

ALTERED STATES OF PERFORMANCE:
SCORDATURA IN THE CLASSICAL GUITAR REPERTOIRE

by

COREY JAMES FLOWERS

(Under the Direction of Michael Heald)

ABSTRACT

Scordatura is commonplace in the guitar repertoire, though there are relatively few resources available that explain the approach to its use, either from a performer's or a composer's perspective. Through examination of specific selections in the classical guitar repertoire, this document offers an introduction to various alternate tunings for the guitar, beginning with tunings used to transcribe lute and vihuela music, and progressing to modern experimentations found in the literature.

Each piece on the accompanying recording provides insight into the use of these alternate tunings by highlighting specific musical characteristics that are made possible, or are idiomatic, in each tuning, such as extended ranges, open string relationships, unique chord voicings, and the ease of introducing contrasting tonal centers across a program. The CD provides a basis for aural comparison of the tunings and is a resource for performers interested in this repertoire. It also provides examples for composers and arrangers wishing to approach writing for the guitar using non-standard tunings.

As additional resources, a glossary of terminology is provided, concerning tunings found in the document, as well as tunings used outside of the classical repertoire that may be useful for

experimentation. An index of scordatura repertoire is provided as well, offering a broad overview of additional repertoire for further study.

INDEX WORDS: scordatura, classical guitar, alternate tuning, Luis de Narváez, Cancion del Emperador, Dusan Bogdanovic, Mysterious Habitats, Joaquín Rodrigo, Invocación y danza, Rainer Brunn, Elemente, Eduardo Sáinz de la Maza, Habanera, Andrew York, Sunburst, Toru Takemitsu, Equinox, Carlo Domeniconi, Koyunbaba, Simple Gifts, José Luis Merlin, Cinco canciones de amor

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DEDICATION

To my family, near and far, thank you for your love and support over the last ten years. I hope to see much more of you all in the coming years, and make up for all of those missed holidays when I was locked in a practice room or in the throes of writing.

To John, thank you for starting me on this path. Your enduring words of wisdom have guided me through completing this journey, which at the beginning, seemed something like the flea and the elephant. You are dearly missed.

TABLE OF CONTENTS

	Page
LIST OF FIGURES	vii
CHAPTER	
1 INTRODUCTION	1
Literature review	2
Methodology	4
Delimitations	4
Organization	5
2 HISTORY OF STANDARD AND ALTERNATE TUNINGS OF THE GUITAR	8
3 DISCUSSION OF THE RECORDED REPERTOIRE	11
Luis de Narváez – <i>Cancion del Emperador</i>	11
Dusan Bogdanovic – <i>Mysterious Habitats</i>	13
Joaquín Rodrigo – <i>Invocación y danza</i>	15
Rainer Brunn – <i>Elemente</i>	18
Eduardo Sáinz de la Maza – <i>Habanera</i>	21
Andrew York – <i>Sunburst</i>	22
Toru Takemitsu – <i>Equinox</i>	25
Carlo Domeniconi – <i>Koyunbaba</i>	27
Ravenscroft and Sutherland – <i>Simple Gifts</i>	31
José Luis Merlin – <i>Cinco Canciones de Amor</i>	33

4 CONCLUSION AND PREFACE TO THE APPENDICES	36
REFERENCES	38
APPENDICES	
A GLOSSARY OF TERMS	41
B INDEX OF REPERTOIRE.....	43

LIST OF FIGURES

	Page
Figure 1: Narváez – <i>Los seys Libros del Delphin – Cancion del Emperador</i>	12
Figure 2: Narváez – <i>Cancion del Emperador</i> , mm. 41-43	12
Figure 3: Narváez – <i>Cancion del Emperador</i> , mm. 76-81	13
Figure 4: Bogdanovic – <i>Mysterious Habitats</i> , mm. 7-9.....	14
Figure 5: Bogdanovic – <i>Mysterious Habitats</i> , mm. 51-53.....	15
Figure 6: Rodrigo – <i>Invocación y danza</i> , mm. 1-3	16
Figure 7: Rodrigo – <i>Invocación y danza</i> , a) mm. 41-4; b) 62-63	17
Figure 8: Rodrigo – <i>Invocación y danza</i> , a) mm. 67-70; b) 105-108; c) 176-179.....	17,18
Figure 9: Brunn – <i>Elemente – Luft</i> , mm. 15-18	19
Figure 10: Brunn – <i>Elemente – Erde</i> , mm. 12-15.....	20
Figure 11: E. Sáinz de la Maza – <i>Habanera</i> a) mm. 1-4; b) 40-44	21,22
Figure 12: E. Sáinz de la Maza – <i>Habanera</i> , mm. 5-8	22
Figure 13: York – <i>Sunburst</i> , mm. 9-12	24
Figure 14: York – <i>Sunburst</i> , mm. 36-37	24
Figure 15: York – <i>Sunburst</i> , a) mm. 53-53; b) 61-63 c) 61-63.....	25
Figure 16: Takemitsu – <i>Equinox</i> , mm. 4-8	26
Figure 17: Domeniconi – <i>Koyunbaba – I</i> , mm. 5-7	29
Figure 18: Domeniconi – <i>Koyunbaba – IV</i> , mm. 7-15	29
Figure 19: Domeniconi – <i>Koyunbaba – IV</i> , mm. 53-58	30

Figure 20: <i>Simple Gifts</i> , mm. 34-35.....	32
Figure 21: <i>Simple Gifts</i> , mm. 64-67.....	32
Figure 22: <i>Simple Gifts</i> , mm. 74-77.....	33
Figure 23: Merlin – <i>5 Canciones de amor</i> – III, mm. 9-12	34
Figure 24: Merlin – <i>5 Canciones de amor</i> – V, mm. 54-58.....	35

CHAPTER 1

INTRODUCTION

The guitar is a difficult instrument to tune for players of all levels, containing multiple interval types across the strings. Temperature, humidity, age and material of the strings, and just performing on the instrument will affect how long the tuning will hold before it begins to falter. This difficulty is multiplied for players performing works in alternate tunings alongside pieces in standard tuning or, for that matter, further alternate tunings. During a typical concert program, it is not uncommon for the guitarist to tune before every piece—whether in standard or alternate tuning—as well as making “on the fly” adjustments where necessary. Changing the tuning of the guitar is a common technique in the repertoire, and can offer a shift in tonal focus, an expanded range, and access to unique musical gestures based on the new intervals of the strings.

This CD project and accompanying document collects and discusses selected examples of the most common alternate tunings, as well as less common approaches taken by more contemporary composers, and gives context to the selected works. Through examination of the guitar’s history, the origins of these tunings are explored and their potential strengths and weaknesses highlighted. Specifically, the following pieces have been selected and recorded for this project:

Luis de Narváez – *Cancion del Emperador*
 Dusan Bogdanovic – *Mysterious Habitats*
 Joaquín Rodrigo – *Invocación y danza*
 Rainer Brunn – *Elemente*
 Eduardo Sáinz de la Maza – *Habanera*

Andrew York – *Sunburst*
 Toru Takemitsu – *Equinox*
 Carlo Domeniconi – *Koyunbaba*
 Trad. (arr. J. Sutherland et al) – *Simple Gifts*
 José Luis Merlin – *Cinco Canciones de Amor*

Each piece features the use of a different tuning (or tunings), ranging from single-string alterations to three (or more) alterations, as well as pieces that contain changes between or within movements. The specific tuning for each piece will be discussed under “Organization.”

An examination of each piece was conducted to provide a contextual study of each tuning and highlight specific examples from each piece. The different tunings make certain musical gestures or chordal relationships possible where they might be unattainable or impractical in standard tuning. Identifying these characteristics benefits performers and composers by making scordatura literature approachable to the uninitiated and by offering a closer look to those already familiar with this repertoire. The index of tunings and pieces presented in the appendix offers a resource for choosing repertoire, teaching students about alternate tunings, and providing examples for study to composers and arrangers wishing to write for the guitar.

Literature Review

There are few sources for many of the pieces recorded on this CD. Scordatura and its history have been discussed in the literature, as well as broader overviews of the composers represented in this project. Stefan Grossman’s *Fingerstyle Guitar Solos in Open Tunings* provides a collection of solo pieces with a forward that discusses the history of open tunings, as they relate to the tunings of parlour guitar and early blues in the beginning of the 20th century, and how these tunings resurfaced after WWII. Many of the pieces in the collection represent the folk idiom more than the classical repertoire, but it is still a useful resource for talking about alternate tunings.

In “Perspectives on the Classical Guitar in the Twentieth Century,” in the Cambridge Companion to the Guitar, David Tanenbaum focuses on performers and composers of the 20th century. Rodrigo and Takemitsu are discussed, and, to a lesser extent, the guitarist-composers are

mentioned in the latter part of the article. A description of the state of the repertoire and its guitarist-centric current is also discussed. This provides a basis for one of the goals of this document, which is to inform the non-guitarist about a technique (scordatura) which can be difficult to understand and use effectively.

Harvey Turnbull's article "Guitar," in *Grove Music Online*, offers a general overview of the history of the guitar, including four- and five-course ancestors and their various tunings. Open and dropped tunings are discussed in context of the modern guitar. James Tyler in his subsection "Lute and Guitar," in "Scordatura" in *Grove Music Online*, provides background information on early tunings and alternate tunings commonly used during the 17th and 18th centuries. The use of tablature to facilitate these tunings is discussed as well as how, with the favor of standard notation on the 6-string guitar, "true" scordatura becomes much more difficult to play. Both Turnbull's and Tyler's article help to introduce alternate tunings found in early repertoire, such as the opening track of the CD by Narvaez.

Graham Wade, in *A Concise History of the Classical Guitar*, begins with an introduction to the guitar and follows with Renaissance predecessors, detailing developments in both instrument construction/design and tuning. Other topics of interest include Segovia and Augustine developing the nylon string (which influenced the reliability of the strings), music in the 20th century, and performers of the 20th century.

Pieces and Composers

Generally, much of the background information on composers and the repertoire comes from *Grove Music Online* and, to a greater extent, from CD liner notes provided with recordings of the selected repertoire. These liner notes seem to be in greater supply, in many cases, than the

traditional print media, particularly for pieces written in the latter half of the 20th Century. Guitar specific publications such as *Guitar Review* and *Soundboard* have also been consulted for additional information on the selections. Material found in the front matter of scores, composer websites (when available), and dissertations on the relevant composers and/or pieces have also been consulted to give a broad overview of the literature available on the chosen repertoire.

Methodology

For many of the works being recorded there is only a single publication of the score available. This is especially true for pieces on the program written after 1980 that have not yet undergone a revision or republication process. The performance of Rodrigo's *Invocación y danza* is informed by comparing two available editions, the 1973 E.F.M. Technisonor publication, with fingerings and revisions by Alirio Diaz, and the 1993 Ediciones Joaquín Rodrigo version, edited by Angel Romero. For Narváez's *Cancion del Emperador*, Emilio Pujol's transcription (published by Schott in 1956) was used and compared with more modern editions. As this piece is transcribed from tablature, comparison of scores is an invaluable tool in providing a faithful performance.

For this recording project, I served as engineer and made all necessary edits and equalization adjustments after the initial recording. After testing in several spaces, the pieces were recorded in my home studio, using a matched pair of Behringer C-2 condenser microphones in an XY configuration. A small amount of reverb and compression was used to add finishing touches to the overall production.

Delimitations

While this topic crosses over into popular styles of guitar playing, the focus of this project and document will remain on the classical guitar repertoire. Tunings from popular styles

that may be effective for future compositions, however, such as variants of standard and dropped D tuning found in rock and heavy metal (E-flat or D-standard and dropped C or dropped B), as well as the various open tunings used in folk and blues music to facilitate the use of slides (open D or G, for example), will be briefly mentioned.

The discussion of the repertoire emphasizes passages and relationships that are inherent to the relevant tunings and provides a clear example of their usage. A complete formal or tonal analysis of each work is not part of this study. The index of pieces in Appendix B offers a wide selection of repertoire from both well-known and lesser-known composers. The index provides a broad representation of the literature, though it is not an exhaustive overview.

Organization

This document contains four chapters. The second chapter provides a brief history of tuning and the associated problems for the guitar and its forebears. The initial discussion of alternate tunings stems from the modern guitar's predecessors and the various tunings employed that evolved into the current "standard tuning," [EADGBE]. This includes lute, vihuela, four- and five-course guitars, as well as extended range harp guitars with as many as ten or eleven strings. These pieces often require some type of alternate tuning to transcribe for the modern guitar, and this serves as a starting point for the discussion of original compositions of the late 19th and early 20th century that use scordatura tunings.

Chapter 3 discusses each piece on the CD. This section includes score examples of difficult passages, composer and performer insights into the individual pieces, and performance practice advice for dealing with the tunings. Each recorded piece has been examined to find specific examples of the usefulness of its respective tuning (e.g. passages or chords that are problematic or impossible in standard tuning), as well as potential limitations, such as reliance on

open strings, difficult chord shapes, or awkward scalar figures as a result of the altered intervals between strings.

Chapter 4 concludes the document and introduces other tunings that could be pulled from popular styles, such as the “new standard tuning” developed by Robert Fripp, for future additions to the repertoire. This chapter also serves to introduce the glossary and index of repertoire in the appendix. The appendices offer a glossary of terminology used in the document and an index of tunings with representative pieces from the repertoire.

The Recording

The CD is organized to progress from single-string alterations to more complicated uses of scordatura featuring several string changes, and finishes with pieces that feature a change of tuning across movements or within the same movement. Below is the program for the recording, including the tuning for each piece and the durations of each track:

1. Luis de Narváez – *Cancion del Emperador* (Lute tuning/3=F-sharp) – 3:21
 2. Dusan Bogdanovic – *Mysterious Habitats* (6=F) – 3:13
 3. Joaquín Rodrigo – *Invocación y danza* (dropped D tuning) – 8:20
 4. Rainer Brunn – *Elemente – Wasser* (6=C-sharp) – 2:29
 5. *Elemente – Luft* (6=C-sharp) – 2:01
 6. *Elemente – Feuer* (6=C-sharp) – 2:40
 7. *Elemente – Erde* (6=C-sharp, 3=G-sharp) – 3:00
 8. Eduardo Sáinz de la Maza – *Habanera* (dropped D/G) – 3:11
 9. Andrew York – *Sunburst* (double dropped D) – 3:36
 10. Toru Takemitsu – *Equinox* (other/6=E-flat and 2=B-flat) – 6:21
 11. Carlo Domeniconi – *Koyunbaba* (open C-sharp minor tuning) – *Moderato* – 3:07
 12. *Koyunbaba – Mosso* – 1:09
 13. *Koyunbaba – Cantabile* – 2:43
 14. *Koyunbaba – Presto* – 4:16
 15. Traditional (arr. J. Sutherland et al) – *Simple Gifts* (dropped D/G, D to C mid-piece) – 2:51
 16. José Luis Merlin – *Cinco Canciones de amor – Cancion del caminante enamorado* (standard) – 2:17
 17. *Cinco canciones de amor – Cancion del caminante solitario* (standard) – 2:08
 18. *Cinco canciones de amor – Cancion de cuna para un soldado muerto* (dropped D) – 3:08
 19. *Cinco canciones de amor – La quena rota* (dropped D) – 3:26
 20. *Cinco canciones de amor – Cancion de todos los caminantes* (dropped D/G) – 2:45
- Total time** – 67:07

The program was chosen with both aesthetic and organizational aspects in mind. The categorization of tunings provides a logical breakdown of all the tunings used on the recording, providing easy transitions for the discussion. Within each section, consideration was given to the flow of the program. The opening Narváez and Bogdanovic pieces offer a light introduction to the recording and are the first examples of single string alteration. As dropped D tuning is a more common alternate tuning, Rodrigo's *Invocación y danza* was chosen as an exemplary use of the tuning and offers the first virtuosic piece on the CD. Rainer Brunn's *Elemente* is his first suite, and the shorter movements offer a nice contrast to the single movement Rodrigo piece, while still providing another large-scale work.

Habanera and *Sunburst* follow and open the section on multiple string alteration. These two short pieces have their own unique characteristics, and give the listener a chance to reset after the preceding longer works. Takemitsu's *Equinox* closes this section, offering a more gestural approach and a more saturated use of dissonance than the other pieces on the program. Featuring the most alterations, Domeniconi's *Koyunbaba* is another suite of pieces that gives the listener a longer look at the possibilities and resonances found in its tuning.

The final section features two pieces that contain multiple tunings. *Simple Gifts*, by John Sutherland, changes during the piece (while playing), and Merlin's suite uses three different tunings across its movements. *Simple Gifts* was chosen partly to showcase the unique "on the fly" alteration, as well as to include some of Sutherland's work in my capstone project. Merlin's five pieces offer a tuneful close to the program, as well as an exciting closing track with its *rasgueado*-featured finale.

CHAPTER 2

HISTORY OF STANDARD AND ALTERNATE TUNINGS OF THE GUITAR

To begin the discussion on the selected repertoire, it will be helpful to establish what standard tuning means, so that non-guitarists approaching the study have a basis for comparison. Generally, when referring to the six strings of the guitar, the numbers 1 through 6 are used to represent the highest to lowest pitched strings. When mentioning various tuning systems, the normal method for referring to the pitches of the strings fall in order from lowest to highest pitch. What is currently used as standard tuning for the instrument then, would be listed [EADGBE], listed in ascending order from the 6th to 1st strings.

As it pertains to this topic, the development in the history of tuning begins with the standardization of the 6-course lute and vihuela traditions, which used the tuning [GCFADG].¹ This tuning is based predominantly on perfect fourths, with a single major third. This tuning is comparable to the guitar, though the third is found a string lower than on the guitar. Referring to the evolution of the 6 string classical guitar out of the 4- and 5-course traditions, Graham Wade claims “the progressions by which the guitar became settled in six single strings are too convoluted to chart with certainty.”² As the instrument was evolving in the late 18th and early 19th centuries, experimentations in tuning followed with it, so it is difficult to track the specific codification of the E based tuning we use today.

¹ Harvey Turnbull, et al, "Guitar," *Grove Music Online/Oxford Music Online*, Oxford University Press, accessed April 20, 2015, <http://www.oxfordmusiconline.com.proxy-remote.galib.uga.edu/subscriber/article/grove/music/43006>.

² Graham Wade, *A Concise History of the Classic Guitar*, Pacific, MO: Mel Bay, 2001, 65.

In lute music, the term *cordes avallées* is used for the lowering of a single course, typically the lowest of the 16th century lute.³ These tunings were used primarily to expand the range of the instrument. Though this term is not typically used to refer to modern guitar tunings, the comparison to dropped D—or the variants dropped C-sharp and raised F—is clear, and may have evolved from that tradition. Pieces in more complex scordatura tunings were widespread in lute and baroque guitar traditions of the 17th and 18th centuries, where sources indicate about twenty variants in the 5-course guitar literature.⁴ This experimentation began to wane as standard notation gained favor over tablature, which was an important tool for disseminating compositions based on scordatura.

Modern guitarist composers have found two solutions to the question of scordatura. Domeniconi's *Koyunbaba* features the use of two staves in the score: one for the true, or sounding, pitches, and the second which represents pitches as they are played, ignoring the re-tuning of the instrument.⁵ While this is unwieldy at first, the player can use both staves to gather the necessary information to perform the piece, and it is easier than transposing the fingerings in the new tuning. The second method involves the combined usage of standard notation (at pitch) with a tablature staff, more commonly used by guitarists not of the classical tradition. The tablature staff is a visual representation of the 6 strings, with numbers to indicate the frets on which to play.⁶ Both styles of notation relate back to the Renaissance and Baroque usage of tablatures, though the systems have their differences in that the focus remains on where the player frets specific notes, but not necessarily giving a representation of pitch. The two modern

³ David Boyden, et al "Scordatura," *Grove Music Online/Oxford Music Online*, Oxford University Press, accessed April 20, 2015, <http://www.oxfordmusiconline.com.proxy-remote.galib.uga.edu/subscriber/article/grove/music/41698>.

⁴ Ibid.

⁵ Both of which are written an octave higher than they sound, which is the normal transposition in guitar notation.

⁶ This can be seen in Jeffry Hamilton Steele's piece, *Vessels*, which uses DADGAD tuning.

systems, with their inclusion of a sounding pitch staff, attempt to bridge that gap, giving the performer both sets of information.

In his treatise on instrumentation, Hector Berlioz includes a section on the guitar, stating:

One can hardly...without playing the guitar, write for it pieces in several parts, containing various passages, and introducing all the resources of the instrument. In order to form an idea of what the best performers are able to produce in this way, the compositions of such...guitar players...should be studied.⁷

In the scope of scordatura music for guitar, this statement still holds true. Much of the music recorded for this project comes from guitarist-composers, the exceptions being Rodrigo and Takemitsu. While the following performance notes on the selected repertoire have a strong performance-based background, they are also intended to give the non-performer insight into the use of these tunings. At the beginning of the 20th century, Andrés Segovia took on a responsibility to foster the repertoire of the guitar by enlisting non-guitarists to write music for the instrument—in part to increase the instruments viability, or as Segovia phrased it, “to revindicate the guitar.”⁸ So to align Segovia’s quest with the suggestion of Berlioz, a closer look at the scordatura repertoire serves to inspire and inform those interested in non-standard tuning applications on the guitar.

⁷ Wade, *A Concise History of the Classical Guitar*, 87.

⁸ Ibid. 109.

CHAPTER 3

DISCUSSION OF THE RECORDED REPERTOIRE

Luis de Narváez – *Cancion del Emperador*

To open the CD, Luis de Narváez’s intabulation of Josquin’s chanson “Mille Regretz” introduces what is commonly referred to as “lute-tuning.” As is the case with this piece, the lowered third string (down one half-step to F-sharp) attempts to reproduce the string intervals of the vihuela, which was tuned in the same way as the lute. The instrument Narváez would have been writing for was tuned in fourths with one major third—the same as the modern guitar—but this major third was between the fourth and third strings (F and A) on the vihuela, as opposed to the third and second strings (G and B) on the guitar.⁹ Emilio Pujol states in the performance notes that this tuning change allows the “disposition of the notes” to be comparable to the vihuela, and avoids harmonies that would be “out of tune or even unplayable.”¹⁰

Figure 1 below is an example of the tablature from Narváez’s third book from *Los seys libros del Delphin de musica*, which uses the Italian lute tablature number system. In this tablature, the lowest line represents the highest pitched string.¹¹ Re-tuning the guitar then, to

⁹ Emilio Pujol, *Anthology of guitar music from old tablaturas*, (Germany: B. Schott’s Söhne, 1956), iii.

¹⁰ Ibid.

¹¹ IMSLP, s.v. “Los seys libros del delphin,” accessed October 6, 2015, [http://imslp.org/wiki/Los_seys_libros_del_delphin_\(Narvaez,_Luys_de\)](http://imslp.org/wiki/Los_seys_libros_del_delphin_(Narvaez,_Luys_de))

compare to the intervals of the vihuela, makes reading and transcribing from this source more accessible.



Figure 1, Narváez - *Los seys Libros del Delphin* - *Cancion del Emperador*, Track 1, 0:00-0:10

For the most part, this particular piece is playable in standard tuning. Certain passages become more difficult without the open F-sharp, but others require the altered tuning to preserve the voicing and duration of chords that support the melody. Measure 43 is one such example, where the C major chord shape must be held while the melody dips down to the open F-sharp. In standard tuning, this F-sharp would be played on the fourth string and interrupt the whole note E below it.



Figure 2, Narváez - *Cancion del Emperador*, mm. 41-43, Track 1, 1:40-1:47

The chord alternation at the end of the piece falls in line with the “impossible” chords Pujol refers to in the preface of his collection. In this case, however, it is not so much that the individual chords—B minor and E minor—are impossible, rather that alternating between them is not ideal without the scordatura tuning. This particular voicing of the B-minor chord, first seen

in m. 77, is playable in standard tuning with the root on the sixth string, but alternating between this shape and the open E minor chord is not nearly as smooth as the transcribed version in lute tuning.

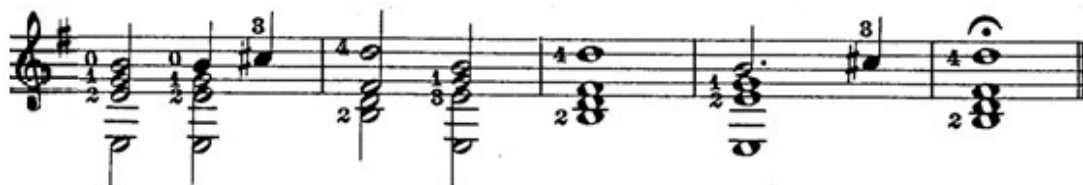


Figure 3, Narváez - *Cancion del Emperador*, mm. 76-81, Track 1, 3:00-3:16

Though this is a transcription, the scordatura used in this piece is an ideal stepping stone for examining the use of alternate tunings in the repertoire. Examining the transcription of *Cancion del Emperador* has shown musical ideas that depend on the tuning to be properly executed, so looking at the following original compositions that were composed specifically for alternate tunings will perhaps show what is unique about each tuning.

Dušan Bogdanović – *Mysterious Habitats*

Composed in 1994, *Mysterious Habitats* is a piece that showcases Bogdanovic's interest in jazz and popular music. Of the piece, Bogdanovic specifically cites François Couperin and Sting as possible influences, saying the "propulsive rhythmic quality reflects the[m] both."¹² The raised F scordatura of the sixth string is uncommon, but is an interesting addition to the program for its ease of switching to a different tonal center, F, which is not regularly heard on guitar.

¹² Dusan Bogdanovic, Liner notes to *Like a String of Jade Jewels* (Dynamic S2028, 1998), 8.

James Reid described the piece as “hypnotic” after hearing it in 1996 at the Portland Guitar Festival, in part due to the ostinato around which the entire piece is built.¹³ The piece starts with a simplified version of the ostinato, presenting just the middle voice, and progressively adds the bass voice until the full ostinato is stated in m. 6. The ostinato, seen in figure 4, is based around the F on the open 6th string. It’s not until the melody enters in m. 7 that the modal nature of the piece begins to come through (fig. 4). The B-naturals throughout the opening suggest F Lydian.



Figure 4, Bogdanovic - *Mysterious Habitats*, mm. 7-9, Track 2, 0:26-0:33

For harmonic interest, small pockets of Mixolydian and Aeolian (on F) are presented in m. 15b and mm. 22-23, respectively. In m. 29, the ostinato is shifted up a third to A. However, to draw more attention to this tonal shift, Bogdanovic also introduces the Dorian mode (on A) for the section marked *brighter*, which may refer to a timbre indication for the right hand. The use of these modes over the ostinato adds to this sense of hypnotism and rhythmic propulsion, as there is no clear drive to cadence at any point. This is reinforced by the end of the piece, as the tempo slows and the final harmonics ring over the open F of the 6th string, alternating between F-sharp and E. The final sonority, (0127), leaves the piece in a state of suspension, perhaps suggesting conflicting, or simultaneous, modes between the halting ostinato (in Lydian) and the melody in harmonics—if the F-sharp were respelled as G-flat—in F Phrygian.

¹³ James Reid, “Portland Guitar Festival 1996,” *Soundboard* v. 23 no. 1 (Summer 1996): 71.

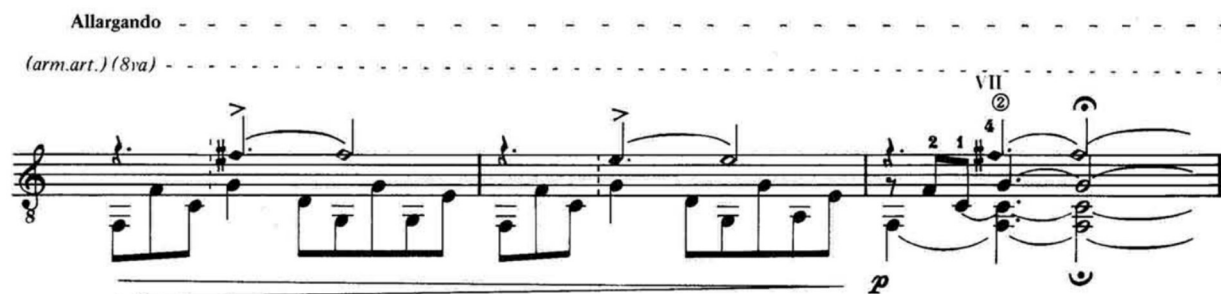


Figure 5, Bogdanovic - *Mysterious Habitats*, mm.51-53, Track 2, 2:50-3:04

While it is outside of the scope of this project to find every scordatura piece, it is worth mentioning the use of this tuning by Fernando Sor, a major composer in the guitar repertoire. Sor's *Fantasie no. 3, op. 10* features an introduction and theme with variations using the same tuning. For the performer wishing to maximize the use of individual tunings in performance, while including a larger work from a major composer, this piece would present an interesting contrast to Bogdanovic's more modern, pop-infused idiom.

Joaquín Rodrigo – *Invocación y danza*

Dropped D is the most common scordatura found in the repertoire. The index of repertoire in Appendix B of this document attests to its ubiquity in the repertoire, with close to seventy entries by twenty-six composers spanning from the early 1800s to present. For this reason, Rodrigo's virtuosic *Invocación y danza* was chosen, as it stands out as a masterpiece of the 20th century guitar repertoire.¹⁴ Though it premiered in 1961, the piece was not widely performed until Julian Bream recorded it in 1983.¹⁵ Among the virtuosic elements employed in the piece are artificial harmonics with an accompanying bass voice, rapid arpeggios that required

¹⁴ Graham Wade, Liner notes to *Rodrigo: A portrait*, 57.

¹⁵ Graham Wade, *A Concise History of the Classic Guitar*, 152.

a “sweeping” motion between the first finger and thumb of the right hand, melodies and chord shapes that leap up and down the fingerboard, and extended tremolo sections and rasgueados that showcase the flamenco inspirations of the piece. There are few single movement works in the literature that incorporate the breadth of techniques and musicality required by Rodrigo’s piece.

Here, the tuning seems to serve primarily to extend the range of the instrument. The open D and the harmonic E that open the piece bring this to the forefront, separating the bass voice and the treble voice in timbre, emphasizing the darker sound of the lowered 6th string against the bell-like harmonics.



Figure 6, Rodrigo - *Invocación y danza*, mm. 1-3, Track 3, 0:00-0:14

Because of the perfect fifth between the 6th and 5th strings, dropped D allows barre chords containing fifths on the bass strings to be easily accessible and moveable. With a single finger holding this part of the chord down, a wide variety of harmonies are now available and easily transposed. The figure in m. 41 (Figure 7) could be seen as a G half-diminished 7th chord with the E in the middle voice acting as a lower neighbor, or as an Em9 (flat 5th); the strong emphasis on G supports the former analysis. After the intensity of the sweeping arpeggios, this figure returns at the *Tempo Primo* in m. 62, transposed down a perfect fourth to D. However, the upper voice is instead transposed up a 5th, expanding the voicing of the sonority and again showcasing the expanded range of the tuning.



Figure 7a, Rodrigo - *Invocación y danza*, mm. 41-42, Track 2, 2:24-2:28

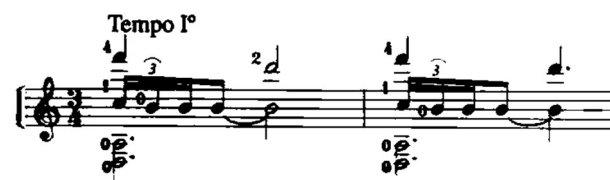


Figure 7b, Rodrigo - *Invocación y danza*, mm. 62-63, Track 2, 3:33-3:36

The eponymous dance portion of the piece, specifically the *polo*, is another flamenco element brought into the music.¹⁶ Though it receives some variation and elaboration on its recurrences, the theme is presented in three different keys throughout the piece, made more playable by a similar use of a transposed barre. The theme is presented in the keys of B minor, F-sharp minor, and finally in D minor as the piece comes to a close. Similarly to the gesture in mm. 41, Rodrigo first presents the dance in a barred position—the first two key areas in this case—before presenting the theme in D utilizing the open strings. For the section in D minor, I chose to use the Alirio Diaz edition and edit the bass line of the third example (mm. 176-179) by dropping the voice down an octave to the open string where appropriate. The version below is from the Pepe Romero edition, which was the primary score used while studying the work.



Figure 8a, Rodrigo - *Invocación y danza*, mm. 67-70, Track 3, 3:49-3:53

¹⁶ Jorge Luis Pastrana, "A Performance Edition with Critical Commentary on Joaquín Rodrigo's *Invocación y Danza*, (DMA diss., University of Arizona, 2001), 20.



Figure 8b, Rodrigo - *Invocación y danza*, mm. 105-108, Track 3, 4:32-4:36



Figure 8c, Rodrigo - *Invocación y danza*, mm. 176-179, Track 3, 6:43-6:49

For this piece, compromises are often made between the Diaz and Romero fingerings, as the editions vary in a number of ways. Rhythmic variations, alternate voicings, and even some melodic content differ between the available editions. In some ways this adds to the difficulty and allure of performing the work, as the player must navigate multiple sources to work through some of the intricacies of the piece.

Rainer Brunn – *Elemente*

Rainer Brunn is a classical and blues guitarist from Bamberg, Germany. According to his page on the Edition Margaux website, Brunn studied guitar at the Meistersinger Conservatory in Nuremberg, and later studied composition privately with Carlo Domeniconi in 1992.¹⁷ His piece, *Elemente* (1989), predates his study with Domeniconi by three years, but may have been influenced by *Koyunbaba* (1985) in terms of the tuning. While Brunn doesn't use the open C-sharp tuning of Domeniconi's piece, the use of the low C-sharp on the 6th string is rare in the literature and it is difficult to avoid the comparison.

¹⁷ Edition Margaux, s.v. "Brunn, Rainer," accessed October 3, 2015, http://www.edition-margaux.de/verlag/composers.php?language=en&authors_id=6

Despite the tuning similarity, the aesthetics of Brunn's piece differ from Domeniconi's quite a bit in compositional style and the music finds its own voice. Rather than the droning octaves and fifths inherent to the open C-sharp tuning, the dropped C-sharp tuning offers an easier implementation of counterpoint against the melodic line. Because of the single alteration, standard scoring is still easily readable compared to the double staved notation needed for *Koyunbaba*.

Each movement of *Elemente* is titled after one of the four elements—Water, Air, Fire, and Earth. Water and Air, marked *Tranquilo* and *Andantino* respectively, both suggest the calmer aspect of their elemental natures. *Wasser* seems to float serenely while *Luft* seems to suggest a wind that rises and falls, its melody featuring falling motions that lift higher with each occurrence, climaxing at the high E in m. 18.



Figure 9, Brunn - *Elemente - Luft*, mm. 15-18, Track 5, 0:33-0:43

Feuer, on the other hand, starts very softly with minimal activity. Slowly, the syncopated melodic cell over a pedal C-sharp develops into fuller and more dissonant chords while the dynamics indicate a slow crescendo. The rhythmic activity and dynamics peak at m. 16 with the *fortissimo* 16th note figure over the droning bass. The process then reverses as the cell is stripped back down to the opening gesture. The palindrome-like form, with the high point in the middle, suggests a fire starting from its first light, growing to its highest blaze, and then gradually burning out.

The final movement uses an additional tuning alteration by raising the 3rd string one half-step to G-sharp. This gives the option of an open string perfect 5th with the already altered sixth string—plus an octave—for harmonic purposes. Up to this point in the piece, this stable interval has not been possible at the tonic level. Perfect fifths, and the inversion of a fourth, seem to be particularly abundant in this movement, perhaps bringing to mind a more ancient musical aesthetic that reflects on the age of the Earth. The closing movement returns to the more contrapuntal style of the first two, though it features a more extensive use of scales, such as those in mm. 13-14.

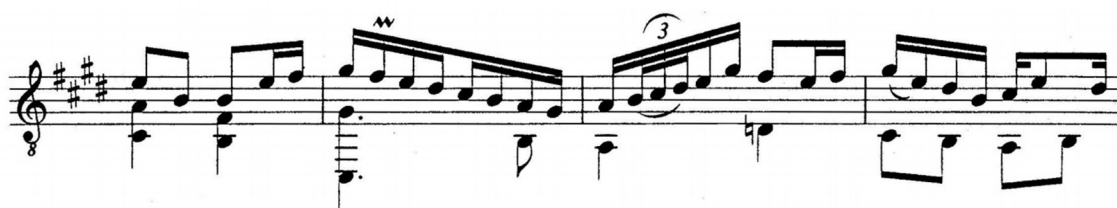


Figure 10, Brunn - *Elemente - Erde*, mm. 12-15, Track 7, 0:30-0:41

While Brunn's *Elemente* is not necessarily part of the standard repertory, it may be useful to the performer programming Domeniconi's *Koyunbaba* because it offers the chance to gradually prepare the instrument for open C-sharp minor, starting with the 6th string and then adding the 3rd by the end of the work. As the section on Domeniconi's piece will discuss, there are tuning stability hurdles to overcome when programming *Koyunbaba*. Brunn's *Elemente* may offer some relief to the tuning stability when played before *Koyunbaba*. This logistical kind of programming choice is one that is worth considering, especially if it will smoothly transition from one piece to the next.

Eduardo Sáinz de la Maza – *Habanera*

While there isn't a succinct name for the tuning, dropped D/dropped G tuning (DGDGBE) is very close to what is known as Open G, or Spanish, tuning (DGDBGD), employed by steel string and electric guitarists. Rather than an open triad, the unaltered 1st string creates a more harmonically rich E minor 7th chord, albeit in third inversion. As is the case with all open type tunings, this 7th chord is playable as a single bar anywhere on the neck, allowing many options for harmonizing a melody with extended chords.

In the case of *Habanera*, it may be more helpful to look at the open tuning as an added tone chord, rather than a 7th chord. The A section of the piece (mm. 1-24) is built on an alternation between two major chords; the roots are G and A-flat—the chord built on the lowered 2nd scale degree is idiomatic of the Phrygian modal inflections of Andalucía—and each is colored by chord extensions that don't affect their function.¹⁸ In jazz and pop music, these two chords might be labeled as G^{add13} and A-flat^{add11} (figure 11a). This could be seen as an influence of jazz and French impressionism, both of which helped Eduardo S. de la Maza find his voice as a composer in this piece from the early part of his career.¹⁹ The planing chords found in jazz—as well as the impressionistic music of Debussy—can be seen at the end of the piece as the open G^{add13} is barred on the 1st and 3rd frets in the closing gesture of the piece (figure 11b).



Figure 11a, E. Sáinz de la Maza - *Habanera*, mm. 1-4, Track 8, 0:00-0:09

¹⁸ Andalucía is a region of Spain's southern coast and has a rich tradition of flamenco music, which influenced the classical repertoire

¹⁹ Bolshoy, Daniel. Liner notes to *Eduardo Sainz de la Maza: Guitar Works*, 15.



Figure 11b, E. Sáinz de la Maza - *Habanera*, mm. 40-44, Track 8, 2:49-3:06

On more of a surface level, this tuning allows for an easily accessible tonic/dominant relationship between the low G on the 5th string, and the 6th and 4th strings, both tuned to D. This open string interplay allows the habanera rhythm to be played easily on the open strings while supporting the melody.

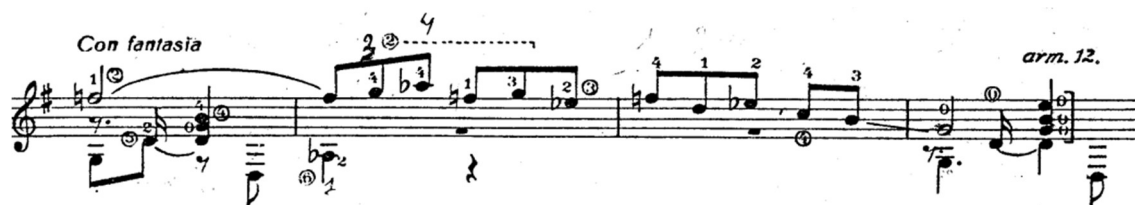


Figure 12, E. Sáinz de la Maza - *Habanera*, m 5-8, Track 8, 0:09-0:18

The A-flat is fretted higher on the 6th string as a result of the tuning, also allowing greater flexibility of range and tonal characteristics. For example, if m. 6 was played in standard tuning, the melody would need to be played on the first string, giving it a brighter tone color. As it is played in the piece—on the 2nd string—the player can achieve a darker sound, as well as a more robust vibrato, by playing the melody in a higher position.

Andrew York – *Sunburst*

Sunburst features a tuning that is rare in the classical guitar repertoire, but one that is more common in rock and folk music. Led Zeppelin, The Doobie Brothers, Neil Young, and

many other artists have used double dropped D tuning (DADGBD) in their respective genres. York's background in folk, rock, and jazz styles could be seen as an inspiration for bringing the tuning to the repertoire. David Tanenbaum suggests that this effort of finding and working in a niche by some guitarist-composers bridges the gap and makes them "indistinguishable from some New Age guitarists," thus widening their potential audience.²⁰ As common as dropped D is in the literature, it is surprising that this alternate tuning has been used so little.

This tuning, like the raised F tuning of *Mysterious Habitats*, introduces an extra third between open strings. On the treble strings, this tuning allows a major third to be barred, and a minor third would be accessible with the D7 chord shape (from standard tuning). Bringing the strings closer intervallically introduces easier cross-string clusters as well. Specifically, this tuning allows you to easily fret a three-note cluster as close as two consecutive half-steps (such as D-sharp—E—F). This cluster is playable in standard tuning only by using the open 1st string, but in double dropped D, this becomes a movable chord shape that would provide the composer/arranger more flexibility in note choice for such a gesture.

These cross-string seconds are employed quite often in *Sunburst*, though in a more tonal context, and could be considered as an integral device in the piece. The opening gesture features a three-note scalar ascent on the treble strings (B—C-sharp—D), moving in order from the 3rd to 1st strings. Measure 9 contains two different sets (B—C—D) and the descending (E—D—C), played across the strings out of order, 2-3-1 and 2-1-3 respectively.

²⁰ Tanenbaum, Cambridge companion, 204



Figure 13, York - *Sunburst*, mm. 9-12, Track 9, 0:12-0:18

Tyler suggests the idiomatic playing of scales on as many strings as possible was a way to increase the resonance of the early guitar.²¹ In this piece, it would seem a similar goal is achieved by playing these scalar figures across three strings.

The closing of the B section, starting at m. 34, heavily incorporates the open (and fretted) thirds available on the treble strings. Measures 36-37 show two different uses of this device (fig. 14). The first is an ascending scalar figure, accented by the thirds available on the open strings, and the second is an easily executable neighbor (and double neighbor) figure in parallel thirds that include open and fretted thirds on both pairs of treble strings (3-2 and 2-1).



Figure 14, York - *Sunburst*, mm. 36-37, Track 9, 1:25-1:29

The opening of the third section in m. 43 augments the initial three-note ascent (B—C-sharp—D) while the virtuosic slurs on the bass strings propel the section forward. The open string G major triad provides an easily accessible harmony to accompany the continued bass string slurs in mm. 52-53. In measures 61-63 a repeated two measure idea features the only use

²¹ Tyler, Scordatura, Oxford music online

of the barred triad in the piece. Here the slurs move from the bass voice to the treble, and the open G major triad is transposed by the half-barre that slurs onto the 7th fret, moving the triad a perfect fifth higher to D major.

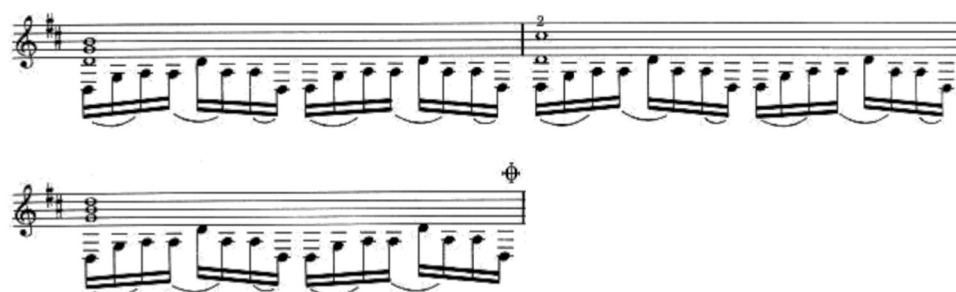


Figure 15a, York - *Sunburst*, mm. 43-45, Track 9, 1:38-1:43



Figure 15b, York - *Sunburst*, mm. 52-53, Track 9, 1:51-1:53



Figure 15c, York - *Sunburst*, mm. 61-63, Track 9, 2:02-2:06

Toru Takemitsu – *Equinox*

Of the tunings used in this project, *Equinox*, tuned [E-flat–A–D–G–B-flat–E], stands out for its use of the tritone between the 6th and 5th strings, as well as the 2nd and 1st strings. These open string sonorities are central to the piece, providing the backdrop for much of the musical language. To introduce the piece at its premiere, Takemitsu wrote, “During the equinox the length of day and night are the same and the title has some relationship to musical proportions

and the harmonic pitch interval within the composition.”²² This could be referring to the recurring ascending and descending arpeggiated theme, seen below (fig. 16), that Broman suggests “indicate[s] the circular motion of the planets or the recurring cycle of the seasons.”²³ It could also be referring to the equal division of the octave that occurs at the tritone, which is found often in the piece.

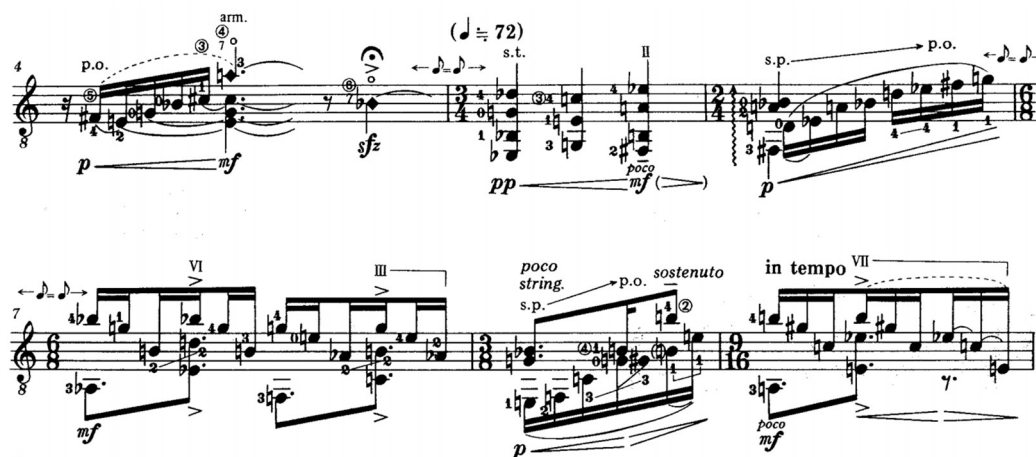


Figure 16, Takemitsu - *Equinox*, mm. 4-8, Track 10, 0:28-0:53

Along with the open string sonorities, Takemitsu also employs natural harmonics to further take advantage of the altered tuning. The B-flat harmonic in m. 4, were it played as an artificial harmonic, as opposed to naturally on the 6th string, would not sound as resonant or last nearly as long as the natural harmonic available in this tuning. These open string and natural harmonics, and how they are interlaced with patterns on the unaltered strings, give this piece a unique sound palette.

As the tuning alterations of this piece are uncommon, it takes considerable patience by the performer to learn the piece. A single string scordatura using an uncommon pitch would

²² Graham Wade, liner notes to *Toru Takemitsu Complete Original Solo Guitar Works*, Naxos 2014, 3.

²³ Per Broman, liner notes to *All in Twilight*, Grammofon ABS 2000, 7.

afford an easier reading transition, such as lute tuning, but two or more at once requires careful study to ensure the non-standard chord shapes are learned correctly. Other factors, as suggested by the *Grove* article on Takemitsu's style, include "the suspension of regular metre and an acute sensitivity to register and timbre," as evidenced in his particular choice of tone colors, marked *s.t.*, *s.p.*, and *p.o.* in the example above.^{24,25} Tanenbaum says Takemitsu's music "uses silence and color, particularly exploiting the darker range of the spectrum."²⁶ With its tritone inclusive tuning, *Equinox* surely falls in this darker range, and holds an interesting place in the repertoire.

Carlo Domeniconi – *Koyunbaba*

Of the pieces recorded in this project, *Koyunbaba* features the most string alterations. In the notes provided by the composer, the piece is notated and may be played in open D minor tuning (DADADF) or the recommended (and more often performed) open C-sharp minor, a half-step lower. Based on the recordings of Antigoni Goni and John Williams, I chose to perform this piece in C-sharp minor because of the resonant nature of the lower tuning (as D based tunings are abundant in the literature) and for practicality.

In performance, *Koyunbaba* is a piece that needs heavy consideration in terms of programming in order to overcome the practical limitations of the instrument. Particularly, one must allow time to retune the guitar, stretch the strings, and tune again in hopes of allowing the tuning to settle. Lowering the 6th string a minor third to C-sharp and raising the 2nd string a whole step to C-sharp is problematic because these strings will have opposite tendencies—the 6th will

²⁴ Yoko Narazaki, and Masakata Kanazawa, "Takemitsu, Tōru," *Grove Music Online*, Oxford Music Online, Oxford University Press, accessed October 10, 2015, <http://www.oxfordmusiconline.com.proxy-remote.galib.uga.edu/subscriber/article/grove/music/27403>.

²⁵ These refer to tone colors played by the right hand: *sul tasto* (over the fingerboard), *sul ponticello* (near the bridge), *position (or play) ordinary* (over the sound hole)

²⁶ Tanenbaum, *The Classical Guitar in the Twentieth Century*, 193.

creep up in pitch and the 2nd string will drop over time creating distastefully out of tune octaves and 5ths as the player progresses through the piece. This tendency is present in both forms of the tuning (D and C-sharp), but is further exacerbated in open D because of the raised 1st string. The minor third between the 2nd and 1st string will also tend to drop, making it difficult for the performer to identify the offending string when making adjustments mid-piece. For this reason, I prefer the C-sharp tuning because the 1st string remains unaltered (E), while the octaves and perfect 5ths on the lower strings are easier to tune while this string is stable.

Of course, the alternative approach, when available, is to have a second guitar for the performance. Here, the performer must be comfortable switching instruments, as each guitar has its own unique qualities, both in terms of sound and in physical response. For example, as the performer progresses through a program, the instrument is warmed by their body heat. If there is a second instrument off-stage (a “*Koyunbaba* guitar” in the proper tuning for this piece), switching to it would have the performer starting this process over again, warming the new guitar up over the course of the piece, and then switching yet again once the piece is over. The changing temperature of the instrument would naturally effect the tuning as the body of the guitar and its strings warm up over time, further reducing the stability of the piece. So it seems that no matter which tuning is chosen, or if a second instrument is used, there are some technical difficulties presented before the first note is even played.

For much of *Koyunbaba*, the melody is presented on either the 1st or 2nd strings while the lower strings offer accompaniment in the form of chord voicings and drones. Much of the first movement relies on the perfect 5ths in the bass strings for accompaniment, either by use of open strings or a barre, as seen below in figure 17. The melodic content then creates most of the harmonic interest as it clashes against the fifths or completes a triad.



Figure 17, Domeniconi - *Koyunbaba* - I, mm. 5-7, Track 11, 0:35-0:42

The second movement is built around arpeggios and droning open strings—as is the 3rd movement—again providing perfect 5ths for the melody to weave around. The ornamented ascending figure in mm. 5-6 of the second movement, as well as the descending gesture in the first movement (mm. 18-20), offers the first uses of scalar figures traveling across a single string. These two gestures are combined in the fourth movement, where the performer executes shifts covering an octave all the way up the neck and then shifts back down, covering a major ninth. Both of these gestures are accompanied by open string pull-offs and bass string drones (fig. 18).



Figure 18, Domeniconi - *Koyunbaba* - IV, mm. 7-15, Track 14, 0:10-0:21

One of the more technically demanding sections of this entire piece stems from the further evolution of this scalar gesture and begins in m. 53. In this section, the ascending/descending motive is reversed. As in the previous iterations of the gesture, it is again accompanied by open string pull-offs and drones. However, another layer is added that provides the extra difficulty. The scalar gesture starts at the 12th fret on the 2nd string and travels down to the 3rd fret, which by itself is not difficult, but a pedal point is added that requires the player to shift back to the 12th fret—on the 1st string—after each successive scale degree. These wide shifts are the most virtuosic use of this gesture, and provide a nice climax to the already energetic Presto (figure 19).

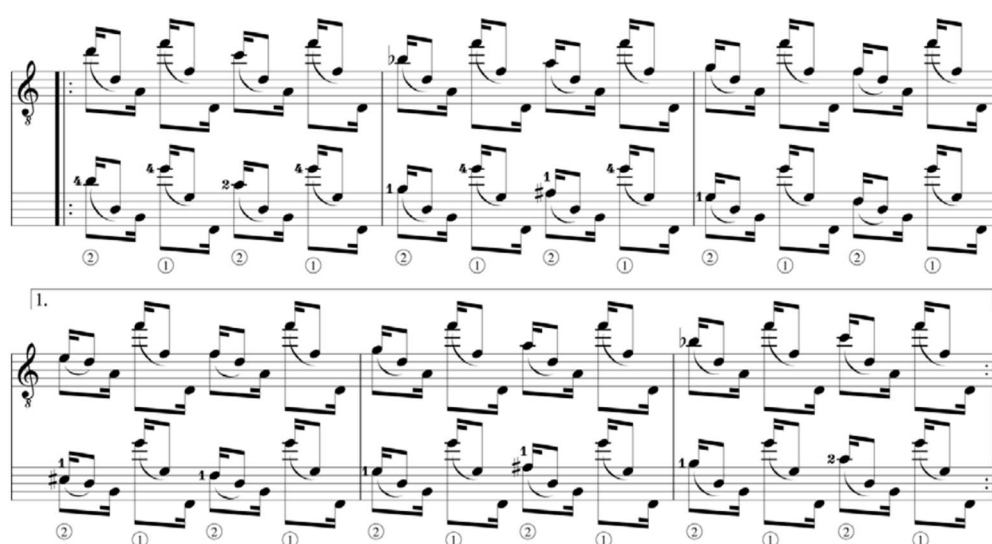


Figure 19, Domeniconi - *Koyunbaba* - IV, mm. 53-58, Track 14, 1:43-1:50

These gestures are all made possible due to the open tuning of the piece, which allows for the wide shifts to be accompanied by the use of open strings, both in the middle and lower registers.

Simple Gifts – Arr. Ravenscroft and Sutherland

This arrangement of the traditional Shaker tune is essentially a textural variation set, taking the melody through several of the most common guitar idioms. The tuning at the beginning of the piece is dropped D and dropped G, which supports the opening statement of the theme in G major with a perfect fifth between the 5th and 4th strings. The tambora effect opens the piece, softly droning the fifths as the phrase builds in intensity. This opening section is built on the drone accompaniment, mostly consisting of whole notes and half notes, until m. 23, where the melody is re-harmonized and moves toward a cadence.

The second variation features triplet arpeggios over the slower moving bass voice (again taking advantage of the open fifths). The melody is augmented, making room for the arpeggios to explore some new harmonic territory and further separate the variation from the opening. While there are some wide stretches for the left hand in this section, they are, for the most part, easily executed. The difficulty in this section falls mainly on connecting the chord shapes at the suggested tempo marking. The closing of the second section, and a push towards the key of D, does present a difficult chord shape in m. 47.

Preparing the modulation is an incomplete A7 chord with a low A in the bass. In standard tuning, this would be a fairly straightforward passage because the open 5th string in standard tuning—or even dropped D—would allow multiple fingering options and would be playable in multiple positions. In this tuning, however, the only option relies on an awkward stretch between the 2nd and 3rd fingers of the left hand if the performer is to let the bass ring for the full half note at the end of the bar. As with certain piano music, performers of stringed instruments are often at the mercy of the size and dexterity of the hands when it comes to difficult stretches and chord shapes. For example, the chord shape in measure 35 indicates a hinge barre over the 4th, 5th, and

6th strings, allowing the open G string to ring out (figure 20). This technique is employed in many pieces and is performable by many guitarists. Unfortunately, I cannot count myself among them, as the knuckle on my first finger does not bend backwards allowing the necessary space for the open G to sound. Practice, and a little creativity, is often the key to puzzles such as this, and the results can be vastly different from performer to performer.



Figure 20, Sutherland - *Simple Gifts*, mm. 34-35, Track 15, 0:57-0:59

The close of the arpeggio section—and the awkward A7—gives way to a contrapuntal rendering of the melody, and is perhaps reminiscent of Bach's species one counterpoint so often performed by amateur and professional guitarists alike. Compared to the sections that precede it, this setting of the melody falls easily under the fingers, and the new key offers a fresh take on the subject. After a relatively quick cycling through the AABA theme, the drones return yet again in m. 64, but on the repeat in m. 65, the performer is tasked with detuning the 6th string down another whole step to C. The right hand continues playing the bass strings, while the left hand detunes the string in the span of two beats (figure 21).



Figure 21, Sutherland - *Simple Gifts*, mm. 64-67, Track 15, 1:47-1:53

This on-the-fly tuning is atypical in the repertoire, but offers an interesting aspect to the piece. Each of the previous variations relies heavily on the use of open strings in the accompaniment, limiting the harmonic possibilities of the piece. Changing the open string at the end of the piece allows a new key area to be explored, now with the use of an open low C and the G on the 5th string. The initial setting of the tune, similar to other variations with a melody over the droning perfect 5ths, is made more interesting by the use of the low C. The ritard at the end of the statement signals the next idea, a slower, chordal setting of the melody. As with the arpeggio variation, this section features some odd chord shapes due to the now foreign tuning (CGDGBE), particularly the F and Em chords (figure 22). This final section abandons the droning accompaniment of much of the piece and, despite the difficult chord shapes, offers a satisfying close to the arrangement.



Figure 22, Sutherland - *Simple Gifts*, mm. 74-77, Track 15, 1:47-1:53

José Luis Merlin – *Cinco Canciones de Amor*

José Luis Merlin is a guitarist, professor, and composer. While his *Suite del Recuerdo* is often recorded and programmed by guitarists all over the world, there are many pieces in his output that have only been recorded by the composer himself. *Cinco canciones de amor* is one of those less recorded works, and fits well at the end of this project to showcase the variety of tunings often called for in a multi-movement piece. It is worth noting that this piece has also

been adapted and performed, by the composer, as a duo for flute and guitar, but the focus here will remain on the solo piece.

Across its five movements, *Cinco canciones...* uses three different tunings: standard (movements I and II), dropped D (III and IV), and Dropped D/G (V). The third movement, *Cancion de cuna para un soldado muerto*, is inspired by Bertold Brecht's poem "Legend of the dead soldier" [Die Legende vom toten Soldaten], according to Merlin's promoter.^{27,28} The movement opens with harmonics on the bass strings, producing a series of fifths and fourths in natural harmonics due to the dropped tuning. Played softly and fading away to *pppp*, this gesture opens and closes the movement with an effective use of the available harmonics.



Figure 23, Merlin - 5 *Canciones de amor* - III, mm. 9-12²⁹, Track 18, 0:18-0:28

The fourth movement, *La quena rota*, features a droning root-fifth motion between the low D string and the fifth string. This movement features an A section in D major, while the B section is in D minor—though the alternation between E-flat and E-natural gives a Phrygian quality to some of the passages. The suite's finale is a rasgueado-based movement that takes advantage of its dropped D/G tuning by using the bass strings as a strummed drone while various

²⁷ "III. Cancion de cuna para un soldado muerto – Jose Luis Merlin – Cinco Canciones de Amor." Youtube video description. Posted by Evgeniya Kirilyuk, May 25, 2014. <https://www.youtube.com/watch?v=VtcGfPntxg4>

²⁸ Kirilyuk is listed as Merlin's general manager on his official website – joseluismerlin.com/contacts, and was contacted to verify this information.

²⁹ The score does not reset measure numbers between movements, but for ease of study, I restart the numbering.

chord shapes are played on the treble strings. Similarly to the finale of the *Suite del Recuerdo*, this movement features many notational cues to assist in the performance of the rasgueado techniques. Whereas the rasgueados in *Carnavalito* from the *Suite del Recuerdo* are limited to a small section of the piece, *Cancion de todos los caminantes* presents more of a challenge for the player with less experience, or endurance, for such an extensive use of the technique. The technical reference in the front matter of the score is particularly helpful for reading the notation of the flamenco techniques less often seen in the classical repertoire (figure 24).

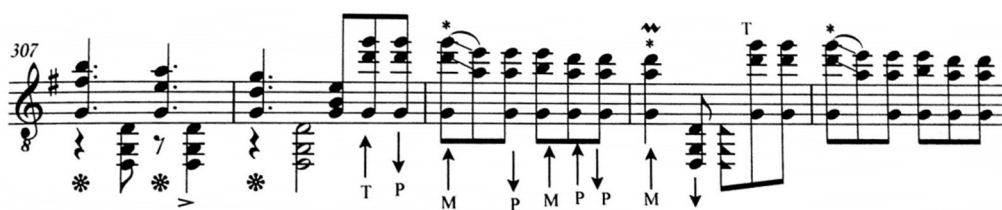


Figure 24, Merlin - 5 *Canciones de amor* - V, mm. 54-58, Track 20, 0:47-0:51

CHAPTER 4

CONCLUSION AND PREFACE TO THE APPENDICES

This document and the CD that it supports have explored a multitude of alternate tunings for the guitar, and given examples of the ways composers have used them. Each scordatura tuning holds its own unique characteristics, whether it is an expanded range, the inclusion of new intervals between the open strings, facilitating a specific musical idea not easily performed in standard tuning, or some combination of these features. The selected repertoire does not exhaust the potential of these tunings, so it remains fertile ground for further research. Hopefully, more performers will be inspired to explore less-performed repertoire, and composers and arrangers—specifically non-guitarists—will find new and creative ways to use these tunings, or some variation thereof, that could find a place alongside existing repertoire.

At the close of his article in *The Cambridge Companion to the Guitar*, David Tanenbaum suggests that “attending solo recitals consisting of music by guitarist-composers for other guitarists” is reminiscent of the pre-Segovia concert world of Tárrega.³⁰ If Segovia’s goal was to increase the scope of the guitar, expanding beyond this “guitarist-centric” world, we must reconcile the comments of Berlioz with this goal and find a middle ground between the performer-composer and the performer who inspires and encourages non-guitarists to write for the instrument. Since there is already a steep learning curve when writing for the guitar, these

³⁰ Tanenbaum, 205.

efforts should be expanded to the scope of scordatura literature, enabling further growth of the repertoire by making its idiosyncrasies more accessible.

The Glossary of Terms in Appendix A offers a guide to the non-guitarist approaching the document. As certain tunings have multiple names, or names that are not self-evident as to their alteration(s), this glossary can be a resource to both support this document and to assist in further exploration into the scordatura repertoire.

The Index of Repertoire that follows in Appendix B, though it is not an exhaustive effort, has gathered examples of the more common alternate tunings for the instrument, as well as pieces that use less traditional tunings. Repertoire from the recording is in bold-face type. For those looking to expand beyond the tunings found in the classical repertoire, perhaps using the scoring models of *Koyunbaba* or the tab inclusion of Jeffry Hamilton Steele can offer a way to include more extreme alterations, or to experiment with tunings found in more aural-based music, such as blues and rock music.

Swedish progressive metal band Opeth, on their 2005 album *Ghost Reveries*, used a variant of open D minor tuning (DADFAE) that could provide interesting possibilities in a classical context. Similarly, Robert Fripp's experiments with "new standard tuning," based on all-fifths tuning with the addition of a minor third (CGDAEG), challenges the player to think outside of normal patterns of chord and scale shapes, and would offer a tuning scheme more similar to the bowed-string family. It should be noted that this expands the range of the instrument in both directions, and, most likely, requires attention to the string gauges used by the performer. Information on transposition based tunings can also be found in Appendix A. While tuning all six strings down may be impractical for a concert, perhaps using variants or portions of these alterations would be a viable alternative for experimentation.

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APPENDIX A

GLOSSARY OF TERMS

Dropped D – The 6th string of the guitar is tuned down one whole step to D; also referred to as Drop D and Low D Tuning. (DADGBE)

Dropped D/G – The 6th string and 5th string of the guitar are tuned down one whole step each (DGDGBE)

Double Dropped D – The guitar is tuned to Dropped D (6th string down to D), and the 1st string is also lowered 1 whole step to D. (DADGBD)

Hinge barre – The player barres multiple inner strings with the same finger, in such a way that notes not affected by the small barre are allowed to ring.

Lute Tuning – The 3rd string is lowered one half-step to F-sharp. Used primarily for transcribing lute and vihuela music from the Renaissance and Baroque.

New Standard Tuning (NST) – Made famous by Robert Fripp, the tuning is based on fifths, instead of fourths, and contains one minor third. (CGDAEG)

Open C-sharp Minor – For *Koyunbaba*, the guitar is tuned to sound a C-sharp minor chord when the open strings are strummed. (C#G#C#G#C#E)

Open D Minor – The notated tuning of *Koyunbaba*, a D minor chord is sounded by the open strings. (DADADF)

Open G – The strings are tuned to an open G major chord. Also referred to as Spanish Tuning (DGDGBD)

Raised F – The 6th string is raised 1 half-step to F. This tuning is less common, and the name has been generated by comparison to Dropped D, for the ease of discussion.

Rasgueado – A percussive style of strumming that incorporates the fingers and thumb of the right hand, in different patterns, to create various rhythms.

Standard Tuning – The traditional tuning of the guitar, tuned in fourths with 1 major third. (EADGBE)

Tablature – First found in the Renaissance, this notation system for fretted instruments features a visual representation of the strings (six lines in the case of the guitar) and indicates fret numbers to be played by the performer, rather than showing pitches on a staff. This allows pieces to be learned quickly, in any tuning. Modern tablature sometimes includes rhythmic indications, but is often paired with a music staff to better show the rhythms and different voices within a piece.

Transposed Variants of Standard and Dropped D – Found in popular music, particularly rock and metal, these tunings are lowered, or dropped, to extend the lower range of the instrument. The same intervals are retained, with the name of the tuning referring to the starting pitch. Examples: D Standard (D G C F A D), C Standard (C F B \flat E \flat G C); Dropped C# (C# G# C# F# A# D#), Dropped B (B F# B E G# C#)

APPENDIX B

INDEX OF REPERTOIRE

Dropped D

Agustin Barrios	<i>Aire de Zamba</i> <i>Allegro sinfonico</i> <i>Cancion de la Hilandera</i> <i>Capricho espanol</i> <i>Cordoba</i> <i>Julia Florida</i>
Dusan Bogdanovic	<i>Jazz Sonatina</i>
Leo Brouwer	<i>Deux Themes Populaires Cubains</i> <i>El Decameron Negro – III</i> <i>Rito de los Orishas</i>
Antonio Cano	<i>El Eco</i>
Mario Castelnuovo-Tedesco	<i>Variations Through the Centuries, op. 71</i> <i>Sonata Ommagio a Boccherini, op. 77 – I, IV</i> <i>Capriccio Diabolico, op. 85</i> <i>Suite, op. 133</i> <i>Tonadilla, op. 170</i> <i>Platero y Yo, op. 190 – IV</i>
Napoleon Coste	<i>Fantaisie Symphonique, op. 28</i> <i>Divagation, op. 45</i> <i>Adagio et Divertissements, op. 50</i>
John Duarte	<i>Variations on a Catalan Song, op. 25</i> <i>Suite Piemontese, op. 46 – II</i> <i>Homage to Antonio Lauro, op. 83 – II</i> <i>Danserie No. 3, op. 113</i> <i>Russiana, op. 119 – I and III</i> <i>Variations on an Italian Song</i>
Roland Dyens	<i>Libra Sonatine – II</i>

	<i>Fantasie</i>
Nikita Koshkin	<i>The Fall of Birds, op. 18</i> <i>Tristan Playing the Lute</i>
Antonio Lauro	<i>Seis por derecho</i>
Miguel Llobet	<i>Estudio Capricho</i>
José Luis Merlin	<i>Cinco canciones de amor</i> – III – IV <i>Sueño con Caballos</i>
Federico Mompou	<i>Suite Compostellana</i> – VI
Jorge Morel	<i>Allegro in Re</i> <i>Latin Impressions</i> – II – III <i>Variations on a Gershwin Theme</i> <i>Sonatina</i> <i>Romance Criollo</i>
Federico Moreno-Torroba	<i>Sonatina</i> – II <i>Castles of Spain</i> – Torija
Manuel Ponce	<i>Courante</i> <i>Scherzino Mexicano</i> <i>Estrellita</i> <i>Waltz</i> <i>Sonata meridional</i> <i>Sonata III</i> <i>Variations and fugue on the “Folia de España”</i>
Emilio Pujol	<i>Three Spanish Pieces</i> – Guajira
Maximo Pujol	<i>Sonatine</i>
Stepan Rak	<i>Variations on a Theme of Jaromir Klempir</i>
Joaquín Rodrigo	<i>Invocación y danza</i> <i>Zarabanda lejana</i>
Eduardo Sáinz de la Maza	<i>Andaluza</i> <i>Evocacion Criolla</i> <i>Platero y Yo, Suite</i> – I, IV, VII
Fernando Sor	<i>Fantasie no. 8, op. 40</i> <i>Fantasie no. 11, op. 56</i>

	<i>Grand Solo, op. 14</i> <i>Introduction and Variations, op. 28</i> <i>Study, op. 6, no. 9</i>
Francisco Tárrega	<i>Prelude 1, 18, 34, 35</i> <i>Mazurkas y Polkas – Rosita</i> <i>Danzas y Canciones – El Columpio</i> <i>Capricho Arabe</i>
Joaquín Turina	<i>Sonata, op. 61 – I, III</i>
William Walton	<i>5 Bagatelles – II, III</i>
Andrew York	<i>Lullaby</i> <i>Royal Plum Pudding</i>
Dropped D/G	
Agustin Barrios	<i>A mi Madre</i> <i>Cancion de Cuna</i> <i>Choro da saudade</i> <i>Un Sueño en la floresta</i>
Dimitri Diatchenko	<i>Tango en Paraiso</i>
Carlo Domeniconi	<i>Gli Spiriti, op. 7</i>
John Duarte	<i>Russiana, op. 119 – II</i>
Roland Dyens	<i>Santo Tirso</i>
Enrique Granados	<i>La Maja de Goya</i>
Eduardo Sáinz de le Maza	<i>Habanera</i>
José Luis Merlin	<i>Cinco canciones de amor – V</i>
Jorge Morel	<i>Carnavalito (Zaldivar)</i> <i>Danzas Para Emiko – I</i>
Francisco Tárrega	<i>Danzas y Canciones – Maria (Tango)</i>
Mario Castelnuovo-Tedesco	<i>Sonata Ommagio a Boccherini, op. 77 – II, III</i> <i>Platero y Yo, op. 190 – V</i>

Traditional

Simple Gifts (arr. Ravenscroft/Sutherland)

Lute Tuning³¹

John Dowland

The Frog Galliard
Go From My Window
Lachrimae Pavan
Melancholy Galliard
Round Battle Galliard
Tartleton's Riserrectione

Alonso Mudarra

Diferencias Sobre "Conde Claros"
Fantasia X, from Tres libros de musica...

Luys de Narváez

Cancion del Emperador
Guardame las vacas

Hans Neusidler

10 Easy Dances (Ein tuger Welscher tantz, et al.)

Other

Nuccio D'Angelo

Due Canzoni Lidie – (6=E-flat, 2=B-flat)

Dusan Bogdanovic

Mysterious Habitats – (6=F)

Leo Brouwer

Hika – (5=G, 2=B-flat)
Sonata – II (6=F)

Rainer Brunn

Elemente – (6=C-sharp; 3=G-sharp in IV)

Carlo Domeniconi

Koyunbaba – (open C-sharp minor)
Tocatta "in Blue", op. 88 – (6=D, 3=F-sharp)

Roland Dyens

*Chansons Francaises Vol. 1*³²
Songe Capricorne – (5=B)

³¹ Selected transcriptions of lute and vihuela

³² A collection of arrangements using multiple tunings throughout the set: 6=F 5=G; 6=E-flat; Dropped D; 6=D-flat, 5=A-flat; 6=F

Andrew McKenna Lee	<i>Scordatura Suite</i> ³³
Andrew Moses	<i>Six Nocturnes</i> ³⁴
Manuel Ponce	<i>Preludio</i> (1928) (Capo on II)
Fernando Sor	<i>Fantasia no. 3, op. 10</i> (6=F)
Jeffry Hamilton Steele	<i>Vessels</i> – (DADGAD)
Toru Takemitsu	<i>Equinox</i> – (6=E-flat, 2=B-flat)
Andrew York	<i>Introduction to Sunburst</i> – Double dropped D <i>Sunburst</i> – Double dropped D

³³ Each movement uses a different tuning: DADGAD; CGDAAD; AAEGDE

³⁴ Multiple tunings including: Dropped D; 6=E-flat, 5=G; 6=C, 5=A-flat