2 + A on beat 3) (G+T)	Bb, F#, G, F, A	5-3	[01245]	<322210>
226 (first five notes) (G+T)	C#, G, F, F#, B	5-15	[01268]	<220022>
226 (beat 2)	B, G, Bb, Gb, C	5-6	[01256]	<311221>
227 (Guitar only)	G#, E, A	3-4	[015]	<100110>
228 (G+T)	F#, A, B, G	4-11	[0135]	<121110>
228 (last beat) - 229 (G+T)	B, G, F, C	4-16	[0157]	<110121>
230 (Guitar only)	D, B, E, Bb	4-z15	[0146]	<111111>
231 - 232 (Tape only)	A, G, C#, D#	4-25	[0268]	<020202>
231 (secco in Guitar)	G, C, F, B	4-16	[0157]	<110121>
233 - 234 (beat 1) (Guitar only)	C, F, Bb, E, A, F#	6-z43	[012568]	<322332>
234 (beat 2) - 235 (beat 2) (Guitar only)	D, G, C, F#	4-16	[0157]	<110121>
235 (beat 3) - 236 (Guitar only)	D, G, B, G#	4-18	[0147]	<102111>
237 (last eighth note) - 238 (beat 2)	F#, B, E, A#, D#, A	6-18	[012578]	<322242>
238 (beat 3) - 239	Only missing pc-5 and pc-8			
240 (G+T)	Eb, C, A, F#, E, G	6-27	[013469]	<225222>
241 (ascending)	A#, B, C, D#, E, F#, G#	7-30	[0124689]	<343542>
241 (beat 3) - 242 (beat 1) (Tape only)	G#, A, Bb, C, D, E, F	7-30	[0124689]	<343542>
242 (first seven notes in scale)	F, G#, A, Bb, C, D, Db, Eb	7-27	[0124579]	<344451>
243 - 244 (downbeat) (Guitar only)	B, E, Bb, C, Db	5-4	[01236]	<322111>
244 (beat 2) - 245 (Guitar only)	A, Db, Eb, G, E	5-28	[02368]	<122212>
246 - 249 (downbeat) (Guitar only)	Bb, Db, Eb, E, B, D	6-z3	[012356]	<433221>
249 (beat 2) - 251 (beat 1)	E, F, Bb, D, D, C#	6-z13	[013467]	<324222>
251 (beat 2)	G, B, Bb	3-3	[014]	<101110>
252	G, B, Ab	3-3	[014]	<101110>
253 (beat 3) - 257	F, F#, D#, D, E, G	6-1	[012345]	<543210>

Measure	Notes in Score	Forte Classification	Prime Form	Interval Class Vector
259 (G+T)	E, F#, G#, B, G	5-11	[02347]	<222220>
260 (beat 1)	D, C, Bb	3-6	[024]	<020100>
260 (beat 4) - 262 (beat 1) (G+T)	C#, C, A, E, D#	5-16	[01347]	<213211>
262 (beat 3) - 263 (beat 1)	A, D#, G#, D	4-9	[0167]	<200022>
263 (beat 2) - 265 (beat 1) (Guitar only)	A, F, B, G#, A#	5-4	[01236]	<322111>
265 (beat 2) - 266 (beat 1) (Guitar only)	E, A, F, B, G	5-24	[01357]	<131221>
268 (beat 4) - 270	Eb, E, F#, D, G, C#	6-z3	[012356]	<433221>
271 - 272	A, C#, F, B, D#	5-33	[02468]	<040402>
273 - 274 (beat 2) (G+T)	F, E, Eb, A	4-5	[0126]	<210111>
274 (beat 3) - 275	A, F#, E, G#	4-11	[0135]	<121110>
276	A, E, G#, Bb, B, G	6-z36	[012347]	<433221>
277 (beat 1)	E, C#, F#, C, A	5-32	[01469]	<113221>
277 (beats 2 + 3)	C#, D#, A, E, F#	5-25	[02358]	<123121>
278	A, G, E, D, F	5-23	[02357]	<132130>
279 (beat 3) (G+T)	C, F#, B, F	4-9	[0167]	<200022>
280 (beat 4) - 281 (beat 1)	A, C#, G#	3-4	[015]	<100110>
281 (beat 2)	D#, F, C	3-7	[025]	<011010>
281 (beat 4)	Bb, A, C	3-2	[013]	<111000>
282 (G+T)	G#, A#, B	3-2	[013]	<111000>
283 - 285 (G+T)	G#, A, C, D	4-z15	[0146]	<111111>
286 - 290 (G+T)	B, G, F, D, Ab, Eb	6-z28	[013569]	<224322>

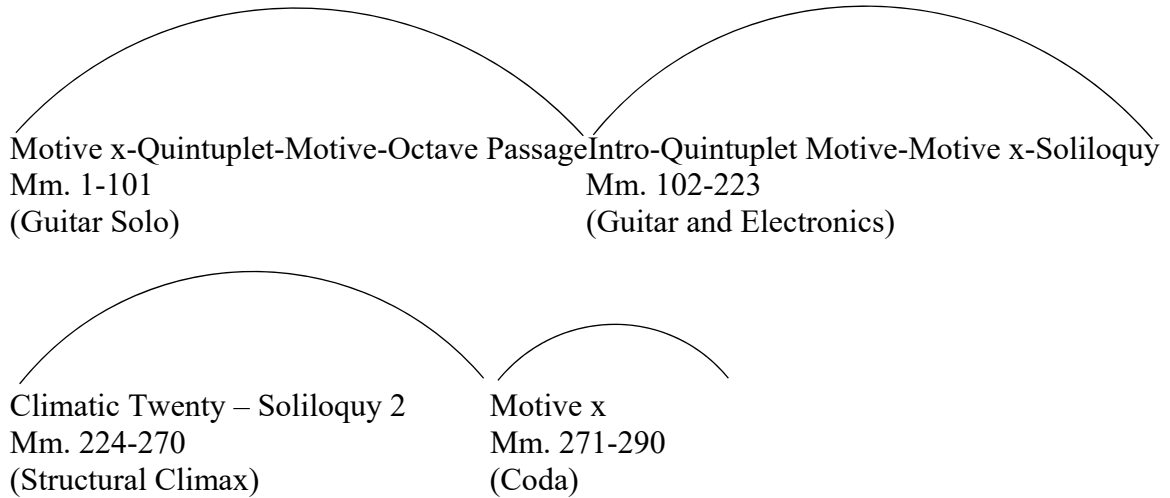
Appendix C: Synchronisms No. 10 (Important Sets)

Forte Classification	Prime Form	Frequency	Measure + Location
3-1	[012]	6	5, 8 (trichord), 31 (f dyad with lower neighbor), 50 (first three notes), 149 (beat 1) (Guitar + Tape), 149 (beat 4) - 152 (Guitar only)
3-2	[013]	10	23 (beat 3 trichord), 89-91 (beat 1), 140 (beat 2) - 142 (beat 1) (Guitar only), 143 (last note) - 144 (Guitar only), 145-146 (without E) (Guitar only), 155-157 (first three beats), 172-173, 200-204 (G+T), 281 (beat 4), 282 (G+T)
3-3	[014]	8	3, 46 (second chord), 46 (beat 1), 177-178, 195 (last two notes) - 196 (downbeat), 198-199, 251 (beat 2), 252
3-4	[015]	6	47 (last dotted quarter), 64 (second trichord), 118 (Octaves in Guitar), 130 (first three notes) (Guitar only), 212 (beat 1) (Guitar only), 227 (Guitar only), 280 (beat 4) - 281 (beat 1)
3-5	[016]	14	45 (beat 2) - 46 (first half note), 48-49 (beat 1), 64 (first trichord), 64 (last trichord) - 65, 112 (trichord in Guitar), 113 (trichord in Guitar), 114 (highest three notes of Guitar pentachord), 116 (Eb) - 117 (A, E) (Guitar only), 117 (last three notes in Guitar), 130 (C#) - 131 (first two notes) (Guitar only), 147 (last note) - 148 (first two notes) (Guitar only), 148 (last three notes) (Guitar only), 171 (last two notes) - 172 (downbeat) (G+T), 173-174,
4-4	[0125]	8	12, 36 (+ of beat 1) - 37 (first note), 37, 38, 44 (beat 2) - 45 (beat 1), 66 (tetrachord), 102 (without low E) - 103 (until F#) (Guitar only), 219 - 222 (beat 1), 225 (beat 2) (G+T)
4-9	[0167]	7	59-61 (first two beats), 70 (tetrachord), 86 (last four notes), 110-111 (Guitar only), 129 (last four notes) (Guitar only), 262 (beat 3) - 263 (beat 1), 279 (beat 3) (G+T)
4-z15 (4-z29)	[0146]	8	28 (beat 1), 100 (beat 3), 101 (beat 1), 101 (beat 2), 127-130 (beat 1) (Tape only), 146 (last note) - 147 (without G), 230 (Guitar only), 283-285 (G+T)
4-z29 (4-z15)	[0137]	2	166-168 (Tape, upper staff), 76 (G#) - 78 (until E harmonic)
5-4	[01236]	5	13-14 (repeated notes), 127 (last two notes) - 128 (first three notes) (G only), 183-192, 243-244 (downbeat) (Guitar only), 263 (beat 2) - 265 (beat 1) (Guitar only)

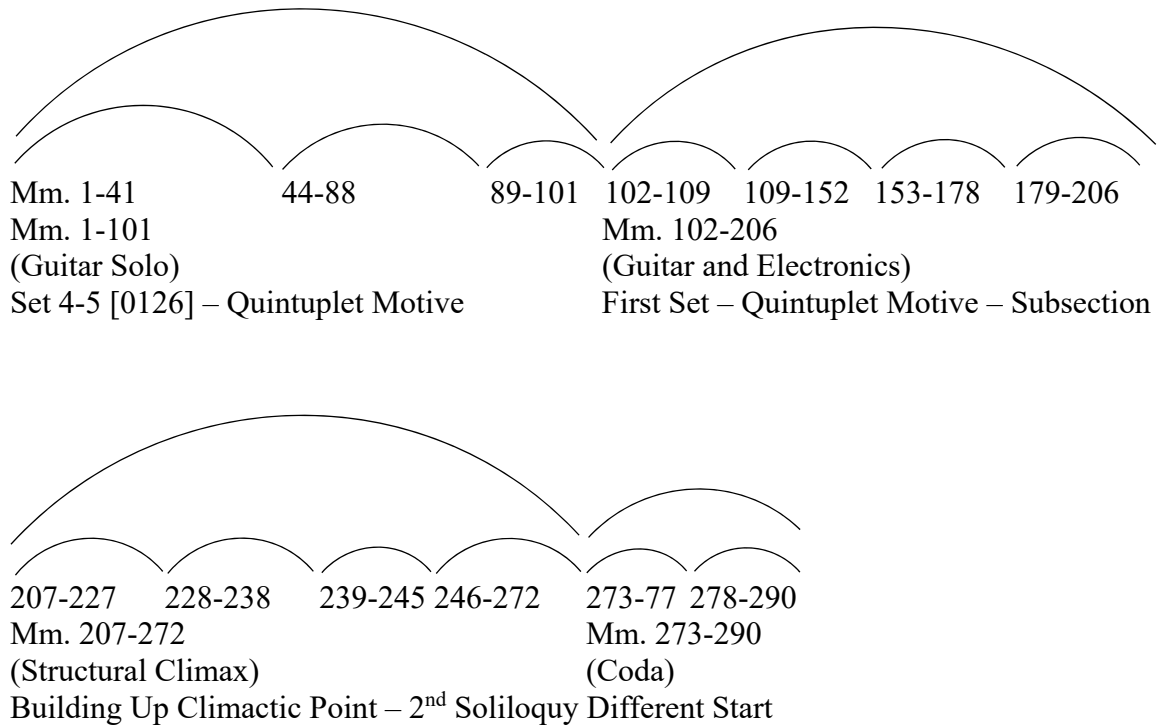
Forte Classification	Prime Form	Frequency	Measure + Location
5-7	[01267]	4	6-7, 30 (last dyad) - 31 (first two beats), 33 (beat 1, without low E string), 66 (first six notes)
5-20	[01568]	4	53, 133-136 (Tape only), 208-209 (Guitar only), 216 (G+T)
5-28	[02368]	4	15-16, 84 (beat 3) - 85, 97, 244 (beat 2) - 245 (Guitar only),
5-33	[02468]	3	24 (beat 2) - 25
6-z3	[012356]	3	62 (beat 3) - 63 (beat 1), 246-249 (downbeat) (Guitar only), 268 (beat 4) - 270
6-z6	[012567]	1	34 (ff chord)
6-z12	[012467]	3	32, 80, 119 (beginning with harmonics) - 121 (beat 2 (G+T))
6-18	[012578]	3	50 (ascending notes in flourish), 164 (hexachord) - 166 (Guitar only), 237 (last eighth note) - 238 (beat 2)
6-z36	[012347]	2	266 (beat 2) - 268 (beat 1), 276
7-30	[0124689]	2	241 (ascending), 241 (beat 3) - 242 (beat 1) (Tape only)

Appendix D: Arch Maps of *Synchronisms No. 10*

Arch Map of *Synchronisms No. 10* as Mapped by Daniel Lippel



Arch Map of *Synchronisms No. 10* as Mapped by Andrew Serce



Appendix E: Necessary Techniques for Performance

Synchronisms No. 10 utilizes many of the standard guitar techniques as well as some of the commonly used extended techniques in contemporary music. Standard guitar techniques include *dedillo*, *figueta castellana*, *glissando*, and harmonics. Extended techniques include double-*Bartók pizzicato*, *tambura*, *rasgueado*, and percussive use of the body of the guitar. This section of the document focuses on playing certain passages that have multiple solutions and suggests right-hand fingerings for each.

Dedillo is a term that describes a type of right-hand plucking technique that involves a single finger, typically the index, as utilized on the vihuela. The index plays successive down and up strokes, across a string or multiple strings, to imitate the sound achieved when using a plectrum. This technique is discussed by Alonso Mudarra in his *Tres libros de musica en cifras para vihuela* (1546).²⁵ This type of right-hand stroke can be beneficial for passages with single notes with a *tremolo* indication (*tremolo* in this case more similar to the type used in orchestral music and not what is known as “guitar tremolo”). For example, Figure 20 shows mm. 149-152 in which the guitar part features a single note tremolo switching from B \flat to A with a dynamic swell for each note. One benefit of using *dedillo*, in this case, is the ease of controlling dynamics.

Figure E.1 Measures 149-152 of *Synchronisms No. 10*

The image shows a musical score for measures 149-152 of *Synchronisms No. 10*. The score is written for guitar (G) and tenor (T) parts. The guitar part features a single note tremolo switching from B \flat to A with a dynamic swell for each note. The tenor part features a tremolo. Annotations include 'Dedillo with index' pointing to the guitar part, and 'mp' and 'mf' indicating dynamics. A box labeled 'Dedillo with index' is placed over the guitar part. The score includes various musical notations such as notes, rests, and dynamic markings.

²⁵ Alonso Mudarra, *Tres libros de musica en cifras para vihuela*, (Seville, 1546/R; ed. in MME, vii, 1949).

Figüeta is a type of right-hand plucking technique that involves the alternation of the thumb and index fingers, as utilized on the vihuela. Venegas de Henestrosa describes two versions of *figüeta*: *figüeta castellana* (with the thumb outside the fingers); and *figüeta estranjera* (thumb inside fingers).²⁶ In m. 13, there is a performance indication that reads “as fast as possible.” For this passage, right-hand patterns such as alternating p-i, i-m, or even i-a are feasible. *Figüeta castellana* provides an easy start to the ascending scale and can help with maintaining *staccato* as indicated in the score. Figure 21 shows this passage and a possible fingering using *figüeta*. Take note that an m finger is placed within the scale to allow for easy initiation of the *figüeta* pattern.

Figure E.2 Measure 13 of *Synchronisms No. 10*

The image shows a musical score for Measure 13 of *Synchronisms No. 10*. The score is written on a single staff with a treble clef. It begins with a measure containing a triplet of eighth notes, marked with a '3' above and a 'f' below. This is followed by a series of eighth notes, marked with 'ff' and 'mf'. A performance instruction 'as fast as possible' is written above the staff. The score concludes with a series of eighth notes marked with 'cresc.' and a 'b' above. Below the staff, a box contains the following fingering sequence: p i p i p i m | p i p i p i m | p.

Glissando is found in various sections and in different contexts. Common use of *glissando* occurs in m. 54 where an octave of G descends to a single G# on the third string and, in m. 124 when a tetrachord is planned. More complex passages that use *glissando* occur in mm. 9, 73-74, 240, and 280-281. The more complex passages of *glissando* are presented in Figures 22-25 below. In Figure 22, a dyad of C#-E# descends over two octaves to reach a C-natural which is articulated with a *Bartók pizzicato*. The *pizzicato* is accomplished by grabbing the A-string with the right-hand thumb and index

²⁶ Luys Venegas de Henestrosa, *Libro de cifra nueva para tecla, harpa, y vihuela*, (Alcalá, 1557), ed. Higinio Anglés (Barcelona: Instituto Español de Musicología, 1944, 2/1965).

fingers. Figure 23 shows an octave initiated by a *Bartók pizzicato* and *glissandi* up until a right-hand finger knuckle strikes the box of the guitar in a percussive manner. The octave pizzicato can be achieved by grabbing the lower note with the right-hand thumb and index finger while hooking the ring finger for the upper note of the octave. The square notation indicates that the body, or box, of the guitar should be hit with a knuckle.

Measure 240 is shown in Figure 24 where *glissandi* are to reach as high a note as possible in the rhythmic time allotted as explained at the bottom of the page by the asterisk.

Finally, Figure 25 draws attention to m. 281 in which glissandi occur in both guitar and tape. Also, notice the amount of techniques used in m. 281, including the *Bartók pizzicato* and knuckle on box.

Figure E.3 Measures 9-10 of *Synchronisms No. 10*



Figure E.4 Measures 73-74



Figure E.5 Measure 240 of *Synchronisms No. 10*



Figure E.6 Measure 281



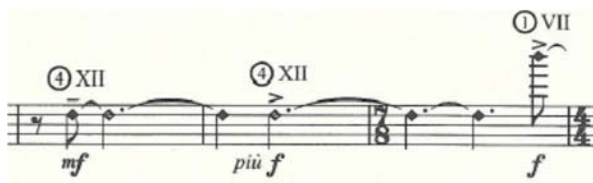
Passages that contain harmonics can be found in mm. 1-2, 10-12, 19-21, 75-79, 107-108, 119-121, 183-192, 273-274, 283-291, among others. These harmonics are presented in large groups, within regularly played notes, as natural harmonics, as octave harmonics, and with various dynamic markings. Two particular passages involving harmonics will be discussed here. The first, found in mm. 10-12, features seven harmonics played in melodic fashion. Looking more closely at the score, it can be seen that each harmonic is played on different strings making use of all six. The first and last harmonic are performed on the sixth string in order to accommodate for the vibrating sixth string. All the harmonics seen in Figure 26 are intended to ring over each other, *lasciare vibrare* being a common practice of the entire piece.

Figure E.7 Measures 10-12 of *Synchronisms No. 10*



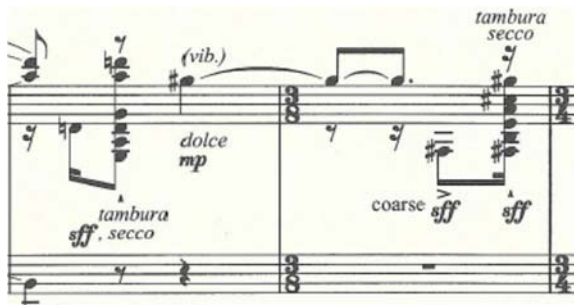
Figure 27 shows mm. 283-285 and the harmonics of increasing dynamic levels. This series of harmonics set up the final measures of the piece. The last harmonic of B should be played with the flesh of the thumb and as loud as possible without buzzing in order to remain loud enough until the tape crescendos to match the same pitch.

Figure E.8 Measures 283-285 of *Synchronisms No. 10*



Tambura is a term that describes a pseudo-percussive effect that is accomplished by striking the strings near the bridge. The *tambura* found in mm. 17-18 are shown in Figure 28 and are achieved by striking the strings with the inside part of the index finger or the side of the thumb and quickly dampened by the left hand to adhere to the *secco* (dry) marking.

Figure E.9 Measures 17-18 of *Synchronisms No. 10*



Rasgueado is possible by strumming a string, or strings, and can be found with many variations in right-hand fingerings. Two types of *rasgueados* will be discussed in this section. The first, a continuous pattern in which the following right-hand finger pattern is used: a(out)-m(out)-i(out)-a(in)-m(in)-i(in). The word “out” is used to describe that the extensor tendons are being used to shoot the fingers out and the word “in” for bringing the fingers back in with the flexor tendons. This type of strumming pattern can be used for the chordal tremolo seen in Figure 29. The crescendo can be controlled by the speed and intensity of the *rasgueado*.

Figure E.10 Measures 230-231 of *Synchronisms No. 10*



The second type of strumming pattern is one that is strongly determined by the dynamic marking associated with the chord. Figure 30 displays an instance where a special version of *rasgueado* should be employed. In mm. 87-88, chord tones are lightly arpeggiated and followed by a tremolo of the chord. The dynamic marking of quadruple *piano* crescendos only as far as *piano* and returns as far as *pianissimo*. This orchestral style tremolo can be achieved by straightening the right-hand index finger, placing it parallel with the strings, contacting with the flesh of the finger, all while bending and contracting at the elbow in a quick manner. The dynamic level of the technique can be controlled by increasing or decreasing speed and/or flesh pressure.

Figure E.11 Measures 87-88 of *Synchronisms No. 10*

The image shows a musical score for two staves. The top staff is for guitar, and the bottom staff is for piano. The guitar part features a circled '5' above a chord symbol 'IV' with a sharp sign, indicating a fifth fret barre. The piano part starts with a circled '2' above a chord symbol 'IV' and a dynamic marking of *mp*. A dotted line labeled *8va* indicates an octave shift. The piano part includes dynamic markings of *mf* (with *(loco) p* below it), *pppp*, *p*, and *pp*. The score shows a sequence of chords and tremolos in the piano part, with the guitar part providing harmonic support.

Program I

Saturday, November 8, 2014
Singletary Center for the Arts Recital Hall
5pm

<i>Suite in A minor (BWV 995, ca. 1727-31)</i>	Johann Sebastian Bach
<i>Prelude</i>	(1685-1750)
<i>Allemande</i>	
<i>Courante</i>	
<i>Sarabande</i>	
<i>Gavotte I & Gavotte II en Rondo</i>	
<i>Gigue</i>	
Hika (1996)	Leo Brouwer
	(1939-)
Tres Apuntes (1959)	
<i>I – Del homenaje a Falla</i>	
<i>II – De un fragmento instrumental</i>	
<i>III – Sobre un canto de Bulgaria</i>	
Cueca (<i>Danza Chilena</i>)	Agustín Barrios Mangoré
Julia Florida (Barcarola)	(1885-1944)
Rondeña	Regino Sáinz de la Maza
Petenera	(1896-1981)
Zapateado	

Program Notes for Program I

Introduction

The music performed on this recital is representative of varying musical time periods and styles of composition. The program also includes music not originally composed for the classical guitar, such as the Suite in A minor by Johann Sebastian Bach, as well as music that stems from another genre such as the flamenco tradition heard in the pieces by Regino Sáinz de la Maza. Repertoire influenced by dancing styles and movements are also found in the program. The Suite in A minor, Cueca, and Zapateado all carry influences of dance music and dance rhythms. Through the diverse sets of pieces presented here, the guitar demonstrates its ability to change mood and musical color effectively.

Suite in A minor (BWV 995, ca. 1727-31)

Johann Sebastian Bach (1685-1750)

Suite in A minor, by Johann Sebastian Bach, was originally composed for the cello (ca. 1720) and later realized into a version for lute (ca. 1727-31).²⁷ The lute is considered one of the predecessors of the guitar as well as the Spanish vihuela. Guitarists and scholars such as Frank Koonce question the intended instrument of composition for the lute realization. Koonce states, in his edition of the lute suites, that, “From the inscription ‘*pour la Luth*’ in the autograph, the editors of the *NBA* [*Neue Bach-Ausgabe*] conclude that this suite ‘is assuredly a lute composition.’ Its range, however, extends below that of a normal thirteen-course lute. Bach may have had a fourteen-course instrument in mind or possibly a lute-harpsichord.”²⁸ The lute-harpsichord, an invention of Johan Christoph

²⁷ J.S. Bach, BWV 995, *G mol Pieces pour le lut par S^{te} J.S. Bach*, edited for guitar by Frank Koonce, second edition, San Diego, California: Neil A. Kjos Music Company, 2002, ii-xxi.

²⁸ *Ibid.*, iv.

Fleischer in 1718, functions like a keyboard instrument in the same way as a harpsichord and has been found to have a resonator shaped like the body of a lute (in some cases). It was known that Bach had two lute-harpsichords at the time of his death in 1750, leading scholars to believe that he would compose works on this instrument.

Suite in A minor is a Baroque instrumental dance suite, with the *Courante*, *Sarabande*, *Gavotte*, and *Gigue* movements stemming from French court dances of the late seventeenth and early eighteenth centuries. The *Prelude* is into distinct parts: a slow and improvisatory introduction followed by a quicker-paced, gigue-like *fugue*. The *Allemande* in this case does not relate to the ballroom version of the allemande which tends to be much faster. A French version of the courante is present in this suite which follows a rhythmic pattern of a whole-note followed by a half-note comprising each (3/2) measure. The *Sarabande*, a Spanish dance, of this particular suite is considered to be unique in musical texture in that the music is presented as broken chordal harmonies which are stretched over each (3/4) measure. The *Gavottes* are presented “*en Rondo*” meaning that *Gavotte I* is performed in its entirety and is immediately followed by *Gavotte II*. When *Gavotte II* is completed, it is followed with a restatement of the first gavotte. To conclude the suite, Bach uses a lively *Gigue* in (3/8) meter that is full of dotted rhythms and harmonic sequences.

Leo Brouwer is a contemporary composer, guitarist, conductor, and influential musical figure from the country of Cuba. Debütting as a guitarist in 1955, he also began his work as a composer and published soon after in 1956. The pieces in the program (*Hika* and *Tres Apuntes*) can be placed during two of the three compositional periods Brouwer's output. *Tres Apuntes* can be traced back to his nationalistic phase which occurred from 1955 to 1962 while *Hika*, belonging to the third phase, demonstrates the era of 'new simplicity' (after 1967). *Tres Apuntes*, meaning "Three Sketches," is comprised of three short pieces, all of which display a different technique and mood. *Del homenaje a Falla* (From the homage to Manuel de Falla), is full of precise rhythms and dramatic color changes. Manuel de Falla is considered by musicologists to be the most influential Spanish composer of the twentieth century. *De un fragmento instrumental* (From an instrumental fragment) displays a common compositional technique used by Brouwer in which a fragment of a measure is built upon by adding or subtracting notes and/or beats from the fragment. This piece also draws on the compositional technique of metric modulation, a process used to change time signatures and tempi by the alteration of groups of notes. *Sobre un canto de Bulgaria* (About a chant from Bulgaria) features a short melody that is repeated and presented in different voices and registers.²⁹

Hika was composed nearly forty years after the Sketches and portray a different approach to composition. Composed in memoriam of Japanese composer Tōru Takemitsu who passed away on February 20, 1996, this piece exhibits striking tempo changes and glimpses of material from other pieces. Brouwer quotes a recycled melodic

²⁹ Ricardo Cobo, Leo Brouwer, *Tres Apuntes*, CD Booklet, 4'48", 1997, <https://uky-naxosmusiclibrary-com.ezproxy.uky.edu/sharedfiles/booklets/GEC/booklet-8.553630.pdf>

passage from his own works (the theme found in *Sobre un canto de Bulgaria*) and highlights the tempo and atmosphere from Takemitsu's piano piece titled "Rain Sketch II – In Memoriam Oliver Messiaen."³⁰

Cueca (*Danza Chilena*) and Julia Florida (*Barcarola*) Agustín Barrios Mangoré
(1885-1944)

Agustín Barrios Mangoré was a guitarist and composer from Paraguay who traveled the world and recorded over 40 records. *Cueca* is a piece that highlights the popular Chilean dance of the same name. It is possible that the piece was composed in the early to mid-1920s during his visit to Chile.³¹ The *cueca* is structured in 6/8 or 3/4 time and is typically split into three separate sections. There are three types of *cueca* and each comes from a different region of Chile: northern, central, and Chiloé. Although it is unclear as to which type is used by Barrios, the *cueca* from the central region may be the closest example to the present piece because of its heavy emphasis on guitar. A while after visiting Chile and Brazil, Barrios went to Cuba in 1938. Shortly after his arrival, he became ill and moved to Costa Rica. Inspired by the capital of San José, he composed the famous *Julia Florida* in dedication to Julia Martínez, the niece of Francisco Salazar. The piece is a *barcarola*, a type of music used to imitate the songs of Venetian gondoliers rowing through the water in Italy. The swaying motion can be heard clearly through the 6/8 time signature.

³⁰ Victoria Eli Rodríguez, "Brouwer, Leo," *Grove Music Online, Oxford Music Online*, Oxford University Press, accessed November 1, 2014, <http://www.oxfordmusiconline.com.ezproxy.uky.edu/subscriber/article/grove/music/04092>.

³¹ Richard D. Stover, "Barrios Mangoré, Agustín," *Grove Music Online, Oxford Music Online*, Oxford University Press, accessed November 1, 2014, <http://www.oxfordmusiconline.com.ezproxy.uky.edu/subscriber/article/grove/music/02125>.

Although there is limited research on his life, Regino Sáinz de la Maza was a prominent figure of the guitar during the twentieth century. There is much to be said about his musical career and status as a guitarist, especially during a time when he was competing against the fame of Andrés Segovia. He was so revered that Joaquín Rodrigo dedicated the now forever famous *Concierto de Aranjuez* to him.³² The three pieces, Rondeña, Petenera, and Zapateado stem from the flamenco tradition and the region of Andalusia, Spain (Rondeña and Zapateado) as well as Paterna de Rivera, Cádiz (Petenera). A *Rondeña* is a *palo* (musical form) originating from Ronda, Malaga, Spain and has roots in the *fandango malagueño*. Considered the oldest of the known fandangos, a *Rondeña* has a typical *compás* which stresses beats 1, 3, 5, 7, and 10 out of a 12-beat pattern. A *Petenera* is a flamenco *palo* whose *compás* stresses beats 1, 4, 7, 9, and 11 (the reverse of a *Rondeña*). The character of this piece is expressed through a rondo form where the refrain serves as an introduction and interlude between the lyrical episodes. The *Zapateado* is a lively shoe dance that shares a *compás* with the *Rondeña*. This traditional dance and music of the Andalusian region features tapping and stamping of the heels and toes.

³² Ricardo Iznaola, "Sainz de la Maza, Regino," *Grove Music Online, Oxford Music Online*, Oxford University Press, accessed November 1, 2014, <http://www.oxfordmusiconline.com.ezproxy.uky.edu/subscriber/article/grove/music/43108>.

Program II

Saturday, April 23, 2016

University of Kentucky Art Museum at the Singletary Center for the Arts
5:30pm

Fantasia (P 1a)

John Dowland
(1563-1626)

“Flow my teares fall from your springs”

“I saw my lady weep”

“Come againe: sweet love doth now invite”

Emily Furnish, soprano

Six airs choisis de l'opera de Mozart: Il flauto magico

Fernando Sor
(1778-1839)

Marche religiuese

Fuggite o voi beltá fallace

Giu fan ritorno i Genj amici

O dolce harmonia

Se potesse un suono

Grand Isi grand'Osiri

Twelve Seguidillas for voice and guitar or piano (book 1)

“*Si dices que mis ojos*”

“*El que quisiera amando*”

“*Las mujeres y cuerdas*”

Emily Furnish, soprano

Drei Tentos from *Kammermusik* (1958)

Hans Werner Henze
(1926-2012)

“*Du schönes Bächlein*”

“*Es findet das Aug'oft*”

“*Sohn Laios*”

Synchronisms No. 10 for guitar and tape (1992)

Mario Davidovsky
(b. 1934)

Program Notes for Program II

Fantasia (P 1a) and Selected Aires

John Dowland (1563-1626)

This program represents the close relationship that the guitar shares with vocal music. John Dowland was a composer and lutenist who is, “Now recognized as the greatest English composer of lute music and lute songs.”³³ *Fantasia* (P 1a) has moments that closely resemble a 4-part choral texture and the compositional technique of imitation between voices. “Flow my teares” and “I saw my Lady weepe” were published in 1600 as the first two songs from *The First Booke of Songes and Ayres* while “Come Againe” is taken from *The Second Booke of Songes and Ayers* (1597). To imitate the range of the lute, the guitar will utilize a capo on the third fret with the G string tuned down to an F#.

Six airs choisies and Seguidillas

Fernando Sor (1778-1839)

Fernando Sor was a Catalan composer and guitarist born in Barcelona, Spain. Published during his London/Paris visits from 1810-23, *Six airs choisies de l'opera de Mozart: Il flauto magico* was influenced by the famous opera by Wolfgang Amadeus Mozart titled *Die Zauberflöte* (The Magic Flute).³⁴ The theme found in *O dolce harmonia* shares the same musical framework as “*Das klinget so herrlich*” from Act I of the opera. This theme is also used in Sor’s *Introduction and Variations on a theme by Mozart*, Opus 9. The history of Spanish song would not be complete without the seguidillas of Fernando Sor. These seguidillas are taken from a set of twelve composed in the late 18th to early 19th centuries.

³³ Peter Holman and Paul O’Dette, “Dowland, John,” *Grove Music Online, Oxford Music Online*, Oxford University Press, accessed April 16, 2016.

³⁴ Brian Jeffery, “Sor, Fernando,” *Grove Music Online, Oxford Music Online*, Oxford University Press, accessed April 16, 2016.

Drei Tentos from *Kammermusik* (1958)

Hans Werner Henze (1926-2012)

Hans Werner Henze was a German composer who, “Has drawn inspiration for his vocal and instrumental works from a broad spectrum of renowned poets, writers, and librettists.”³⁵ The *Drei Tentos* are three solo guitar pieces extracted from the chamber piece *Kammermusik* (1958). Henze set “In lieblicher Bläue”, by Friedrich Hölderlin as the text for *Kammermusik*.

Synchronisms No. 10 for guitar and tape (1992)

Mario Davidovsky (b. 1934)

Mario Davidovsky is an American composer who was born in Argentina. Primarily a violinist from a young age, he began composing at 13 and later studied with Copland at the Berkshire Music Center in 1958. He has been internationally recognized for his electro-acoustic works, which supported his view that, “The ability to record sound was, in his opinion, the single most important technical breakthrough of the 20th century; it enabled sound to be frozen in time and used as an architectural element of musical form.”³⁶

³⁵ Virginia Palmer-Füchsel, "Henze, Hans Werner," *Grove Music Online, Oxford Music Online*, Oxford University Press, accessed April 16, 2016.

³⁶ Noel B. Zahler, "Davidovsky, Mario," *Grove Music Online, Oxford Music Online*, Oxford University Press, accessed April 16, 2016.

Text for Program II
Transcribed by Andrew Serce

John Dowland

II. Flow my teares fall from your springs

Flow my teares fall from your springs,
Exilde forever: let me mourn
Where nights black bird her sad infamy
sings,
There let mee live forlorne.

Downe vaine lights shine you no more,
No nights are dark enough for those
That in dispaire their last fortunes deplore,
Light doth but shame disclose.

Never may my woes be relieved,
Since pittie is fled,
And teares, and sighes, and groanes my
wearie dayes
Of all joyes have deprived.

From the highest spire of contentment,
My fortune is throwne,
And feare, and grieffe, and paine for my
deserts
Are my hopes since hope is gone.

Harke you shadowes that in darknesse
dwell,
Learne to contemne light,
Happie, happie they that in Hell
Feele not the world's despite.

**I. I saw my Lady weepe
To the most famous, Anthony Holborne.**

I saw my Lady weepe,
And scrow proud, to bee advanced so:
In those faire eies, where all perfections
keepe,
Her face was full of woe,
But such a woe (beleeve me) as wins more
hearts,
Then mirth can doe, with her, intysing parts.

Sorrow was there made faire,
And passion wise; eares a delightfull thing,
Silence beyond all speech a wisdom rare,
Shee made her sighes to sing,
And all things with so sweet a sadnesse
move,
As made my heart at once both grieve and
love.

**XVII. Come againe: sweet love doth now
invite**

Come againe:
Sweet love doth now invite,
Thy graces that refrain,
To do me due delight,
To see, to hear, to touch, to kiss, to die,
With thee againe in sweetest sympathy.

Come againe:
That I may cease to mourn,
Through thy unkind disdain,
For now left and forlorn:
I sit, I sigh, I weep, I faint, I die,
In deadly pain, and endless misery.

All the day:
The sun that lends me shine,
By frowns do cause me pine,
And feeds me with delay:
Her smiles, my springs, that makes my joys
to grow,
Her frowns the winters of my woe.

Fernando Sor

Si dices que mis ojos

Si dices que mis ojos
Te dan la muerte,
Confíesate y comulga,
Que voy a verte.

Porque yo creo
Me suceda lo mismo
Sino te veo.

El que quisiera amando

El que quisiera amando
Vivir sin pena,
Ha de tomar el tiempo
Conforme venga.

Quiera querido;
Y si te aborrecieren
Haga lo mismo.

Las mujeres y cuerdas

Las mujeres y cuerdas
De la guitarra,
Es menester talento
Para templarlas.

Flojas no suenan,
Y suelen saltar muchas
Si las aprietan.

Translation

If you say that my eyes

If you say that my eyes
kill you,
Then make confession; take the sacrament;
For I am going to see you.

For I believe
That the same thing will happen to me
Unless I see you.

He who wants to love

He who wants to love
And yet live without despair,
Must just take time
As it comes.

Take someone to love;
And then, even if they loathe you for it –
Just take time as it comes.

Women and guitar strings

Women and strings
Of the guitar,
You need talent
To tune them.

If they slack they don't sound,
And lots of them, if you tighten them too
much, break.

Program III

Sunday, November 6, 2016
The John Jacob Niles Gallery and Center for American Music
7:30pm

- Cinq Préludes* (1940) Heitor Villa-Lobos
Prélude No 1 in E minor (1887-1959)
Prélude No 2 in C minor
Prélude No 3 in A minor
Prélude No 4 in E minor
Prélude No 5 in D major
- Sonatina Meridional* (1932) Manuel María Ponce
I. Campo (1882-1948)
II. Copla
III. Fiesta
- Douze Études* (1929) Heitor Villa-Lobos
Étude No 1 – Étude des arpèges (1887-1959)
Étude No 2 – Des arpèges
Étude No 7 – Très animé
- Processional Suite* for two guitars (1997) Oliver Schneller
I. Fiesta (b. 1966)
II. Siesta
III. Valse funèbre
IV. Calesa

Andrew Serce, guitar 1
Jeremy Bass, guitar 2

Program Notes for Program III

Cinq Préludes (1940)

Heitor Villa-Lobos (1887-1959)

Heitor Villa-Lobos was a Brazilian composer who is considered to be, “The single most significant creative figure in 20th-century Brazilian art music.”³⁷ His father, Raúl Villa-Lobos, taught him how to play the cello at a young age. He considered the instrument to be one of his favorites and a great influence on his compositions. In *Prélude No 1* in E minor, the first theme presents a melody in the lower register of the guitar. The melody is presented two more times beginning with the same ascending gesture, but then continues with passages that are different than the first presentation. The second section is in E major and contains a melody in the upper register before returning to E minor. *Prélude No 2* in C minor does not sound like a minor piece at all. The key signature and opening chord found in the 1954 publication by Editions Max Eschig represents that of a piece in E major. The second section features a major chord shape in the left hand and is arpeggiated using chord planing with both open B and E strings throughout. *Prélude No 3* in A minor is a unique piece in the guitar compositions of Villa-Lobos because of the two highly distinctive sections. The first section begins with a flourish of 6-5 suspensions which resolve to a C major-major 7th chord. This section also contains ascending arpeggios and chord planing. The second section is marked by the indication *Molto adagio e (dolorido)*. If one was to directly translate *dolorido* from Portuguese to English, they would find definitions such as ‘sore’ and ‘bad’. In this case, it is more appropriate to use the translation of *doloroso*, meaning ‘painful’. This second

³⁷ Gerard Béhague, "Villa-Lobos, Heitor," *Grove Music Online, Oxford Music Online*, Oxford University Press, accessed October 18, 2016.

section is reminiscent of a melodic sequence used by Johann Sebastian Bach. *Prélude No 4* in E minor returns to a strong influence of the composer's familiarity and love for the cello. The opening melody permeates the movement and draws attention to the lower register. The *Animato* section presents a *cantabile* bassline hidden within rapid arpeggios. *Prélude No 5* in D major begins with a light-hearted scalar melody in the upper register and is followed by a melancholic *Meno* section before returning to the scalar melody. Each piece from the *Cinq Préludes* was given a name by Villa-Lobos which have not appeared in printed editions: 1. Lyrical Melody: Homage to the Brazilian Country Dweller; 2. *Melodia capadocia*; 3. Homage to Bach; 4. Homage to the Brazilian Indians; 5. Homage to Social Life.

Sonatina Meridional (1932)

Manuel María Ponce (1882-1948)

Manuel María Ponce was a Mexican pianist and composer. His musical studies began at an early age studying with his sister Josefina and later with Cipriano Ávila. He had experience singing in the church choir at S. Diego, Aguascalientes where he later became the organist. He studied piano with Vicente Mañas and harmony with Eduardo Gabrielli in Mexico City. He later traveled to Europe to study with Cesare Dall'Olio (teacher of Giacomo Puccini), Torchi, and Martin Krause.³⁸ Ponce was also in contact with the famous classical guitarist Andrés Segovia (1893-1987). In 1930, Segovia was in correspondence with Ponce and requested that a sonatina be composed for him. Segovia wanted a piece that encapsulated a Spanish character. Segovia gave the title *Campo* (countryside) to the first movement, a lively sonata form movement in 3/8 meter. The

³⁸ Ricardo Miranda Pérez, "Ponce, Manuel," *Grove Music Online, Oxford Music Online*, Oxford University Press, accessed October 18, 2016.

second movement, *Copla* (song or ballad) is beautiful and saturated with lyrical passages. Finally, *Fiesta* (performed *attacca*) is an energetic movement in 3/4 time that features hemiolas and frequent changes in color.

Douze Études (1929)

Heitor Villa-Lobos (1887-1959)

The *Études* of Villa-Lobos are considered to be some of the most well-known pieces of the guitar repertoire. The credit of which can be heavily placed on the performer of dedication, Andrés Segovia. Segovia was born in Linares, Jaén, Spain and became the most influential performer of the classical guitar during the twentieth century. Villa-Lobos and Segovia met in Paris during 1924, a time in which Segovia was searching for new repertoire. Segovia wrote an introduction to the studies which was included in the original publication where he claims that, “Villa-Lobos has given to the history of the guitar fruits of his talent as luxuriant and savory as those of Scarlatti and Chopin.”³⁹

Processional Suite for two guitars (1997)

Oliver Schneller (b. 1966)

Oliver Schneller is a German composer and saxophonist born in Cologne. He is currently a Professor of Composition and Director of the Eastman Computer Music Center at the Eastman School of Music in Rochester, NY. He is also a co-founder and artistic director of the *SinusTon Festival* for Experimental Music in Magdeburg.

Processional Suite is dedicated to Thomas Offermann and Jens Wagner of *Duo Sonare* from Bonn, Germany. Unlike the preceding pieces of this program, this suite is more so rooted in the compositional language of the second half of the twentieth century. The piece contains complex rhythms and folkloric melodies.

³⁹ Andrés Segovia, preface to the *Douze Études*, (Paris: Editions Max Eschig, 1953).

Program IV

Saturday, April 8, 2017

The John Jacob Niles Gallery and Center for American Music
6pm

Fantasia-Sonata opus A-22 (1939)

Largo

Allegro

Adagio cantabile

Allegro Assaí

Largo

Joan Manén
(1883-1971)

Três Cenas Brasileiras (1984) for two guitars

I. *Pinote*

II. *Vitoria Regia*

III. *Recife dos corais*

Sergio Assad
(b. 1952)

Dr. Dieter Hennings, guitar 1

Andrew Serce, guitar 2

Guitar Quartet (2009)

Juan Trigos
(b. 1965)

The UK Guitar Quartet

Dr. Dieter Hennings, guitar 1

Jeremy Bass, guitar 2

Dr. Andrew Rhinehart, guitar 3

Andrew Serce, guitar 4

Program Notes for Program IV

Fantasia-Sonata opus A-22 (1939)

Joan Manén (1883-1971)

Joan Manén was a Catalan violinist and composer who was born in Barcelona, Spain. His father taught him how to play the piano and guided him in learning solfège at a very young age. He was considered to be extremely talented as he was frequently performing concertos by Chopin by the age of seven. At the age of five, he began violin studies with Clemente Ibargueren as well as Vicente Negrevernís and began to début in Latin America and Europe.⁴⁰

At a young age, Manén shared a concert with the great Spanish guitarist, Francisco Tárrega (1852-1909). In a later meeting, it was said that Manén suggested to Tárrega himself to make a publication of a guitar method, a project that was never sought out.⁴¹ Later in 1894, he traveled to New York where he met the guitarist Antonio Jiménez Manjón (1866-1919). His reputation and level of musicianship led him to be accompanied on violin by pianists such as Enrique Granados, Joaquín Nin, and Richard Strauss.

Manén was considered, for the most part, as a self-taught composer, beginning to write at the age of thirteen. He did receive lessons in harmony from Gabriel Balart (1824-1893), Joaquín María Vehils (1857-1934), and possibly, Celestí Sadurní (1863-1910). Known for being a jack of all trades, he began conducting his works and even wrote the librettos for his later operas, starting with *Acté* (later rewritten as *Neró i Acté* in 1928).

⁴⁰ Lionel Salter, "Manén, Joan," *Grove Music Online, Oxford Music Online*, Oxford University Press, accessed March 6, 2017, <http://www.oxfordmusiconline.com.ezproxy.uky.edu/subscriber/article/grove/music/17618>.

⁴¹ Joan Manén, *Fantasia-Sonata opus A-22*, ed. Angelo Gilardino, Ancona, Italy: Bèrben Edizioni musicali, 2011.

His compositional influences stem from Wagner and Richard Strauss, particularly in his orchestral writing. Most interestingly, and quite suddenly, he destroyed or completely revised all of his compositions dating before 1907.

Fantasia-Sonata is a large scale solo piece for classical guitar that was commissioned by Andrés Segovia. It is thought that the two met in Barcelona during 1915, when Segovia was touring with Miguel Llobet. In 1929, Catalan newspapers spread word that Manén completed the piece and later was studied by Segovia while he was on a trans-Siberian train trip. In his forward to the Gilardino edition, Julio Gimeno García makes some remarks about Segovia's involvement with the piece stating that, "In the summer of 1930 Schott published the *Fantasia-Sonata* in the collection of guitar works directed by Andrés Segovia. In an interview given that same year to Juan Gols, Segovia stated that Manen's composition was 'the most important work written for the guitar.'" "

Três Cenas Brasileiras (1984) for two guitars

Sergio Assad (b. 1952)

Sergio Assad is a guitarist, composer, and arranger from Mocóca, São Paulo, Brazil. He began composing for guitar at a young age and was heavily influenced by the folk melodies he learned from his father. At the age of fourteen, he was arranging and composing for the duo that he formed with his brother, Odair. Later, Sergio and Odair studied with Monina Tavora (1921-2011), a famous guitarist/lutenist who was a student of Andrés Segovia.⁴² After completing his studies with Tavora, Sergio studied conducting and composition at the Escola Nacional de Música in Rio de Janeiro. He also studied composition with Esther Scliar (1926-1978), a Brazilian pianist and composer.

⁴² Sergio Assad, "Biography," accessed on March 5, 2017, <<https://assadbrothers.com/biography>>.

Sergio's compositions have reached the apex of guitar literature. One of his more famous works, *Aquarelle* (1986) was a set piece for the Guitar Foundation of America international guitar competition in 2002. He also composed the set piece for the 2008 GFA competition which is titled *Valsa de Outono*. As part of the Assad Duo, he has collaborated in performances and recordings with Gidon Kremer, Dawn Upshaw, and the famous Yo-Yo Ma. *Três Cenas Brasileiras* is listed as Sergio's first official composition, dating back to 1984. It was published by Editions Henry Lemoine and recorded by Nonesuch Records in 1984. The piece is guitar duo that features both instruments which share primary melodies and while interchanging entire phrases and/or fragments of phrases. Folkloric rhythms and virtuosic passages combine to make three joyous scenes filled with an exciting character.

Guitar Quartet (2009)

Juan Trigos (b. 1965)

Juan Trigos is a composer and conductor born in Mexico City, Mexico. He is known as the creator of the concept called Abstract Folklore.⁴³ This concept is based on the idea of having a primary pulse, resonance of instruments, and the saturation of polyrhythmic and polyphonic musical events. Trigos also maintains an impressive conducting résumé having premiered an extensive catalogue of works with various choirs and orchestras around the world. He is the Music Director and Principal Conductor of the Sinfónica de Oaxaca in Mexico. *Guitar Quartet* exhibits many of elements of Abstract Folklore as pulse, resonance of the guitar, and rhythm are explored in a large-scale setting.

⁴³ Juan Trigos, "Biography," accessed on March 5, 2017, <<http://promusint.com/juantrigos/wp/biography/>>.

Program V

Friday, April 14, 2017

The John Jacob Niles Gallery and Center for American Music
7pm

A New Analytical Approach to
Synchronisms No. 10 by Mario Davidovsky

Introduction

Example #1: Opening Gesture

About the Composer

Form of *Synchronisms No. 10* (Dan Lippel version)

Solo Guitar (Measures 1-101)

Example #2: Different Textures of Motive x

Example #3: Quintuplet Motive

Example #4: Octave Passage

Guitar and Electronics (Measures 102-223)

Example #5: Introduction of Tape and the Hybrid Instrument

Example #6: Quintuplet Motive and Motive x

Example #7: Soliloquys

Structural Climax (Measures 224-270)

Example #8: Climactic Twenty Measures

Coda (Measures 273-290)

Example #9: Start of Coda

Form of *Synchronisms No. 10* (Andrew Serce version)

Solo Guitar (Measures 1-101)

Example #10: Set 4-5 [0126] and Its Importance

Guitar and Electronics (Measures 102-206)

Example #11: Opening Set of Guitar and Electronics Section

Example #12: Similarities in the Use of the Quintuplet Motive

The Difference in Structure of Subsections

Structural Climax (Measures 207-272)

Example #13: Building Up to the Climactic Point

Example #14: Second Soliloquy

Coda (Measure 273-290)

Example #15: Difference in Starting Point

How Does This Post-Tonal Analysis Better Inform My Interpretation?

Synchronisms No. 10 for guitar and tape (1992)
(b. 1934)

Mario Davidovsky

Program Notes for Program V

Synchronisms No. 10 for guitar and tape (1992)

Mario Davidovsky (b. 1934)

Mario Davidovsky is an American composer who was born in Argentina.

Primarily a violinist from a young age, he began composing at 13 and later studied with Copland at the Berkshire Music Center in 1958. He has been internationally recognized for his electro-acoustic works, which supported his view that, “The ability to record sound was, in his opinion, the single most important technical breakthrough of the 20th century; it enabled sound to be frozen in time and used as an architectural element of musical form.”⁴⁴

Program notes for this lecture recital also included Appendix C: Arch Maps of *Synchronisms No. 10*. This lecture recital focused on the chapters titled “Introduction,” “The Specifics of Lippel’s Form,” and “Sets and Form” found in Part I of this document.

⁴⁴ Noel B. Zahler, "Davidovsky, Mario," *Grove Music Online, Oxford Music Online*, Oxford University Press, accessed April 16, 2016.

Bibliography

- Assad, Sergio. "Biography." Accessed on March 5, 2017.
<<https://assadbrothers.com/biography>>.
- Bach, Johann Sebastian. BWV 995, *G mol Pieces pour le lut par S^{re} J.S. Bach*. Edited for guitar by Frank Koonce. Second edition. San Diego, California: Neil A. Kjos Music Company, 2002.
- Béhague, Gerard. "Villa-Lobos, Heitor." *Grove Music Online. Oxford Music Online*. Oxford University Press, accessed October 18, 2016.
<http://www.oxfordmusiconline.com.ezproxy.uky.edu/subscriber/article/grove/music/29373>.
- Buchler, Michael. Setmaker software: http://ottocmr.fsu.edu/~buchle_m/setmaker.html (for PC).
- Clarkson, Austin. "Wolpe, Stefan." *Grove Music Online. Oxford Music Online*. Oxford University Press, accessed April 21, 2013.
<http://www.oxfordmusiconline.com.ezproxy.uky.edu/subscriber/article/grove/music/30523>.
- Cobo, Ricardo, Leo Brouwer. *Tres Apuntes*. CD Booklet, 4'48". 1997. <https://uky-naxosmusiclibrary-com.ezproxy.uky.edu/sharedfiles/booklets/GEC/booklet-8.553630.pdf>
- Davidovsky, Mario. *Synchronisms #10*. New York: C.F. Peters Corporation, 1995.
- Gardner Malloy, Christopher. "Cadential Procedures in Mario Davidovsky's *Divertimento for Cello and Orchestra*." PhD diss., Brandeis University, 1998.
- Holman, Peter and Paul O'Dette. "Dowland, John." *Grove Music Online. Oxford Music Online*. Oxford University Press, accessed April 16, 2016.
<http://www.oxfordmusiconline.com.ezproxy.uky.edu/subscriber/article/grove/music/08103>.
- Isaacson, Eric J. "Similarity of Interval-Class Content between Pitch-Class Sets: The IcVSIM Relation." *Journal of Music Theory* 34/1 (1990): 1-28.
- Iznaola, Ricardo. "Sainz de la Maza, Regino." *Grove Music Online. Oxford Music Online*. Oxford University Press, accessed November 1, 2014.
<http://www.oxfordmusiconline.com.ezproxy.uky.edu/subscriber/article/grove/music/43108>.

- Jeffery, Brian. "Sor, Fernando." *Grove Music Online. Oxford Music Online*. Oxford University Press, accessed April 16, 2016.
<http://www.oxfordmusiconline.com.ezproxy.uky.edu/subscriber/article/grove/music/26246>.
- Klumpenhouwer, Henry. "The Inner and Outer Automorphisms of Pitch-Class Inversion and Transposition: Some Implications for Analysis in Klumpenhouwer Networks." *Intégral* 12 (1998): 81-93.
- Lewin, David. "A Tutorial on Klumpenhouwer Networks, using the Chorale in Schoenberg's Op. 11, #2." *Journal of Music Theory* 38/1 (1994): 79-101.
- _____. "Klumpenhouwer Networks and Some Isographies that Involve Them." *Music Theory Spectrum* 12/1 (1990): 83-120.
- _____. "Re: Intervallic Relations between Two Collections of Notes." *Journal of Music Theory* 3/2 (1959): 298-301.
- Lippel, Daniel. "Synchronisms #10 for Guitar and Electronic Sounds and Festino: Seminal Works for Guitar by Mario Davidovsky." PhD diss., Manhattan School of Music, 2006.
- Malloy, Christopher Gardner. "Cadential Procedures in Mario Davidovsky's Divertimento for Cello and Orchestra." PhD diss., Brandeis University, 1998.
- Manén, Joan. *Fantasia-Sonata opus A-22*. Ed. Angelo Gilardino. Ancona, Italy: Bèrben Edizioni musicali, 2011.
- Morris, Robert D. "A Similarity Index for Pitch-Class Sets." *Perspectives of New Music* 18 (1979-80): 445-460.
- Mudarra, Alonso. *Tres libros de musica en cifras para vihuela*. Seville, 1546/R; ed. in MME, vii, 1949.
- Palmer-Füchsel, Virginia. "Henze, Hans Werner." *Grove Music Online. Oxford Music Online*. Oxford University Press, accessed April 16, 2016.
<http://www.oxfordmusiconline.com.ezproxy.uky.edu/subscriber/article/grove/music/12820>.
- Perea, Andrew Rafael. "Electro-Acoustic Music: An Historical Overview, with an In-Depth Study of Preparatory Techniques for Mario Davidovsky's Synchronisms No. 9 for Violin and Tape." Ph.D. diss., The University of Texas at Austin, 1998.

- Pérez, Ricardo Miranda. "Ponce, Manuel." *Grove Music Online. Oxford Music Online.* Oxford University Press, accessed October 18, 2016.
<http://www.oxfordmusiconline.com.ezproxy.uky.edu/subscriber/article/grove/music/2072>.
- Ricks, Steven Leon. "Angled Responses: Structural Pairing in Mario Davidovsky's *Quartetto*." Ph.D. diss., The University of Utah, 2001.
- Rodríguez, Victoria Eli. "Brouwer, Leo." *Grove Music Online. Oxford Music Online.* Oxford University Press, accessed November 1, 2014.
<http://www.oxfordmusiconline.com.ezproxy.uky.edu/subscriber/article/grove/music/04092>.
- Salter, Lionel. "Manén, Joan." *Grove Music Online. Oxford Music Online.* Oxford University Press, accessed March 6, 2017.
<http://www.oxfordmusiconline.com.ezproxy.uky.edu/subscriber/article/grove/music/17618>.
- Sampsel, Laurie J. *Music Research: A Handbook*. Second Edition. New York, New York: Oxford University Press, 2013.
- Segovia, Andrés. Preface to the *Douze Études*. (Paris: Editions Max Eschig, 1953).
- Serrouya, Meir. An Analysis of Mario Davidovsky's Scenes from Shir Ha-Shirim. PhD, Brandeis University, 2000.
- Soule, Richard Lawrence. "Synchronisms Nos. 1, 2, 3, 5, and 6 of Mario Davidovsky: A Style Analysis". PhD diss., Peabody Institute of the Johns Hopkins University, 1978.
- Stover, Richard D. "Barrios Mangoré, Agustín." *Grove Music Online. Oxford Music Online.* Oxford University Press, accessed November 1, 2014.
<http://www.oxfordmusiconline.com.ezproxy.uky.edu/subscriber/article/grove/music/02125>.
- Straus, Joseph. *Introduction to Post-Tonal Theory*. Upper Saddle River, N.J.: Prentice Hall, 2005.
- Susser, Peter Matthew. "Attack, Sustain and Decay: An Analysis of 'Synchronisms No. 3 for Cello and Electronic Sounds' by Mario Davidovsky. (with original composition)." Ph.D. diss., Columbia University, 1994.
- Trigos, Juan. "Biography." Accessed on March 5, 2017.
<http://promusint.com/juantrigos/wp/biography/>.

- Venegas de Henestrosa, Luys. *Libro de cifra nueva para tecla, harpa, y vihuela*. (Alcalá, 1557). Ed. Higinio Anglés. Barcelona: Instituto Español de Musicología, 1944, 2/1965.
- Wimsatt, William K. and Monroe C. Beardsley. "The Intentional Fallacy." *Sewanee Review*, vol. 54, No. 3 (1946): 468-488. Revised and republished in *The Verbal Icon: Studies in the Meaning of Poetry*, University of Kentucky Press, 1954: 3-18.
- Wingell, Richard J. *Writing About Music: An Introductory Guide*. Fourth Edition. Upper Saddle River, N.J.: Prentice Hall, 2009.
- Wingell, Richard J. and Silvia Herzog. *Introduction to Research in Music*. Upper Saddle River, N.J.: Prentice Hall, 2001.
- Zahler, Noel B. "Davidovsky, Mario." *Grove Music Online*. *Oxford Music Online*. Oxford University Press, accessed December 11, 2016, <http://www.oxfordmusiconline.com.ezproxy.uky.edu/subscriber/article/grove/music/07281>.

Vita

I. Education

2015	University of Kentucky Certificate in Music Education K-12	Lexington, Kentucky
2014	University of Kentucky Certificate of Music Theory Pedagogy	Lexington, Kentucky
2012	University of Kentucky M.M. Classical Guitar Performance	Lexington, Kentucky
2010	Nazareth College of Rochester B.A. in Music Emphasis in Classical Guitar, Violin, and Piano Performance Emphasis on Composition Minor in Philosophy	Rochester, New York

II. Professional Experience

2017	University of the Cumberlands Adjunct Professor of Guitar	Williamsburg, Kentucky
2016-Present	Lyric Theater Instructor for Community Guitar Class	Lexington, Kentucky
2011-Present	Musikgarten of Lexington Private and Classroom Instructor	Lexington, Kentucky
2013-2016	University of Kentucky Teaching Assistant	Lexington, Kentucky
2013-2015	University of Kentucky Part-Time Instructor	Lexington, Kentucky
2013-2014	Lexington Public Library Village Branch	Lexington, Kentucky

III. Honors

2013-2016	University of Kentucky Teaching Assistant	Lexington, Kentucky
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Andrew Jack Serce