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MUSIC THEORY IN MEXICO FROM 1776 TO 1866: A  
STUDY OF FOUR TREATISES BY NATIVE AUTHORS

DISSERTATION

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By

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This investigation traces the history and development of music theory in Mexico from the date of the first Mexican treatise available (1776) to the early second half of the nineteenth century (1866). This period of ninety years represents an era of special importance in the development of music theory in Mexico. It was during this time that the old modal system was finally abandoned in favor of the new tonal system and that Mexican authors began to pen music treatises which could be favorably compared with the imported European treatises which were the only authoritative source of instruction for serious musicians in Mexico.

The four main treatises examined in this study--Juan Antonio Vargas y Guzmán's Explicación para tocar la guitarra (Veracruz, 1776), Mariano Elízaga's Elementos de música (México, 1823), José Antonio Gómez' Gramática razonada musical (México, 1832), and Felipe Larios' Método de armonía teórico-práctica (México, 1866)--are of paramount importance in the history of Mexican theory because they are the major theoretical works of their time and, as such, they comprise a direct lineage of theoretical development in Mexico.

The study of each of these treatises is divided into two main areas: 1) biographical information and description of the treatise, and 2) analytical study featuring the purpose of the work, analysis of concepts, musical examples, translation of important sections, and historical perspective--the author's sources of information and a comparative study with other Mexican and European treatises that discuss the same topics.

The conclusions of this investigation may be briefly summarized as follows: the first theorist, Juan Antonio Vargas y Guzmán, is regarded as the point of transition from the old modal system to the current system of tonality; Mariano Elízaga, on the other hand, enjoys the distinction of being the first Mexican author to give full discourse on the tonal system in Mexico and to explain the current system of modes and the structure of the major and the minor scales; finally, harmonic theory in Mexico was significantly expanded by José Antonio Gómez, and brought to full development by Gómez' own disciple, Felipe Larios.

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Chapter I  
INTRODUCTION

From ancient times to the present, the study of music theory has commanded the attention of musicians as well as philosophers and scientists. In the course of history, much ground has been covered and modern scholars dealing with the subject have gathered enough information to formulate, in some detail, a historical survey or, as stated by one author: "to illustrate the variety of music theory through the ages, particularly its changing scope and methodology."<sup>1</sup>

Certainly it comes as no surprise that the field of history of music theory in the western world is restricted, almost in its entirety, to European thought. It has been only in recent times that significant contributions have been made by theorists in the "New World." This apparent lack of input from American musicians is, of course, not difficult to explain. By the time the inhabitants of the American continent came in touch with the more developed culture of the "Old World" (around the first half of the sixteenth century), European musicians were well ahead in the development of a music system: theory had reached its climax in the works of Tinctoris, Gaffurius, Aaron, Glareanus, and Zarlino;

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1. Claude Palisca, "Theory," The New Grove Dictionary of Music and Musicians, 20 vols., ed. Stanlie Sadie (London: Macmillan, 1980), XVIII, 742.

a strong notational system was in the process of being established, and polyphony reigned in all its splendor.

However, it did not take long after the Spanish conquerors set foot on American land for the natives to assimilate their culture. Soon they began to study music, to make copies of music books brought by the Spaniards, and even to produce their own compositions. Evidently, the Spanish missionaries brought copies of some of the important European treatises to America.<sup>2</sup> Such treatises were read by native musicians who in turn began to write their own explanations about music; thus the study of music theory began in the "New World."

The present investigation attempts to trace the history and development of music theory in Mexico from 1776, the date of the first Mexican treatise available, to the second half of the nineteenth century. As one may expect, music theory in Mexico, as well as in the rest of the "New World," has its roots in European theory. Almost immediately after their arrival on Mexican soil, the Spanish missionaries discovered that music was a very valuable medium in the catechization of the natives. For the purpose of musical

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2. Antonio Vargas y Guzmán, Explicación para tocar la guitarra (Veracruz, México: 1776) cites the works of Boethius (p. 38), Ornithoparchus (p. 34), Aaron (p. 33), and others. Mariano Elízaga in his Elementos de música (México: Imprenta del Supremo Gobierno, 1823) makes references in the Prologue to the works of Tartini, Kircher, Lorente, Nassarre, and Eximeno. The treatises of Vargas and Elízaga will be discussed during the course of the present study.



instruction, European treatises (Spanish for the most part) were evidently used at first. Up to the seventeenth and eighteenth centuries works by Tomás de Sancta María (d. 1570), Francisco de Montanos (1528-1592), Pietro Cerone (1556-1625), Pedro de Ulloa (1663-1721), Pablo Nassarre (1664-1724), José de Torres y Martínez Bravo (1665-1721), Manuel Jerónimo Romero de Avila (1717-1779), Antonio Soler (1729-1783), Antonio Eximeno (1729-1808), and others, seem to have had wide circulation in Mexico.<sup>3</sup> One also finds references to the works of Boethius, Glareanus, Aaron, Zarlino, and Rameau. However, during the seventeenth and eighteenth centuries native musicians began to gain recognition and the first theoretical books by local residents started to appear. References to such books are given by Mexican historians and musicians such as Gabriel Saldívar,<sup>4</sup> Miguel Galindo,<sup>5</sup> and Jesús Romero<sup>6</sup> among others. Although some of those treatises no longer survive--at least they have not yet been located-- a good number of them are available and provide enough information to enable us to trace the development of music

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3. Gabriel Saldívar, Historia de la música en México (México: Editorial Cultura, 1934), 129-132, 171.

4. Ibid., 110-114, 129-141, 174-177.

5. Miguel Galindo, Nociones de historia de la música Mexicana (Colima, Jalisco, México: Tip. de "El Dragón," 1933), 531-537.

6. Jesús Romero, José Mariano Elizaga (México: Ediciones del Palacio de Bellas Artes, 1934), 19-28, 100, 142-146.

theory in Mexico.

The importance of such a study hardly needs any proof. The field of Mexican theory has up to now remained unexplored; indeed, many do not even know that it exists. Most of the major treatises are either unknown or are only very briefly described in books or articles dealing with the history of music in Mexico. To my knowledge, no attempt has been made to study such treatises in depth or to establish a line of development with regard to music theory in Mexico. There is good reason to believe that a strong correlation exists between this theory and the music that was composed during the same period. The Mexican treatises were written by some of the leading musicians of the time, who exercised great influence as composers, teachers, and founders of some of the most important music institutions in Mexico.

Among the theoretical books written in Mexico during the eighteenth and nineteenth centuries, four seem to surpass all the others in content as well as in the prestige and fame of their authors. These four treatises provide us with valuable information with regard to the beginnings and development of music theory in Mexico; they form the core of the present study: Antonio Vargas y Guzmán, Explicación para tocar la guitar(r)a (1776); Mariano Elízaga, Elementos de música (1823); José Antonio Gómez, Gramática razonada musical (1832); and Felipe Larios, Método de armonía

teórico-práctico (1866).<sup>7</sup>

As stated before, the modern literature dealing with these books is scarce and usually brief. Concerning the first treatise (the Explicación by Vargas y Guzmán), one reference by Robert Stevenson is found with regard to the tuning of the Spanish guitar. In one paragraph Stevenson discusses a guitar transcription based on the principles established in Vargas y Guzmán's Explicación, which he simply describes as a "303-page Mexican guitar treatise dated 1776 at the Newberry Library, Chicago, with the call-number Case MS VMT 582 V29e."<sup>8</sup> However, in his subsequent article entitled "A Neglected Mexican Guitar Manual of 1776" Stevenson describes the Explicación in greater detail.<sup>9</sup> Perhaps the most extensive modern description of this treatise is found in Juan José Escorza and José Antonio Robles-Cahero's recent article entitled "La Explicación para tocar la guitarra de Vargas y Guzmán: un tratado novohispano del siglo XVIII" published in México in 1984.<sup>10</sup> To my knowledge, however, no

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7. With the exception of the first author (Vargas y Guzmán), the others were more less contemporaries and seem to have influenced each other. Elízaga and Gómez often carried similar responsibilities; Larios was a student of Gómez.
  8. Robert Stevenson, Music in Aztec & Inca Territory (Berkeley: University of California Press, 1968), 240.
  9. Robert Stevenson, "A Neglected Mexican Guitar Manual of 1776," Inter-American Music Review I/2 (Spring-Summer 1979), 205-210.
  10. Juan José Escorza and José Antonio Robles-Cahero, "La Explicación para tocar la guitarra de Vargas y Guzmán: un tratado novohispano del siglo XVIII," Heterofonía XVII/87 (Oct.-Nov.-Dic. 1984), 5-42.

work dealing with the theoretical principles set forward in the Explicación has yet been written. Furthermore, neither the name of the author nor that of his treatise are mentioned in modern dictionaries such as the New Grove or Die Musik in Geschichte und Gegenwart, to mention only a few.

Among Mexican theorists, Mariano Elízaga is perhaps the most frequently cited by modern writers. Gerard Béhague talks about Elízaga as "the composer most prominent during the revolutionary period" who "wrote two influential theoretical treatises, Elementos de música (1823) and Principios de la armonía y de la melodía (1835), the latter an introduction to the study of four-part harmony."<sup>11</sup> Of the four authors who occupy our attention in this study, Elízaga is the only one to receive an individual entry in the New Grove Dictionary. In that article his book Elementos de música is described as "a notable didactic work," whereas his second book Principios de la armonía is only mentioned as "a second didactic work."<sup>12</sup> Mexican historians and musicologists provide only a little more information on the subject. In his Historia de la música en México, Saldívar

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11. Gerard Béhague, Music in Latin America: An Introduction (Englewood Cliffs, New Jersey: Prentice-Hall, 1979), 97. Also Gerard Béhague, "Mexico," The New Grove Dictionary of Music and Musicians, 20 vols., ed. Stanlie Sadie (London: Macmillan, 1980), XII, 226-229. The second of the two treatises was not available to me for study.
12. Robert Stevenson, "José Mariano Elízaga," The New Grove Dictionary of Music and Musicians, 20 vols., ed. Stanlie Sadie (London: Macmillan, 1980), VI, 132-133.

reproduces several paragraphs of the Prologue in Elementos de música. He considers the book a "summary" of the teachings of the Spanish theorist Antonio Eximeno, on the basis of Elízaga's own declarations.<sup>13</sup> Perhaps the most extensive description of Elízaga's works is found in Jesús Romero's José Mariano Elízaga.<sup>14</sup> Although this book deals in some detail with Elízaga, his life and works, it does not attempt to make a critical study of either of Elízaga's treatises.

With regard to José Antonio Gómez's Gramática razonada musical, the only significant commentary is found in Miguel Galindo's Nociones de historia de la música Mexicana. Besides reproducing several portions of the Gramática, Galindo offers criticism of both the style and the content of the book. In general, Galindo believes that Gómez's teachings are somewhat confusing and lacking in clarity.<sup>15</sup> The following paragraph gives a good idea of Galindo's attitude:

Confusion in the ideas was also a general fact. The mind had not yet been able to disentangle the bandages it had inherited from previous generations. This was even more so in music, where the intricacy of such a tangle had been greater, as if woven with ignorance and metaphysics. Mr. Gómez, in spite of

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13. Saldívar, op. cit., 175.

14. Romero, op. cit., 23-30, 100, 133-134, 158, 165.

15. Galindo, op. cit., 535.

his competence in teaching, proceeded with very confused and mistaken theoretical notions.<sup>16</sup>

However, Galindo also recognizes the great value of the Gramática and evaluates it as "a work of great pedagogical merit, and one which, in spite of its numerous defects, fulfilled a very important role in the musical development of Mexico."<sup>17</sup> For the time being, we will neither support nor reject such criticisms. We shall evaluate the treatises only after a detailed analysis of each. As for the final work to be considered, Larios' Método de armonía teórico-práctica, nothing, to my knowledge, has been written except the mere mention of its existence.<sup>18</sup>

In the present work each of the four main treatises will be discussed in chronological order. Our investigation will be divided into two main areas: 1) biographical information and description of treatises, including place of

16. Ibid., 531, my translation. It is not uncommon for Mexican historians to refer to the writings of Medieval and Renaissance theorists in a rather disdainful manner. For instance, Romero (op. cit., 22) talks about the doctrines of Pontio and Zarlino as "pedagogically detestable." Also, Saldívar (op. cit., 132) describes several Spanish treatises as "pedantic and tiresome in the extreme, because they forced the student to memorize an endless number of theories, rules, and definitions often confused and mistaken."

17. Ibid., 536-537.

18. Guillermo Orta Velázquez, Breve historia de la música en México (México: Librería de Manuel Porrúa, 1970), 339. Also Francisco Moncada-García, Pequeñas biografías de grandes músicos Mexicanos, 2nd ed. (México: Ediciones Framong, 1979), 134.

origin, date, present location, and organization of content; and 2) analytical study, featuring the purpose of the work, analysis of concepts, musical examples, translation of important sections, and historical perspective--the author's sources of information and a comparative study with relation to other Mexican and European treatises that discuss the same topics.

Finally, all translations are mine, unless otherwise stated. The original texts of translated passages are often included, together with the corresponding translation, in parallel columns to facilitate a quick comparison of the original with its English version. Spanish sources are quoted exactly as they appear in the original; no attempt has been made to correct grammatical errors. Underlining is used to indicate all the various forms of emphasis in the original sources.

Chapter II  
GENERAL BACKGROUND: MUSIC ACTIVITY  
IN MEXICO BEFORE 1776

Plainchant Tradition in Mexico

Undoubtedly, one of the first and most important manifestations of Spanish influence in the "New World" was the plainchant tradition that developed in Mexico during the sixteenth and early seventeenth centuries. As recorded by Bernal Díaz del Castillo (1492-1581), perhaps the first "plainchant performance" in Mexico took place during the first Sunday after the Spaniards arrived at the port known later as Veracruz. On that occasion two Indian governors arrived on a special mission of Aztec emperor Moctezuma. But before dealing any business with them Cortes ordered his men to build an altar on which Fray Bartolomé de Olmedo, "who was a fine singer, chanted Mass."<sup>1</sup>

European music was learned and mastered by the Indians immediately after the arrival of the conquerors. Studies of the Aztec culture reveal that the Aztecs had innate musical talent and a well established musical tradition--a contributing factor to the amazing speed with which they were

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1. Bernal Díaz del Castillo, Historia verdadera de la conquista de la Nueva España, ed. Genaro García (México: Secretaría del Fomento, 1904), I, 107: "dixo misa cantada fray bartolome de olmedo que Era gran cantor."



able to master Gregorian chant. Although Spanish music was foreign to the Indians, a comparison of the Gregorian system with the Aztec musical tradition shows a good number of similarities between the two. Robert Stevenson points out some of these aspects that were more or less common to both traditions:<sup>2</sup> 1) the division of the day into canonical hours, 2) the hiring of temple singers, 3) the complicated musical ritual, 4) the parallelistic setting of verses, 5) the recitation on a central pitch (except at beginning, middle, and end of a strophe), and 6) the responsorial manner of singing.

The Spaniards soon discovered that music was a very valuable medium for religious conversion. Missionaries, especially the Franciscans and the Jesuits, paid special attention to music in the catechization of the natives. They constantly praised the Indian aptitude for assimilating European cultural traits, most notable among them, music. Thus, musical instruction and Indian participation in church musical activities proved to be one of the most effective mediums for achieving missionary objectives.

Certainly one of the most significant events in the development of music in early Mexico was the arrival of the Franciscan missionary Pedro de Gante (ca. 1480-1572) on August 30, 1523 who, in 1524, established a school in

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2. Robert Stevenson, Music in Aztec & Inca Territory (Berkeley: University of California Press, 1968), 198.

Texcoco.<sup>3</sup> Although the primary purpose of this institution was not the teaching of music, music was indeed one of the most important subjects offered to the Indians. According to the chroniclers Gerónimo de Mendieta and Juan de Torquemada, some of the first subjects taught to the students had to do with reading, writing, practical arts, singing, and playing of musical instruments.<sup>4</sup> They were also taught to make copies of music, to draw staff lines, and to write musical notes. After the preliminary instruction in musical notation, students were introduced to the singing of plainchant. In 1527 the school was permanently moved to Mexico City. Toribio de Benavente o Motolinía, in his Historia de los indios, gives the following remark about the success with which this school operated:

At this time a different fire, the fire of devotion, began to kindle in the hearts of the Indians when they learned the Ave María, the Pater Noster, and the catechism. To make them accept the teaching more readily, and find some pleasures in it, the friars gave them the Per signum Crucis, the Pater Noster, the Ave Maria, the Credo and the Salve, with the Commandments, in their own tongue and set

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3. Pedro de Gante has been justly called "The first teacher of European music in America." For further information refer to Lota M. Spell, "The First Teacher of European Music in America," The Catholic Historical Review, New Series, II/3 (Oct. 1922), 372-378.
4. Gerónimo de Mendieta, Historia eclesiástica indiana (México: Antigua Librería, 1870), 608. Also Juan de Torquemada, Monarquía Indiana, 3 vols. (Madrid: N. Rodríguez Franco, 1723), III, 428.

to music in a simple and pleasing tune. They were so eager to learn, and there were so many of them, that they were fairly piled up in the courtyards of the churches and shrines and in their own sections of the town, singing and learning prayers for three or four hours on end; and their haste was so great that wherever they went, by day or by night, one could hear them on all sides singing and reciting the whole catechism. The Spaniards were amazed to see the fervor with which they recited it and the eagerness and haste with which they learned it.<sup>5</sup>

In this manner plainchant was quickly disseminated among the Aztec civilization. Music proved to be one of the Spanish elements most welcome by the Indians. In fact, it has been reported that, as early as the second half of the sixteenth century, the number of Indians who dedicated themselves to music had become so great that, in 1561, Philip II ordered "a reduction in the number of Indians who shall be permitted to occupy themselves as musicians."<sup>6</sup>

The innate talent of the Indians, together with the musical instruction they received, enabled them not only to learn, but also to create new music. Although no surviving evidence of early works by a native composer, so far as this writer can assert, has yet been found, it only seems logical to assume that new plainchant compositions began to appear

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5. Toribio de Benavente o Motolinía, Historia de los indios de la Nueva España (Barcelona: Herederos de Juan Gili, Editores, 1914), 28. E. A. Foster, Motolinia's History of the Indians of New Spain (Berkeley: The Cortés Society, 1950), 52.
  6. Gerard Béhague, Music in Latin America: An Introduction (Englewood Cliffs, New Jersey: Prentice-Hall, 1979), 2.

during that time. Juan de Torquemada in his Monarquía Indiana confirms this position:

With this I conclude (and this is an important observation): only a few years after the Indians began to learn the chant, they also began to compose. Their villancicos, their polyphonic music in four parts, certain masses and other liturgical works, all composed with adroitness, have been adjudged superior works of art when shown [to] Spanish masters of composition. Indeed the Spanish masters often thought they could not have been written by Indians.<sup>7</sup>

The plainchant tradition in Mexico actually began as what has been called "a direct transplantation to Mexico of the Gregorian tradition as it was practiced in sixteenth-century Spain."<sup>8</sup> Torquemada reports that plainchant books were brought from Spain and that the Indians used and copied these books.<sup>9</sup>

Eventhough most plainchant books printed in Mexico during the sixteenth and early seventeenth centuries contain music which, as stated before, was not composed locally but was transplanted into Mexico, there is some evidence of newly composed plainchant. One of the earliest references to an original composition is given by Benavente: "One of these

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7. Torquemada, op. cit., III, 214. Translation by Robert Stevenson in Music in Aztec & Inca Territory (Berkeley: University of California Press, 1968), 172.

8. Mary E. Duncan, "A Sixteenth-Century Mexican Chant Book" (unpublished Ph.D. dissertation, University of Washington, 1975), vii.

9. Torquemada, op. cit., III, 213.

Indian singers, an inhabitant of this city of Tlaxcala, has composed unaided a complete Mass which has been approved by good Castilian singers who have seen it."<sup>10</sup> Unfortunately, this as most early compositions is yet to be found. A more concrete reference in this regard is found in the Graduale Dominicale, a chant book published in Mexico in 1576 by Pedro de Ocharte.<sup>11</sup> A Latin inscription which appears in the title page mentions the Reverend "bachiller" Juan Hernández who corrected and purified the chants included in the book in order to conform with the Tridentine decrees, and who also had previously composed several new compositions such as graduals, alleluias, tracts, offertories, and communions.<sup>12</sup> If this information is correct--that Juan Hernández indeed composed new music--he may be considered as the first composer to have had an original composition printed in the New World.<sup>13</sup>

Perhaps the most important example of plainchant writing in Mexico is represented by the Quatuor Passiones composed by Juan Navarro (ca. 1550-ca. 1610), a Franciscan

10. Benavente, op. cit., I, 210.

11. Pedro de Ocharte, Graduale Dominicale (México: 1576), inscription on title page. Copies preserved at the Biblioteca Nacional de México, Newberry Library (VM 2149 G73), and the Library of Congress (M2149. M5 1576 Case).

12. Juan Hernández was born at Tarazona, Spain, in 1545. He emigrated to Mexico City in 1567 or 1568 where he received a Bachelor's degree in canon law. He became music director at the Mexico City Cathedral in 1585.

13. This is the position taken by Stevenson. See Stevenson, op. cit., 188.

residing in the diocese of Michoacán.<sup>14</sup> In 1572 Pedro de Ocharte sent one hundred pasioneros (books containing passions also referred to as passioners) from his press to Juan Diego de Rincón, bishop of Michoacán. These passioners included music for the last three days of Holy Week and therefore included only the music for the passion narrative in the Fourth Gospel. At this time Navarro conceived the idea of creating his own plainsong settings for the other Passion narratives. His attempt was to make a book as usable as possible, and therefore this composition project included not only all four Passions but also certain scripture passages which are read on Holy Saturday--i.e., parts of Lamentations and the prayer of prophet Jeremiah. It comprises monodic settings of all four Passions and was entitled: Liber in quo quatuor passiones Christi Domini continentur. This work, published at Mexico City in 1604 by Diego López Dávalos, represents perhaps the only Neo-Hispanic publication exclusively devoted to music.<sup>15</sup> It consists of 105 numbered folios, of which the first 89 contain the Passions, with the remainder consisting of Lamentations and the Prayer of Jeremiah. In the preface to his book, Navarro claims that the music was

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14. This Juan Navarro was formerly confused with another Spanish composer of similar name. However, this confusion was clarified by Gilbert Chase in his article, "Juan Navarro Hispalensis and Juan Navarro Gaditanus," The Musical Quarterly XXXI (April 1945), 188.

15. Robert Stevenson, Music in Mexico: A Historical Survey (New York: Thomas Y. Crowell, 1952), 131.

actually written in the New World. The style of his music is very similar to conventional plainchant. In general, the music is simple since the book was designed to fulfill the needs of ordinary churches.

The practice of singing plainchant did not disappear with the advent of polyphony. In fact, nearly all the Neo-Hispanic polyphony found in surviving manuscripts is of the alternating type: a verse in plainchant, followed by one in polyphony, next in plainchant, and another one in polyphony, etc. The alternating musical setting shows not only contrast in texture but also in rhythmic style--free rhythmic declamatory style against more measured rhythmic patterns.

The entire plainchant tradition in Mexico during the sixteenth and early seventeenth centuries is contained in a collection of liturgical books with music, printed between 1556 and 1589, and in the 1604 edition of Navarro's Quatuor Passiones. Of the sixteenth-century books, one is completely lost, and only a fragment of one other is extant. Table I provides a list of bibliography, showing, in addition to year of publication and publisher, information on locations where these books may be located. Stevenson evaluates these early Mexican publications as follows:

The present-day significance of these music imprints may be summarized under seven statement headings: (1) These were the first books containing music printed in the New World. (2) They were the only liturgical books with music published in any of the Spanish colonies . . . .

(3) They provide imposing examples of the printer's art in sixteenth-century America. (4) The plainchant printed in them is less "corrupted" than had previously been thought universal in sixteenth-century liturgical books. (5) From them can be ascertained the general level of musical culture in churches of New Spain during the epoch. (6) They introduce us to some of the commanding musical personalities of the time at Mexico City, where all the books were printed. (7) From circumstances connected with their publication we can adduce corroborating evidence concerning the number, geographic spread, and performance ability of Indian choirs.<sup>16</sup>

This early plainchant tradition stands as an event of paramount importance for the cultural development of Mexico. It provided the newly discovered country with the first cultural influence from the outside world, it indeed played a major role in the introduction of christianity into the Aztec civilization, it influenced the development of other arts--specifically architecture and painting--and it provided a system of notation up to that time lacking in the Aztec music language.

#### Spanish Composers in Mexico

Certainly, the missionary efforts in using music as an effective tool in the introduction of christianism into the New World was a very important force behind the development of a new musical tradition in Mexico. However, perhaps the most important event in the development of this tradition was the immigration, during the sixteenth and seventeenth

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16. Stevenson, Music in Aztec & Inca Territory, 192-193.



TABLE I

	New York Public Library	British Museum	M. Scheide Collec. Prin- ceton, N.J.	Univ. of Tex. Library Austin	Huntington Library	Littl Library, University of Indiana	Biblioteca Nacional, México	Library of Congress	Newberry Library	Biblioteca Nacional, Chile
1556 <u>Ordinarium sacri ordinis.</u> Juan Pablos.	X	X	X							
1560 <u>Manuale Sacramentorum secundum.</u> Juan Pablos.	X	X		X						
1561 <u>Missale Romanum Ordinarium.</u> Antonio de Espinosa.	X				X					
1563 <u>Psalterium Chorale.</u> Pedro Ocharte.					X					
1568 <u>Manuale Sacramentorum.</u> Ocharte.	X									
1572 <u>Graduale Dominicale.</u> Espinosa.							X			
1572 <u>Passionario Apuntado.</u> Espinosa.										
1575 <u>Antiphonario Dominical.</u> Espinosa.										
1576 <u>Graduale Dominicale.</u> Three editions: Espinosa, Ocharte (2).							X	X	X	
1584 <u>Psalterium, An(t)iphonarium Sanctorale.</u> Ocharte.				X						
1589 <u>Antiphonario de tempore.</u> Ocharte.				X						
1604 <u>Quatuor Passioness.</u> Juan de Navarra.										X

centuries, of noted Spanish composers who decided to continue their musical careers in Mexico. As expressed by Lester D. Brothers, "It still comes as a surprise to musicians that noted European artists should have chosen to pursue their careers in an area so remote as Peru or Mexico."<sup>17</sup>

Surprising or not, this historical fact remains as one of the outstanding contributions of the Spanish conquest to the development of the newly discovered world. The following is only a brief survey of some of the most outstanding Spanish composers who adopted Mexico as their "new country."

In 1539 Fray Juan de Zumárraga (1468-1548), the first bishop of Mexico, appointed Canon Juan Xuárez as the first chapelmaster at the Mexico City Cathedral. In 1556 he was succeeded by Lázaro del Alamo, a well trained musician who had been a cantor at the Salamanca Cathedral since 1554. Unfortunately, there are only references to del Alamo's compositions but apparently none of his works survive. One of the most important Spanish composers who immigrated to Mexico was Hernando Franco. He is often referred to as "The leading composer of sixteenth-century New Spain."<sup>18</sup> Franco was born in Galizuela, near Alcántara, Spain, in 1532, and died in Mexico City on November 28, 1585. At the age of ten

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17. Lester D. Brothers, "Sixteenth-Century Spanish Musicians in the New World," Explorations in Renaissance Culture IV (1978), 2.

18. Béhague, op. cit., 8.

he became a choirboy in the Segovia Cathedral and, by the age of fourteen, he was receiving a salary in recognition of his musical talent and ability. Among his teachers was Gerónimo de Escobar who later probably also taught Victoria as a choirboy in Avila.<sup>19</sup> Under the sponsorship of Arevalo Sedena, Franco's arrival to the New World may have occurred as early as 1554. After spending some time in Guatemala, he became chapelmaster at the Mexico City Cathedral on May 20, 1575, a position he held during the last ten years of his life. Among his works, which include Lamentation settings, Psalms, and Motets, certainly his seven Magnificats are among the most artful and best known. This collection of Magnificats comprise what is known as the Franco Codex of the Cathedral of Mexico.<sup>20</sup> Franco was succeeded by Juan Hernández who was the Mexico City Cathedral's chapelmaster from 1586 to ca. 1620. Already discussed as a composer of plainchant, Hernández' works also include several polyphonic compositions such as a Mass, a Magnificat, an incomplete Requiem, a Salve Regina, Lamentations, and a Motet.

Another renowned composer was Francisco López Capillas, chapelmaster at Mexico City from 1654-1674. Capillas enjoys

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19. Alice Ray Catalyne, "Hernando Franco," The New Grove Dictionary of Music and Musicians, 20 vols., ed. Stanlie Sadle (London: Macmillan, 1980), VI, 790-792.

20. This collection of Magnificats was studied and transcribed by Steven Barwick as The Franco Codex of the Cathedral of Mexico (Carbondale, Illinois: Southern Illinois University Press, 1965).

the distinction of having been considered "the most profound and prolific composer of Masses in Mexican history."<sup>21</sup> His importance as a composer rests in his superior craftsmanship specifically noted in his Masses and, perhaps to a lesser degree, in his Magnificats.<sup>22</sup> During the first years of the eighteenth century the cathedral at Mexico City enjoyed the services of Antonio de Salazar. Known mainly for his polychoral motets,<sup>23</sup> Salazar also held duties in the area of music education: he supervised the teaching of polyphony in public schools, and under his direction the quality of the cathedral orchestra was greatly improved. Salazar was succeeded by his student Manuel de Sumaya (1678-1756), the first Mexican-born chapelmaster (from 1715-1739). Under Sumaya's leadership the orchestra, as well as the entire music program in the cathedral, reached its highest level of proficiency. Sumaya's own compositions include Vespers music, Psalm settings, Misereres, Lamentations, and villancicos. Sumaya also enjoys the honor of having composed La Parténope,

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21. Robert Stevenson, "López Capillas, Francisco," New Catholic Encyclopedia VIII (1967), 986.

22. For an analysis of López Capillas Hexachord Mass, see Lester D. Brothers, "A New-World Hexachord Mass by Francisco López Capillas," Yearbook for Inter-American Musical Research IX (1973), 5-44.

23. Some transcriptions can be found in Lincoln Spiess and Thomas Stanford, An Introduction to Certain Mexican Archives (Detroit: Information Coordinators, Inc., 1969). Also in Stevenson, Latin American Colonial Music Anthology (Washington, D.C.: Organization of American States, 1975), 274-279.

the first full opera produced in Mexico, and only the second to be produced in the New World (the first was La Púrpura de la Rosa by Tomás de Torrejón y Velasco, staged in Lima on October 19, 1701). La Parténope, on a libretto by Silvio Stampiglia (1664-1725), was presented at the viceregal palace on May 1, 1711. Unfortunately, the music has been lost and only the libretto, printed in Mexico City in both Italian and Spanish, has been preserved in the National Library of Mexico. Sumaya's style shows a clear departure from renaissance polyphony and an approach to the practices of the baroque principles.

Italian influence came to Mexico with the appointment, in 1749, of the Italian composer Ignacio Jerusalem (ca. 1710-1769) as chapelmaster at the Mexico City Cathedral. He was followed by Matheo Tollis de la Roca (ca. 1710-1781) and Antonio Juanas (d. 1817). This Italian influence brought as a result a secularization of sacred music, a fact best exemplified by the appointment of Manuel de Arenzana, an opera composer, as chapelmaster at the Puebla Cathedral from 1729 to 1821.

The city of Puebla also became an important center in the continuing growth of musical heritage. The tremendous support given by Bishop Juan de Palafox y Mendoza (1600-1659) was a very influential factor in the development of the arts. Important composers working in Puebla were Pedro Bermudes (from 1603-1606), and his successor, the Portuguese-born

Gaspar Fernandes (ca. 1566-1629). However, music in the Puebla Cathedral reached its greatest splendor in the hands of Juan Gutiérrez de Padilla (ca. 1590-1664), chapelmaster from 1629 until his death. A former chapelmaster of the Cádiz Cathedral, Padilla is often referred to as the most important composer working in Mexico during the seventeenth century.<sup>24</sup> A large number of his compositions survived (mainly at the Puebla Cathedral), which include: Antiphons, Hymns, Lamentations, a Litany, Masses, Motets, a Passion according to St. Matthew, Responsories, and villancico cycles. Although as a composer Padilla showed a high degree of competence in almost all the forms he attempted, he is especially recognized for his music for double choir.<sup>25</sup> Other chapelmasters at the Puebla Cathedral following Padilla were Juan García and Miguel Mateo Dallo y Lana. Besides Mexico City and Puebla, Michoacán also became an important center of music. Active composers in Valladolid (presently known as Morelia, the capital of the state of Michoacán) were Juan Navarro (already discussed as a plainchant composer), and two eighteenth-century chapelmasters, Francisco Moratilla and José Gavino Leal.

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24. Gerard Béhague, "Mexico," The New Grove Dictionary of Music and Musicians, 20 vols., ed. Stanley Sadie (London: Macmillan, 1980), XII, 227.

25. For analysis of Padilla's double choir music, refer to Alice Ray Catalyne, "The Double Choir Music of Juan de Padilla" (unpublished Ph.D. dissertation, University of Southern California, 1953).

Compositional Techniques in Sixteenth-Century  
Mexican Polyphony: The Franco Codex  
of the Cathedral of Mexico

Hernando Franco can perhaps be considered as the point of departure in the development of Mexican polyphony. Of his works, his seven Magnificats certainly rank among the best of all polyphonic works composed in Mexico during the sixteenth century. There is evidence that, originally, Franco wrote eight Magnificat settings using all eight modes; unfortunately, the third-tone settings have been lost. Franco arranged the twelve verses for each Magnificat setting in the following order: 1, 3, 5, 7, 9, 11, 2, 4, 6, 8, 10, 12. This order suggests that the composer intended the odd-numbered verses of each setting to be performed with substitutions (perhaps monophonic plainsongs) for the omitted even-numbered ones, while the even-numbered series would be performed in the same way, with similar substitutions for the odd-numbered verses.

In general, it can be said that the polyphonic style of Franco is representative of the traditional, and even conservative, Spanish theory of the sixteenth century, usually distinguished by the following characteristics: the recognition of only eight modes (even in the seventeenth century, Spanish theorists talk only of eight modes, with the exceptions of Cerone and Correa de Arauxo who employed twelve modes); the same old classifications of consonances and

dissonances, and the same rules for treating the latter; and a rather strict adherence to the traditional rules of composition.<sup>26</sup>

As represented in his Magnificats, Franco's individual style is characterized by: close part-writing; limited voice ranges; abundance of imitative writing; conservative treatment of the modes; careful elaboration of cadences; rather clean phrase structure demarcated by cadences; and the development of his musical ideas from a single source, the plainsong intonations, which are used either as a cantus firmus or as the subject for successive imitations, or motifs throughout the texture. For the purpose of the present study, only the Magnificat in the second mode (from the Franco Codex) will be considered, as representing Franco's polyphonic style.

In his treatment of mode Franco is rather conservative. As most Spanish theorists and composers, he recognized only eight modes and assigned one of them to each of his Magnificats. The Magnificat in the second mode is transposed up a fourth to G with a flat in the signature, a common procedure as described in the writings of theorists such as Aaron and Gaffurius. The mode is usually carried by the tenor, which often moves within a limited ambitus, as it can be observed in the opening verse (verse 1, illustrated in Example 1). In the same section the soprano spans only the

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26. Almonte Howell, "Symposium on Seventeenth-Century Music Theory: Spain," Journal of Music Theory XVI (1972), 63-71.



Example 1. Franco Codex, Magnificat in the second mode,  
Verse 1.

1. **Soprano**

**Alto**  
A - ni - ma me - a Do - mi - num,

**Tenor**  
Do -

**Bass**  
A - ni ma

A - ni - ma me - a Do - mi - num [Do - - -

5

A - ni - ma me - a

mi - num, A - ni - ma - me - a

me - a Do - mi - num, [a - ni - ma

mi - num] a - ni - ma me -

10

Do - mi - num.

Do - mi - num, Do - - - mi -

me - a Do - mi - num.] A - ni - ma me - a Do - mi -

a Do - mi - num [a - ni - ma me - a Do - - - mi -

15

A - ni - ma me - a Do - mi - num.

num, a - ni - ma me - a Do - mi - num.

num, a - ni - ma me - a Do - mi - num.

num,] a - ni - ma me - a Do - mi - num.

interval of a fourth. The beginning notes for all sections are those commonly assigned to the second mode (D, F, G, B-flat), and all the verses end on G, the final of the mode. The species of fourths and fifths are not clearly outlined in this composition. Although the upper species of fifths can often be located within the horizontal vocal lines (see Example 1, mm. 8-10 and 13-17 in the tenor line), the correct species of fourths (first species of fourths, tst) is not actually used in this composition. Instead, the "wrong" species of fourths (third species of fourths, tts) is emphasized because this species is contained in the plainsong formula upon which the entire Magnificat is based (compare the plainsong intonation illustrated in Example 2 with the entries of all four voices in Example 1).

With regard to form, a great deal of uniformity is found. All twelve verses of the Magnificat are of approximately equal length (25 to 30 measures) and each of them is

Example 2. Liber Usualis, 208.

♯ D ver | A

1. Magni- ficat \* ánima mé-a Dóminum.

normally divided into four phrases. As customary with most Magnificats, the last verse setting is slightly longer than the rest, with added voices featuring a fugue.

In sixteenth- and seventeenth-century Spanish theory, cadences are usually classified into two types: remissa, and sostenida. Thomas Sancta María explains these two types of cadences in the following manner:

Therefore, the cadence is made in two manners, the first is remissa, and the other sostenida. The remissa is made always by a tone as mi re mi. And the sostenida by a semitone, as fa mi fa.<sup>27</sup>

In accordance with his examples, regarding these two types of cadences, one can easily see that he is just describing the traditional manner of marking cadences in which two voices close with the progression of a major sixth to an octave. In the remissa the upper voice approaches the final by a tone and the lower voice moves down by a semitone

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27. Thomas de Sancta María, Libro llamado arte de tañer fantasía (Valladolid, 1565), new edition with introduction by Denis Stevens (Heppenheim, West Germany: Gregg International Publishers Limited, 1972), folio 63.

(commonly known as phrygian cadence), while in the sostenida the process is reversed: the upper voice approaches the final by a semitone, and the lower voice resolves down by a tone. Of the 48 cadences in this Magnificat, the great majority of them--46--is of the sostenida type; only one is remissa, and one (the final cadence) does not fall under either of these two categories. This fact, of course, is not surprising, since proceeding according to the sostenida type is the most appropriate way to cadence on the proper places of this mode which, according to Zarlino, are: D, G, B-flat, and d (Istitutioni Harmoniche, part IV, chapter 19). Of the 48 cadences, 28 are on G (including all the final cadences of each verse), 14 on B-flat (the repercussa of the transposed mode), 3 on F, 2 on D, and one on C. It is natural that such cadences could only be approached by a whole tone in the lower voice, since the use of accidentals in this period did not include A-flat, C-flat, G-flat, and D-flat, which would be required to make a remissa cadence on G, B-flat, F, and C respectively. The only example of a remissa cadence occurs in verse 10, m. 7, where the soprano and the bass lines cadence on D. This is illustrated in Example 3.

However, the most typical cadential procedure in Franco's Magnificats is the one illustrated in Example 4, where the soprano cadences with the tenor (M6-8ve in mm. 29-30), the bass moves down a fifth, and the alto either remains a fifth above the bass (creating an incomplete triad) or moves

Example 3. Franco Codex, Magnificat in the second mode,  
Verse 10.

5 6 7

pa - tres no - stros sic-ut lo - cu - tus

ad pa - tres no - stros sic-ut lo -

8 cu - tus est ad pa - tres no - stros

ut lo - cu - tus est ad pa - tres no - stros

down to a third, making a complete triad. This pattern occurs about 26 times in this music. In some instances the cadential progression--M6-8ve--is also found between other voices: it occurs 4 times between tenor and bass, and once between soprano and alto.

Example 4. Franco Codex, Magnificat in the second mode,  
Verse 11.

25 28 30

Spi - ri - tu - i Sanc - to.

Sanc - to] et Spi - ri - tu - i Sanc - to.

i Sanc - to, Spi - ri - tu - i Sanc - to]

to, et Spi - ri - tu - i Sanc - to.

Occasionally, as in Example 5a (mm. 23-24), the tenor evades the cadence by means of a rest,

Example 5a. Franco Codex, Magnificat in the second mode  
Verse 9.

21 22 23 24

di - ae su - - - - - ae, mi -

- - - - - ae, [re - cor - da - - - - - tus] mi

8 su - - - - - ae, mi - se - ri -

mi - se - ri - cor - - - - - di - ae su - ae,

or as in Example 5b (mm. 23-24), by moving in parallel sixths with the soprano.

Example 5b. Franco Codex, Magnificat in the second mode,  
Verse 10.

22 23 24 25

ni e - jus in sae - cu - - - - la.

se - mi - ni e - jus in sae - - - - cu la.

8 cu - la] et se - mi - ni e - jus in sae - cu - la.

- - - - - jus in sae - - - - - cu - la.

These are examples of what Zarlino calls a cadenza fuggita or an evaded cadence, in which the voices give the impression of leading to a perfect cadence, but turn instead in a different direction.<sup>28</sup> However, in all these cadences, the progression to the final, evaded in the tenor voice, is strengthened by the bass line which moves down a fifth from D to the lower G. It is interesting to observe, in this Magnificat, that in every case in which the soprano and the tenor cadence by means of the usual M6-8ve progression, such progression is accompanied by the movement of a fifth down to the final in the bass. Although, no doubt, by the end of the sixteenth century, the bass line began to receive more attention, the above mentioned bass progression does not constitute enough evidence to support the view that the tenor had already been replaced by the bass as the governing element in musical structure. Such cadences are explained by Zarlino who, after making it clear that the tenor "is the part that governs and regulates the composition and maintains the mode," and that "its cadences must be placed on the proper tones, and introduced with good reason,"<sup>29</sup> gives the following statement regarding the role of the bass at cadence points:

28. Gioseffo Zarlino, The Art of Counterpoint (part III of Le Istitutioni Harmoniche, 1558), trans. Guy A. Marco and Claude V. Palisca (New York: W.W. Norton & Company Inc., 1976), 151.

29. Ibid., 180.

But remember that although the bass may at times occupy the tenor register, as I have said, and similarly the other parts may exchange locations; the bass must always conclude on the final of the mode of the composition. The other parts must also be on their proper tones at the end, for it is from the final chord that we judge the mode. If the tenor does not finish on the final, this will be of small importance if its melody has progressed in accord with the nature of the mode; and this is true of the other parts also.<sup>30</sup>

Perhaps more difficult to explain is the very last cadence of the composition, illustrated in Example 6.

Example 6. Franco Codex, Magnificat in the second mode, Verse 12.

30 31 32 33 34

men[sae - cu - lo - rum, a - - - - - men]

lo - rum a - men a - - - - - men

men. sae - cu - lo - rum a - men

s - - - - - men, sae - cu - lo - rum, a - - - - - men.

sae - cu - lo - rum, a - men.

a - - - - - men, sae - cu - lo - rum, a - - - - - men.

30. Ibid., 186.



At first sight, the M6-8ve cadential progression is not found between any of the voices and therefore, an analysis of the entire section is necessary in order to understand the modal structure of the final cadence. The whole section (Verse 12) is built upon the entire plainsong intonation, used as cantus firmus in two of the voices: alto and tenor II which are in strict canon. The alto begins on C, followed by the tenor II two measures later which imitates the alto line exactly at the interval of a fifth below. As a result, the tenor II ends two measures after the alto; in order to accompany the tenor to the end, the alto voice repeats the last phrase ("saeculorum amen") at a higher pitch than the original (original at F, repetition at A) and then resolves down to the final G, making a cadence (6-8) with the tenor II (actually a 10th-8ve, inverting the interval of the sixth) two measures before the end of the composition. Furthermore, this cadence is extended by the other voices which do not come to an end until two measures later. This custom of extending the final cadence was already discussed by Pietro Aaron and is a common feature in Franco's cadences.<sup>31</sup>

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31. Pietro Aaron, Trattato della natura (1525), cited in Oliver Strunk, Source Readings in Music History (New York: W.W. Norton, 1950), 212: "And if sometimes, as has become the custom, the composer prolongs his work, amusing himself with additional progressions, you will, in my opinion, need to consider whether the final, as altered by the composer, is suited to and in keeping or out of keeping with his composition, for if reason guide him in what is suited to the tone he will at least see to it that some one part (namely, the tenor or cantus) sustains the final, while

Further instances of such practice can be observed in Example 1 (mm. 15-17), and in Example 7.

Example 7. Franco Codex, Magnificat in the second mode, Verse 9.

25                      26                      27                      28                      29

se - ri - cor - di - ae su - ae.

se - ri - cor - di - ae su - ae.

cor - diae su - ae.

mi - se - ri - cor - di - ae su - ae.

In these passages the effect of cadential progression is one similar to what is now commonly referred to as deceptive cadence; the bass line, instead of moving down a fifth to the final, moves up a semitone and then goes down to the final.

Like most composers in the sixteenth century, Franco builds his Magnificats around the plainsong intonations which, according to most sources, constituted the point of departure for the setting of the canticle verses. With regard to the composition of Magnificats, Pietro Cerone gives the following

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the others proceed as required by the tone, regular or irregular, with pleasing and appropriate progressions like those shown below, or in some more varied manner according to his pleasure and disposition."

detailed instructions:<sup>32</sup> 1) the best plan is to let all the parts imitate the intonation at the beginning of the verses, always varying the imitation and using different manners; 2) while two parts sing the intonation, the other parts may sing some arbitrary invention; 3) sometimes let all the parts sing certain inventions appropriate to the tone, disregarding the intonation of the plainsong, but pattern the end of the verse according to the ending of the plainsong at least in one part; 4) occasionally, one part sings the entire plainsong from beginning to end, interpolating rests from time to time, and upon this the other parts go on to sing various inventions; 5) use only the first half of the plainsong, disregard the rest; 6) begin with free composition and then use only the second half of the plainsong; 7) one voice may sing half of the plainsong and another may finish the remainder; 8) disregard the plainsong in its entirety (only for experts in the musical profession). The fidelity with which Franco followed the plainsong intonations in constructing his themes is easily noticed by comparing the plainsong intonation (Example 2) with the opening verse of his Magnificat in the second mode, reproduced in its entirety in Example 1. Having committed himself to the traditionally accepted idea that a Magnificat should be built around the familiar melodic formula

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32. Pietro Cerone, El Melopeo y maestro (Naples, 1613), cited in Strunk, op. cit., 271-272.

of the plainsong intonations, the task of the composer then became one of demonstrating his skill as a variationist.<sup>33</sup> Franco uses different procedures to accomplish this task: sometimes the appropriate plainsong tone is freely paraphrased to generate a cantus firmus in a single voice; in other instances, part of the intonation is used as the subject for successive imitations; and occasionally, short motifs from the intonation are used throughout the texture. Furthermore, Franco often uses each of the two natural segments of the verse structure independently, although more frequently he joins them in a continuous flow of overlapping entries and imitations.

With regard to making fugues (imitations), Franco follows strictly the rules given by Sancta María, who says that the three manners of making fugues are at the intervals of a fourth, a fifth and an octave.<sup>34</sup> All the entries in the Magnificat on the second mode occur, with no exception, at one of these intervals.

Finally, one of the most striking characteristics of Franco's style is its apparent chordal nature. Passages like the one illustrated in Example 8 are not rare in Franco's music and one can almost attempt to make a harmonic analysis by using Roman numerals.

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33. Stevenson, Music in Mexico, 113.

34. Sancta María, op. cit., folio 64.

Example 8. Franco Codex, Magnificat in the second mode,  
Verse 6.

5 6 7 8

ten - ti - am fe - cit po - ten - ti - -

cit po - ten - ti - am

- - ti - am [fe - cit po - ten - - -

ten - ti - am] fe - cit po - ten - - -

9 10 11 12

- - - am in - bra - - - chi - o su -

in bra - - - chi - o su - -

- - ti - am] in bra - chi -

ti - am in bra - chi - o

However, I would like to suggest that such "chordal" effect is only the result of Franco's conservative treatment of consonances and dissonances but handling it in a basically linear manner. As it can be observed in Examples 1 and 8 (and in any section of the Magnificats for that matter), Franco's texture can be characterized as nearly all

consonant, with the exception of passages where fast scalar motions occur; dissonant combinations are seldom found, even in the form of suspensions. Therefore, the "chord-like" sonority of his music is only the natural result of a nearly exclusive combination of different voices by means of intervals of the octave, fifths, thirds, and sixths. This is one consequence of the conservative traits in Spanish music already mentioned above.

A comparison of the Magnificats of the Franco Codex with those of the contemporary European masters (Morales, Guerrero, or Palestrina) shows that Franco had mastered well the craft of his time and that he transported to the New World the technical facility upon which a new generation of composers would later build their own tradition.

#### Spanish and other European Books Used in Mexico Prior to the Mexican Treatises

The teaching of music was one of the first and most important activities of the Spanish missionaries. The pioneer efforts of Fray Pedro de Gante and Fray Juan de Caro were followed by a group of collaborators known as "los doce Franciscanos" (the twelve Franciscans). This group, often referred to as "the fathers of the Mexican church" (Roman Catholic church is implied), arrived at the Franciscan mission in 1524. The members of this group were Fray Martín de Valencia (principal of the mission), Fray Francisco de Soto,

Fray Francisco de los Angeles o Quiñones, Fray Martín de Jesús o de la Coruña, Fray Antonio de Ciudad Rodrigo, Fray Toribio de Paredes o de Benavente (Motolinía), Fray García de Cisneros, Fray Luis de Fuensalida, Fray Juan de Ribas, Fray Francisco Ximénez, Fray Andrés de Córdoba, and Fray Juan de Palos.

Music teaching in the New World was patterned after European models. The subjects taught in Mexican music schools were probably equivalent to those at European universities of the time: study of plainchant and polyphony, melodic dictation, counterpoint, performance of several instruments, and others. Undoubtedly, the teaching of music via European methods continued until books written by Mexican authors began to appear. References to the following Spanish treatises are found as having been used in Mexico from the sixteenth through the eighteenth centuries:<sup>35</sup> Pedro Guevara de Loyola, Arte para componer canto llano (Sevilla, 1582); Francisco de Montanos, Arte de música theórica y práctica (Valladolid, 1592); Andrés Lorente, El porqué de la música (Alcalá de Henares, 1672); José de Torres y Martínez Bravo, Reglas generales de acompañar en órgano, clavicordio y arpa (Madrid, 1702); Pedro de Ulloa, Música universal, o principios universales de la música (Madrid, 1717); Jerónimo Romero de Avila, Arte de canto llano y órgano (Madrid, 1761); Antonio Soler, Llave de la modulación y antigüedades de la música (Madrid, 1762); and Antonio Eximeno, Dell'origine e delle regole della

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35. Saldívar, Historia de la música en México, 129-132.

musica colla storia del suo progresso, decadenza, e rinnovazione (Roma, 1774). The Italian treatise (but written in Spanish) El Melopeo y maestro (Naples, 1613) by Pietro Cerone was also well known in Mexico. Furthermore, references found in the works by Mexican authors regarding other noted European theorists such as Boethius, Ornithoparcus, Aaron, Zarlino, Tartini, Kircher, and others,<sup>36</sup> not only testify to the fact that their works had reached Mexican territory but also that local musicians were well informed of the essential development of music theory in Europe.

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36. For references see footnote 2 of chapter I of the present work.



### Chapter III

#### BEGINNINGS OF MEXICAN THEORY: ANTONIO VARGAS Y GUZMAN, EXPLICACION PARA TOCAR LA GUITARRA, 1776

The study of music theory in Mexico began, as stated previously, with the arrival of Spanish musicians and teachers to Mexican territory. As expected, a notable Spanish influence took place in Mexico during the colonial era, dominating almost every aspect of cultural life. However, the residents of the New World soon became aware of the convenience of establishing their own tradition: they began to build their own cathedrals and, not satisfied with the music literature that was imported from Europe, they composed their own music and published their own books. Furthermore, they were also preoccupied with the technical aspects of music as well as with the theoretical problems involved in explaining it. It can be assuredly stated that several theoretical books were written in Mexico during the seventeenth or even as early as the sixteenth century. Historical references, as well as personal testimonies of some who claimed to have seen some of these early treatises, attest to their existence. One such testimony is given by the Mexican musicologist Guillermo Orta Velázquez:

There is evidence for the existence of many manuscript methods (written in Mexico), whose

pedagogical and formative value must not be judged according to their content, but rather, according to their usefulness in music instruction. For our own satisfaction, we have had in our hands some of these rare copies which denote accuracy in their precepts, according to the musical theory of the time.<sup>1</sup>

### Two Early Mexican Treatises Previous to the Explicación

The first historical reference with regard to a theoretical treatise written in Mexico is perhaps the one given by the chronicler Fray Francisco de Burgoa (1604-1681). In his Geográfica descripción,<sup>2</sup> Burgoa talks about one Indian, Juan Matías (ca. 1617-1667), native of San Bartolomé (called Zaapeche in Indian dialect), a town in the state of Oaxaca well known for having several fine ecclesiastical musicians.<sup>3</sup> Burgoa's report relates that Matías was such an extraordinary musician that, when he was only twenty years of age, a Spanish chapelmaster decided to take him to Spain to present him before the king. Unfortunately, the ship on which he was to make the journey did not sail that year and Matías had to return home. Almost immediately afterwards, he was appointed

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1. Guillermo Orta Velázquez, Breve historia de la música en México (México: Librería de Manuel Porrúa, 1970), 198-200. The author does not specify by name which treatises he had the opportunity to examine.
  2. Francisco de Burgoa, Geográfica descripción de la parte septentrional, del polo ártico de la América (México: Juan Ruyz, 1674), chaps. 39, 77, and Index.
  3. For more biographical information, see Robert Stevenson, "El mas notable de los maestros Indígenas," Heterofonía XI (Julio-Agosto 1975), 3-9.

chapelmaster at the Oaxaca Cathedral, selected over several eminent musicians from Mexico City and Puebla. Matías remained in that position for fifteen years, during which he achieved great recognition as a composer. He was a prolific composer of church liturgies such as: kyries, glorias, credos, and music for vespers and other offices. Among his best works are a Stabat Mater and a sacramental villancico titled Ocho al Santísimo. His secular compositions include villancicos and canzonetas which are widely used by the natives in their celebrations. As a performer he is said to have been able to play anything "from the organ to the smallest instrument as if he was dedicated to such one instrument alone."<sup>4</sup>

In the index to his work, Burgoa makes reference to a theoretical treatise by Matías in which he "reduced harmony to a perfect circle."<sup>5</sup> This book by Matías is probably the first of its kind written in Mexico.<sup>6</sup> Unfortunately, it has been lost and every attempt to locate it has, so far, been unsuccessful. Nevertheless, it seems important to consider what Burgoa meant when he attributed to Matías the achievement of having "reduced harmony to a perfect circle."

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4. Burgoa, op. cit., chapt. 39.

5. Burgoa, op. cit., Index. Also cited by Saldívar in his Historia de la música en México (México: Editorial Cultura, 1934), 113-114.

6. This is the position also taken by other scholars dealing with this subject. For further references, see Saldívar, op. cit., 113-114.

We can perhaps explain this fact by answering two fundamental questions: 1) what did Burgoa (and Matías, for that matter) understand by the term "harmony"? and, 2) how could Matías have reduced such concept of harmony to a perfect circle? With regard to the first question, let us consider a couple of definitions of the term "harmony," previous to Matias' time. About one hundred years earlier, Zarlino defined harmony as: "nothing other than diversity of moving parts and consonances, brought together with variety."<sup>7</sup> As implied in this definition, Zarlino understood by "harmony" to be the sounding together of several parts or voices. He further clarifies his concepts when he speaks of "proper" and "improper" harmony. After giving some consideration to compositions using dissonances in counterpoint, and compositions for two voices alone, Zarlino makes the following statement:

In neither case will what we call proper harmony be achieved. That is, we do not hear the full body of consonance and harmony whose extreme sounds are divided by intermediate sounds. Instead we hear what we call improper harmony, consisting of two voices only, without intermediate sounds.<sup>8</sup>

Evidently, for Zarlino, it requires more than two sounds to achieve "proper harmony." Zarlino is one of the

7. Gioseffo Zarlino, The Art of Counterpoint (Part III of Le Istitutioni harmoniche, 1558), trans. Guy A. Marco and Claude V. Palisca (New York: W.W. Norton, 1976), 52.

8. Ibid., 68.

earliest theorists to recognize the triad and to classify it into major and minor.<sup>9</sup> During the first part of the seventeenth century, several German theorists further defined the concept of harmony. For them the triad played a more important role in the theory of harmony than it did for Zarlino. For Johannes Lippius (1585-1612), for instance, harmony was conceived fundamentally in terms of the triad:

The harmonic, simple, and direct triad is the true and unitrisonic root of all the most perfect and most complete harmonies that can exist in the world. It is the root of even thousands and millions of sounds, because each of them should ultimately be reducible to the parts of the triad, either by unison or by octave. The triad is the image of that great mystery, the divine and solely adorable Unitrinity (I cannot think of a semblance more lucid).<sup>10</sup>

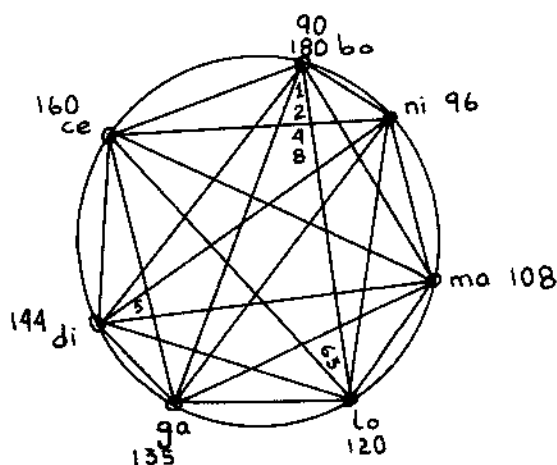
Therefore, it is clear that, by Matias' time, harmony was defined (at least in Europe) in terms of triads. Even Spanish theorists talked about harmony in this respect. For example, as early as 1565, Thomás de Sancta María, perhaps influenced by the instrumental practice of his days, talked about chords and stated that all chordal combinations were to be computed from the bass to the soprano, since the inner voices "serve merely as accompaniment to fill the gap between

9. Joel Lester, "Root-Position and Inverted Triads in Theory Around 1600," Journal of the American Musicological Society XXVII (1974), 110.

10. Johannes Lippius, Synopsis of New Music (Strassburg, 1612), trans. Benito Rivera (Colorado Springs: Colorado College Music Press, 1977), 41

the outer voices."<sup>11</sup> Assuming that Matías was familiar with such newer theory of harmony, just how could he have reduced that concept of harmony to a "perfect circle"? It has been shown that the geometrical figure of the circle was used before Matías, especially by German theorists early in the seventeenth century. The concept of a "circular scale" was introduced by Burmeister and Putaneus and further developed by Lippius.<sup>12</sup> By means of the following figure (Example 1) Lippius illustrated his concept of the "circular scale" which he used specifically to prove the invertibility of intervals.<sup>13</sup>

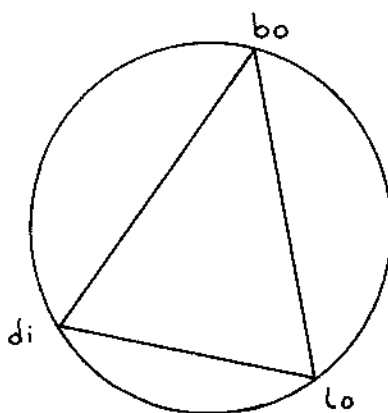
Example 1. Lippius' illustration of the "circular scale."



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11. Thomás de Sancta María, Libro llamado arte de tañer fantasía (Valladolid, 1565), new ed. with introduction by Denis Stevens (Heppenheim, West Germany, 1972), folio 13v.
  12. For further discussion of the theories of Lippius on this subject see Benito Rivera, German Music Theory in the Early 17th Century: The Treatises of Johannes Lippius (Ann Arbor: UMI Research Press, 1974), 88-103, 123-124
  13. Lippius, op. cit., 40.

However, Lippius also used the circle in reference to the harmonic triad. He made reference to a "triangle of the circular scale" (Triangulus scalae circularis) to illustrate the perfection of the triad. Rivera has shown (see Example 2) how Lippius obtained a circular triangle from the above figure.<sup>14</sup>

Example 2. Lippius' Triangulus scalae circularis.



According to Rivera: "the picture illustrates how the triad retains its identity after diffusion, inversion, or enlargement. In every arrangement it remains contained in one and the same circle-triangle."<sup>15</sup>

Through the above illustrations we can see how the circle had been used to explain the invertibility of intervals

14. Rivera, op. cit., 123.

15. Ibid., 124.

and the harmonic triad. One could even say that Lippius "reduced the triad to a perfect circle." However, it is very doubtful that Matías' achievement (that of reducing harmony to a "perfect circle," as quoted by Burgoa) was in any way compatible with the above-mentioned German theories. I would like to suggest that the concept of "harmony," as understood by Matías, was not necessarily the same as the one already discussed in reference to the German theorists. For the time being, and due to lack of information on the content of Matías' treatise, one can only speculate about its possible implications and achievements. However, certain references to another Mexican treatise, supposedly written only a few years after the one by Matías, may shed some light on the subject and help us to understand what seventeenth-century Mexican writers meant when they speak of harmony.

According to several references, a musical treatise entitled Compendio de armonía musical: El Caracol was written during the second half of the seventeenth century by the famous Mexican poetess Sor Juana Inés de la Cruz (1651-1695).<sup>16</sup> Furthermore, a reference by the writer herself, found in one of her poems, attests to the existence of such treatise. General opinion, however, now concedes that Sor Juana's treatise has been lost or destroyed. No one, to my

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16. Orta-Velázquez, op. cit., 197-198; Saldívar, op. cit., 130-131; Alfonso Méndez-Plancarte, ed., Obras completas de Sor Juana Inés de la Cruz, 5 vols. (Mexico: Fondo de Cultura Económica, 1951), I, xliv.



knowledge, has seen it in recent years. Orta-Velázquez believes that the treatise was based on the theory of Guido of Arezzo.<sup>17</sup> Karl Vossler, on the other hand, announces an enlargement of harmonic theory.<sup>18</sup> To what extent are these opinions valid, it is uncertain. Furthermore, the merit of such work has been also evaluated by one of her biographers as follows: "This work, according to the authorities, was so highly praised, that by itself it would have been sufficient to make her world famous."<sup>19</sup> Nevertheless, the best source of information about the content of the book is Sor Juana's own poem Después de estimar mi amor, written for the Excelentísima Señora Condesa de Paredes. In this poem the author offers her apologies for the delay in sending a certain musical treatise the countess had requested from her. The reason for the delay, she explained, was that the book was not yet completely finished; she promised to conclude the work as soon as her health improved. The poem is reproduced in its entirety in Appendix A.

The poem begins with the customary salutation (lines 1-12)<sup>20</sup> after which Sor Juana makes reference to the music

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17. Orta Velázquez, op. cit., 198.

18. Karl Vossler, Die Sehnte Muse von Mexico (Munich, 1934), translated by Pedro Henríquez Ureña as La Décima Musa de México in the prologue to Obras escogidas de Sor Juana Inés de la Cruz (México: Colección Austral, 1939), 15-43.

19. Méndez-Plancarte, op. cit., xliv.

20. Numbers refer to the lines of the poem as reproduced in Appendix A.

treatise (lines 13-14). Then, in a marvelous display of poetry, she offers a summary of the elements of music, presumably those included in the treatise. She refers to the art of composition, its rules, characters, ciphers, proportions, quantities, intervals, dots, lines (lines 21-24), citing Pythagoras with regard to the divisions of the tone (lines 25-32). Following, she discusses whether the diatessaron should be considered a consonance (lines 33-36). Then, she discusses several problems of notation in relation to punto de alteración, máxima, longo, altera, and tripla (lines 41-48), and talks about the imperfection that results when a given note is followed by another one of lesser value (lines 49-56). The term tinta (in lines 61-64) is probably used as synonymous with coloration, in reference to such notational practice. She further speaks about the perfection of the intervals of the octave and the fifth (lines 57-60), and also about the harmonic and the arithmetic divisions of the octave (lines 65-68). Then she considers whether or not all music can be reduced to two mensurations: one for the voice and one for the time, and how these concepts apply to plainchant (lines 69-80). From lines 81-88 she again touches upon the problems of tuning, and shows that the proportion from ut to re is not the same as from re to mi, and similarly the proportion from fa to sol is also different from that of sol to la; this being, she explains, because sesquioctava and sesquinona are, although ever so slightly, nevertheless

different. She then refers to the enharmonic and chromatic genera (lines 89-96). Finally, after a delightful interlude (lines 97-116 are purely poetic), she makes direct reference to her yet unfinished musical treatise from lines 117-140. From this point to the end of the poem is merely an elaborate farewell, without any significant references to music.

With regard to the treatise itself, the most revealing part of the poem is from lines 117 through 128. This section is here reproduced, together with English translation:

Y empecé a hacer un Tratado para ver si reducía a mayor facilidad las reglas que andan escritas.	I began to write a treatise to see if I could reduce to greater facility the rules that have been written.
En él, si mal no me acuerdo, me parece que decía que es una línea espiral, no un círculo, la Armonía;	And if I remember well, it seems that I concluded that harmony is not a circle, but a spiral line;
Y por razón de su forma revuelta sobre sí misma, lo intitulé <u>Caracol</u> , porque esa revuelta hacía.	And because of its shape revolving upon itself, I entitled it snail, because of the turns it makes.

The above statement, in which Sor Juana claims to have reduced harmony to the form of a "spiral line," is certainly worthy of note. Moreover, it challenges comparison with Matías' previously discussed concept of the "perfect circle." That Sor Juana was well acquainted with the theory of the "perfect circle" is clearly stated in her poem (see lines seven and eight above). Perhaps she was also aware of Matías' theories (this can be inferred from line four above)

and she was trying in this way to correct him.<sup>21</sup> Before attempting to reconcile these two different ideas, we must first consider the two questions previously left unanswered, and direct them specifically to these two Mexican theorists: 1) what did Matías and Sor Juana understand by the term "harmony"? and, 2) how could have one reduced the same concept to a perfect circle while the other to a spiral line? The answer is found in Sor Juana's poem. Her evident preoccupation with proportions, comas, perfection of intervals, enharmonic equivalences, and her specific reference to Pythagoras, strongly suggest that her concept of harmony was based on the idea of a concordant relationship or ratios of tones; thus having more to do with tuning than with the European development of the harmonic triad: Matías reduced harmony to a "perfect circle" because he adopted equal-temperament; Sor Juana, in the other hand, reduced harmony to a "spiral line" because, as inferred in her poem, she used Pythagorean intonation. The corresponding figures in Example 3 give a visual representation of how each author might have illustrated their own concept.

### The Explicación: General Description

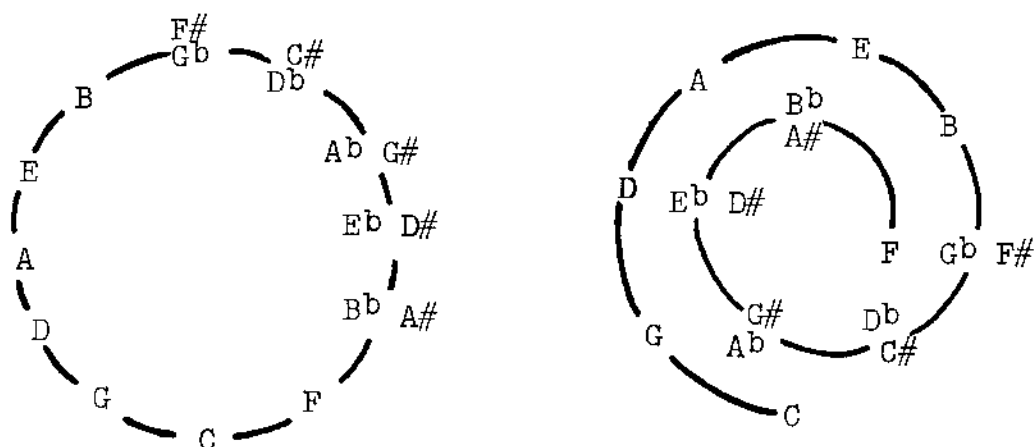
Perhaps the first modern reference to the Explicación was given by Isabel Pope at an American Musicological Society

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21. It is very unlikely that Sor Juana and Matías ever met. However, it is obvious that she was acquainted with Matías' theory of the "perfect circle."

Example 3.

Matías' Perfect Circle      Sor Juana's Spiral Line



session on November 2, 1974. A manuscript copy of this treatise, as Isabel Pope then revealed, is owned by the Newberry Library and catalogued under the following number: Case MS VMT 582 v92e. The complete title of the treatise as it appears on the title page is: Explicación / para tocar la guitarra / rra, de punteado, por / música o sifra y reglas vtilis para / acompañar la parte del bajo / dividida en dos tratados por / Dn Juan Antonio Vargas y Guzmán. / Profesor de este ynstrumento / en la Ciudad de Veracruz / Año de 1776. Being a manuscript copy, it is evident that this treatise was never published. Furthermore, until recent years it was believed that the Newberry Library's copy was the only one in existence. However, a significant discovery was made in 1981, when, among some unclassified materials at the Archivo General de la Nación in Mexico City, a second copy of the Explicación was

found. Credit for the discovery of this Mexican copy is claimed by Juan José Escorza and José Antonio Robles-Cahero.<sup>22</sup> Apparently, both copies (the one at Newberry Library and the one at Mexico City) are similar in content; minor differences in format are understood considering that both are manuscript copies.<sup>23</sup> However, the Mexican copy contains a significant addition: at the end of the theoretical section is a collection of thirteen sonatas for guitar and continuo (not contained in the Newberry Library's copy). Due to the fact that these compositions do not bear their composers' names, and until further evidence proves it otherwise, it has been tentatively assumed that the composer of the sonatas could very well be the author of the treatise himself, Juan Antonio Vargas y Guzmán.<sup>24</sup>

Very little is known about Juan Antonio Vargas y Guzmán. The only information about his life is provided by the author himself. The title-page inscription in Explicación indicates that he was a professor of guitar at Veracruz in

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22. Juan José Escorza and José Antonio Robles-Cahero, "Two Eighteenth-Century Treatises (at Mexico City) on Instrumental Music," Inter-American Music Review VI/1 (Fall, 1984), 1.

23. For the purpose of the present study, the copy at the Newberry Library has been the one basically used. This work was well advanced when news about the discovery of the Mexican copy were published. Therefore, all page-number references relate to the Newberry Library's copy.

24. This is the position taken by Escorza and Robles-Cahero. See Escorza and Robles-Cahero, loc. cit.

1776. This brief piece of information is all that is presently known about him. The fact that he wrote his treatise in the city of Veracruz further confirms historical reports regarding the high cultural level of that city whose inhabitants were described by some of the chroniclers as "the best educated of all cities in the New Spain."<sup>25</sup> This remark is not surprising considering the geographical position of the port of Veracruz. Because of its strategic location, Veracruz served in colonial times as the gate of entrance for Spanish musicians and other European intellectuals who came to Mexico to propagate their music and culture.

With regard to the study of music in Mexico, especially in the areas of music theory and guitar instruction, Explicación constitutes an invaluable source. It is possibly the earliest surviving music treatise written in Mexico and perhaps the only extant work of its kind from the eighteenth century.<sup>26</sup> An investigation of this treatise reveals to a great extent the level of the quality of musical instruction in Mexico at that time. Well documented, it provides sufficient evidence

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25. Francisco Javier Clavijero, Descripción de la provincia de México según el estado en que se hallaba el año de 1767, published from the original manuscript in Mariano Cuevas, ed., Tesoros documentales de México, Siglo XVIII (México: Editorial Galatea, 1944), 332-333.

26. One possible exception to this statement is a plainsong treatise, Arte de canto llano, written by Vicente Gómez sometime during the late eighteenth or early nineteenth century. A manuscript copy of this treatise is located in the personal collection of Gabriel Saldívar (1909-1980) at Mexico City.

about the professional training of its author. Throughout his work, Vargas y Guzmán makes repeated references to such authors as San Agustín (p. 17), Cicero (p. 36), Boethius (p. 38), Aaron (p. 33), Ornithoparcus (p. 34), Francisco Correa de Arauxo (p. 137), Andrés Lorente (p. 260), Juan del Vado (pp. 165, 259), José de Torres y Martínez Bravo (pp. 132, 221, 234), Santiago de Murcia (pp. 4, 131), and Pablo Minguet y Yrol (pp. 4, 131).<sup>27</sup>

From the perspective of a guitar manual, Explicación is to be considered as one of the most complete of its time. His extensive discussion of subjects such as the history of the guitar, techniques of guitar playing, guitar notation, realization of figured bass symbols, precise tunings and stringings in reference to six- and seven-course guitars, and the inclusion of numerous musical examples, have placed Vargas y Guzmán, according to modern writers, "in the forefront of guitar treatise writers of his epoch."<sup>28</sup>

One outstanding feature of Explicación is the great care with which the author organized his material. This extensive work, 303 pages long, is carefully divided into two treatises and numerous chapters. The entire work is organized as follows:

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27. For further discussion see Stevenson, "A Neglected Mexican Guitar Manual of 1776," Inter-American Music Review I/2 (Spring-Summer 1979), 205-210.

28. Escorza and Robles-Cahero, op. cit., 1.



Title page.

Statement of purpose - pp. 1-14.

Introduction to the first treatise - pp. 17-19.

First treatise - consisting of 25 chapters, pp. 19-126.

Introduction to the second treatise - pp. 127-130.

Second treatise - consisting of 34 chapters, pp. 130-293.

Table of contents - pp. 293-303.

Appendix - containing thirteen sonatas for guitar and continuo. This Appendix is found only in the copy at the Archivo General de la Nación in Mexico City.

Vargas y Guzmán's objectives in writing his Explicación are clearly stated in the prefatory section Declaración de la obra (statement of purpose). There are two main objectives: 1) to instruct the student in the basic techniques of playing the guitar, with special emphasis on accompanying,<sup>29</sup> and 2) to provide the student with a strong theoretical foundation which the author considered indispensable for becoming a competent performer. This aspect, in Vargas y Guzmán's opinion, was lacking in the guitar instruction up to that time.

Es el instrumento  
de la Guitarra uno de los  
que . . . experimentan

The guitar is among  
those instruments which . . .  
suffer such negligence

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29. Vargas y Guzmán, Explicación, 7: "pero lo que me atrebo a asegurar es, que casi sin penzar ni fatiga alguna se hallará el aficionado instruido en los puntos mas esenciales de esta materia, especialmente en la de el acompañamiento."

esta omision y abandono; y se deriva de esto, sin duda el que sus aficionados, y aun Maestros lo ejerciten, sin los precisos fundamentos a que esta afecta toda clase de armonías.<sup>30</sup>

and abandonment. This explains, no doubt, the fact that amateurs, and even teachers, play it without the precise foundations which lead to the proper understanding of harmony.

Even the works of such renowned authors as Santiago de Murcia and Pablo Minguet y Yrol were considered by Vargas y Guzmán to be deficient in teaching music theory.<sup>31</sup> In reference to the above-mentioned Spanish treatises, Vargas y Guzmán states:

Estos lei yo acabado mi estudio de Música, . . . pero a pesar de sus rumbosos nombres, no los juzgue ni califico por suficientes para que por ellos solos se haga el principiante capaz de manejarlo con las formalidades y circunstancias que se requieren, ni instruirse de la Teorica que es indispensable preceda, si ha de gloriarse de buen Tocador.<sup>32</sup>

I read these books after I concluded my music studies, . . . but in spite of their sophisticated titles, I do not judge them, in themselves alone, capable of preparing the beginner to manage the instrument with the required formality and precision, nor to provide him with the indispensable theoretical knowledge which must precede the practice if he is to take pride in being a good performer.

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30. Vargas y Guzmán, op. cit., 2-3.

31. Vargas y Guzmán, op. cit., 4, citing Santiago de Murcia, Resumen de acompañar la parte con la guitarra (Madrid, 1714), and Pablo Minguet y Yrol, Reglas y advertencias generales que enseñan el modo de tañer todos los instrumentos mejores y más usuales (Madrid: Joaquín Ibarra, 1752-1754).

32. Vargas y Guzmán, op. cit., 5.

This definite concern by the author of the need in theoretical instruction justifies the inclusion of the Explicación (a work supposedly intended for the teaching of the guitar) in a study, like the present, concerned primarily with the development of music theory in Mexico.

As mentioned above, the entire work is divided into two treatises for the sake of organization and clarity. In the first treatise, De la guitarra de punteado, the author's intention is to provide the student with an appropriate foundation, both theoretical and practical, upon which he may later build his musical edifice.

En el tratado primero, se hallara expresado lo que conduce a la verdadera inteligencia de el estudioso teórico y a las firmes y eficaces reglas de el aficionado practico.<sup>33</sup>

In the first treatise one finds the principles which lead to the true knowledge of the dedicated theorist and to the precise and efficient rules of the practical amateur.

The first treatise may be conveniently divided as follows: chapters 1-3, 6, and 19-22 give instruction on the basic techniques of playing the guitar; chapters 4, 5, and 7-18 are devoted to the study of music theory, including a section on ornamentation (chapters 15-17); and finally, the last three chapters (23-25) contain a discussion on guitar notation, in which the author compares cipher notation with conventional music notation, and subscribes to the superiority

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33. Ibid., 8.

of the latter system.

The second treatise, De la guitarra de bajo, is both a manual of instructions for accompanying as well as a harmony book. In his preliminary description of the treatise (Declaración de la obra), the author also states the purpose of the second treatise as follows:

En el tratado segundo, que habla de hacer con la Guitarra la parte del Bajo, se encontrarán repetidas y particulares reglas, para el modo mas ordinario, y comun que ay de poner las voces sobre todos los movimientos que pueden ocurrir en el, continuandolas con exemplos y demostraciones practicas hasta llegar al metodo mas clasico y primoroso del acompañamiento, . . . para que con inteligencia y exercicio de las posturas llanas, egecute un armonioso compuesto de todas las consonancias caracter y Blazon propio de la Musica que en acordes armonias se valga de consonantes o disonantes especies de cuya oposicion resulte un primoroso agregado de dulcissimas melodias.<sup>34</sup>

The second treatise dealing with the realization of the bass on the guitar, gives repeated and specific rules about the usual manner of placing the upper voices, taking into consideration all possible movements of the bass line. This is demonstrated with examples and practical illustrations designed to get the student acquainted with the most common and elegant method of accompanying, . . . so that with intelligence and diligent practice, he may be able to produce a harmonious combination of all consonances suitable to music, and to blend, in a concordant manner, consonant with dissonant species from whose combination results a wonderful agregate of the sweetest melodies.

Therefore, in this second treatise the author seeks to achieve a balance between theory and practice, presenting theoretical principles as needed to support his teachings on accompanying.

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34. Ibid., 10-12.

In the first eight chapters he introduces some basic concepts for the study of harmony: modes, keys, and intervals. In chapters 9 and 10 he gives practical and theoretical advice especially with regard to accompanying with chords in root position and first inversion. From chapters 11 to 17 he explains how to harmonize a bass line, ascending as well as descending, moving by steps as well as by skips. In the following eleven chapters (18-28), he discusses the use of dissonant harmonies (especies falzas), that is, chords containing seconds, fourths, tritones, and sevenths. Chapters 29 and 30 deal, respectively, with the interpretation of figured bass symbols and accompanying fast-moving bass lines. Finally, the treatise closes with a discussion of cadences (chapters 31-34). A summary, with musical examples, often follows each major division.

In the following analytical study of Explicación, all the major theoretical concepts discussed therein will be considered in greater details. Since, as stated in the introductory chapter, the present study is basically concerned with the development of music theory in Mexico, only those sections of Explicación containing topics of theoretical significance will be considered. Sections of the treatise dealing with other topics such as the history of the guitar, tuning and stringing, techniques of guitar playing, guitar notation, etc., will not be considered further.

Analytical Study: First Treatise

As stated by the author, it was his intention to write a treatise as complete and authoritative as possible. With this purpose in mind, prior to the discourse itself, he felt necessary to review the writings of both "ancient and modern authors" which, in turn, served as guidelines in the elaboration of his own dissertation.<sup>35</sup>

Vestiges of Medieval Theory (Chapters 4 and 5)

In following the traditional format, Vargas y Guzmán typically begins his discourse on music theory with the medieval definitions and divisions of music. Quoting Pietro Aaron he defines music as follows:

La Musica es una ciencia que consiste en numeros, proporciones, consonancias, medidas, y cantidades . . . Es una cantidad de voces por ynstrumentos naturales, o artificiales armonicamente recogidos.<sup>36</sup>

Music is a science which consists in numbers, proportions, consonances, measures, and quantities . . . It is the harmonic combination of several voices, by means of natural or artificial instruments.

The above passage, although quoting on the authority of Aaron, could in fact be easily made by almost any theorist from Boethius to Zarlino. Throughout his work, Vargas y Guzmán

35. Ibid., 6: "y assi empese a repasar algunos Autores antiguos y modernos segun los conseptue oportunos para acordinar esta obra con cuyas guias dí principio . . ."

36. Ibid., 33, citing Pietro Aaron, Toscanello in Music (Venice, 1523), Book I, chapt. 1 and 3.

shows himself as a diligent scholar, always willing to give credit to the original sources. However, he is not, and he makes this clear, a mere expositor of other authorities.<sup>37</sup> On the contrary, he shows originality and does not refrain from criticizing other authors or disagreeing with them if necessary. To the definition of music quoted above, Vargas y Guzmán adds his own explanation.

Dicese una cantidad de voces por que se adbier-ta, que una sola no hace armonia, sino que es parte de ella. Previene-se por Ynstrumentos Naturales ó Artificiales para que se conosca que los primeros son aquellos por donde naturalmente sale la voz que producen las partes de la armonia, y los segundos, los que por arte ó Ynstrumentos a este efecto contruidos forman el son semejante a el de las voces. Y se expresa que armonicamente recogidos para que se entienda que las voces unidas en disonancia no hacen Musica.<sup>38</sup>

I say several voices to make clear that one voice alone does not make harmony, but is only one of its components. With regard to natural or artificial instruments, let it be known that the former are those which, in a natural manner, produce the voices which make the different parts of harmony; the latter are those instruments which, artfully constructed, resemble the sound of the voices. Furthermore, the expression harmonic combination makes it clear that voices united through dissonances do not make music.

Although not entirely original, one may say, the above definition of music does give evidence of some original thinking.

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37. Ibid., 12: "No disminuye el merito de mi tarea haber cogido el rocío de las Rossas de varios Autores, pues aun que me sirven sus cadencias de materia, solo tengo de propio empleo los puntos que la enlazan."

38. Ibid., 33-34.

After complying with the traditional practice of relating music with numbers and proportions, Vargas y Guzmán then states his own requirements for a complete definition of the term. These requirements are: 1) that to make music, not just one but several voices are required; 2) that music can be equally made by voices or instruments; and 3) that the different voices must be combined by means of consonances, i.e., dissonances do not make music. These three concepts may be of some significance, especially if one considers the time and circumstances under which they were stated. First, we see that the author defines music only in terms of several voices sounding together. This is significant in itself, considering that other local authors contemporary to him were still writing plainchant treatises. Second, Vargas y Guzmán considers instrumental and vocal music equally important; in fact, his treatise is perhaps the first ever written in Mexico on instrumental music. Finally, his repeated concern with verticalities (which he calls "harmonic combinations") strongly hints that Vargas y Guzmán's concept of harmony was significantly more advanced than that of the two previously discussed Mexican theorists (Matías and Sor Juana). The basically homophonic character of the sonatas included at the end of the Mexican copy of his treatise, attests to a more triadically oriented concept of music. In concluding the section on definitions of music, the author gives a brief definition of mensural music:



Y por ultimo diré con los modernos que la Musica Metrica, ó Mensural, es diversa cantidad de figuras las que les aumentan o disminuyen segun el modo, el tiempo y la prolacion . . ."39

And finally, I will say with the moderns that mensural music is diverse amount of figures, augmented and diminished, according to the mode, the time and the prolacion . . ."

In chapter 5, De los géneros de Música que ay y sus explicaciones, Vargas y Guzmán ventures deep into medieval speculative theory. Relying on such authorities as Cicero and Boethius, he narrates on the three stereotyped divisions of Music: música mundana, música humana, and música ystrumental,<sup>40</sup> and, in these passages the author expends his most imaginative and poetic language. He explains música mundana as follows:

La primera digeron ser aquella que con un maravilloso conciento de todos los movimientos Celestes con la uniforme variedad de los tiempos y combeniente mescla de los Elementos, consiste en la fabrica hermosa de este visible Mundo . . . Es una Armonia causada con el movimiento de las Estrellas, y con el impetu de las Esferas, por que si bien se adbierte el tiempo que se mide por el curso de los Planetas, es hijo de una

The first is that which, with a marvellous concert of all celestial movements, the uniformed variety of the times, and the appropriate mixture of all elements, consists in the wonderful factory of this visible world . . . It is a harmony caused by the movement of the Stars and by the impetus of the Spheres, because if we observe well, the time, which is measured by the course of the Planets, is the son of

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39. Ibid., 34-35.

40. Ibid., 36, 38, citing Cicero, Principia musica, Book 5, chapt. 5, and Boethius, De institutione musica, Book 1, chapt. 5.

Celeste Armonia. Los Astros y los Planetas son los Musicos del Cielo, que con alternadas revoluciones, forman un suavísimo concierto variando la Voz, según la diversidad de los aspectos, levantando el tono en la elevación de el Polo, y abatiéndole cuando desciende al Perigeo de su Esfera. En los Equinoccios y Solsticios se significan las pausas, en el movimiento de raptó las fugas en la retragación, las repeticiones, y en el movimiento de trepidación los Quiebros. Así se forma el tiempo con la imperceptible consonancia de estos Celestes Orfeos a quienes sus propios Orbes sirven de Sitaras e Instrumentos siendo los Rayos de su Luz de Hilo de Oro, los días notas blancas las Noches negras, y las inteligencias que los mueben llevan el compás, midiendo las distancias, y regulando los movimientos, con tan grande proporción y Uniformidad que cada instante es una composición de inexplicables armonías.<sup>41</sup>

Celestial Harmony. The Stars and the Planets are the musicians of Heaven which, with alternating rotations, make the sweetest concert; varying the voice according to the diversity of the aspects, raising and lowering the tone conjointly with the elevation of the Pole and its descent to the Sphere's Perigee. In the Equinoxes and the Solstices we see the pauses; in the movement of rapture, the fugues; in the retrogradation, the repetitions; and in the vibrations, the trills. In this manner time is formed, by the imperceptible consonance of the Celestial Orpheus to whom their own Orbs serve as cithern, whose golden strings are made by the beams of the light. The days are the white notes and the nights the black notes, and the intelligence, which keeps them in movement, carries the beat, measures the distances, and regulates the movements with such great symmetry and proportion, that every moment becomes a composition of indescribable harmonies.

With regard to música humana, the author says:

Musica Humana, dixeron ser aquella que se forma por la concordancia

Musica Humana, has been said to be that formed by the concordance

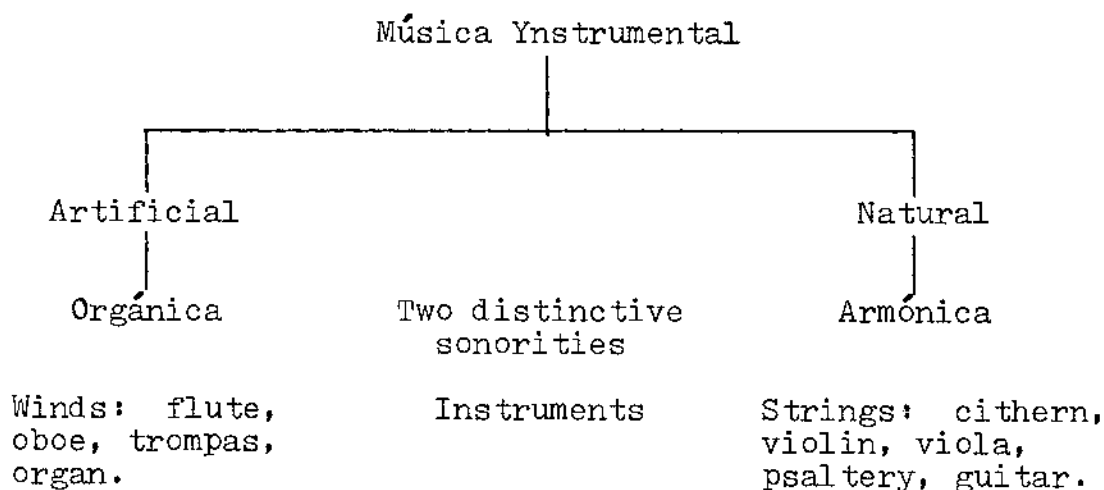
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41. Ibid., 36-38.

de diversos Elementos en un compuesto, por la qual naturaleza de los espiritus se junta con el cuerpo . . . y assi claramente vemos ser el Alma y el Cuerpo compuestos con admirables proporciones las quales hacen distintas consonancias.<sup>42</sup>

of the diverse elements which form a composite. This concordance further unites the Spirit with the Body . . . and so, we clearly see how both, the soul and the body, are shaped with marvellous proportions which in turn generate a diversity of consonances.

Vargas y Guzmán's classification of música ynstrumental is illustrated in the following chart:<sup>43</sup>



Finally, the author presents one last classification of instrumental music:

42. Ibid., 38, citing Boethius, De institutione musica, Book 1, chapt. 5.

43. Vargas y Guzmán's classification of natural and artificial instruments does not correspond to Zarlino's musica harmonica o naturale and musica artificiata. Although both authors use the same terms, Zarlino actually means vocal (naturale) and instrumental (artificiata) music, whereas Vargas y Guzmán in fact classifies two different types of instruments, as illustrated in the above chart.

Esta Musica es de dos maneras, Ynspectiva, y Activa, ó de otra forma, Theorica, y Practica: aquella consiste en conocer mirar, y aberiguar las circunstancias de el Arte, contentandose con saberlas sin oyrlas: Y esta es la que canta ó toca segun sus preceptos artificiosamente y con gusto, oyendolas sin conocerlas, de cuyas partes tiene el primero lugar la Theorica porque vale mas la Ciencia que el huso de ella.<sup>44</sup>

This music is of two types: inspective, and active, or stated differently, Theoretical and Practical. The former attempts to contemplate, to investigate, and to know all the circumstances of Music, being satisfied with the knowledge alone and with no further need for listening. The latter is that which sings and plays according to rules, skillfully and with good taste, listening but without understanding. Of these two kinds, Music Theory takes precedence because Science is of greater value than the use one makes of it.

Significantly, this last classification of music serves more than merely dividing musical knowledge into two categories: it emphasizes the author's highest regards for the study of music theory. More specifically, the above statement challenges anyone who may consider Explicación significant only as a guitar manual and ignores its importance as a theoretical book. Playing, no matter how skillfully done, says the author, is of no great significance unless it is accompanied by a solid theoretical foundation. In fact, one may infer from the author's repeated allusions to this matter that he would much rather be regarded as a theorist without the ability to perform, than a performer without proper understanding of music.

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44. Vargas y Guzmán, op. cit., 40.

The Basic Elements of Music (Chapters 7-18)

Faithful to his expressed purpose of providing the student with a proper theoretical foundation, the author devotes twelve chapters in the first treatise to basic elements of music such as keys, accidentals, time signatures, tempo marks, signs, scales, figures, etc. The following are the items discussed.

The G-sol-re-ut scale. The first concept presented is the G scale which, according to Vargas y Guzmán, is the most useful for the guitar.

La Escala o clabe de G. sol: rre: ut: que es la que sirve para la Guitarra de Punteado se compone, de beinte y tres signos naturales, que para distinguir-se unos de otros, se dividen Regrabes o Segrabes siete grabes, siete agudos, y siete sobre agudos.<sup>45</sup>

The Scale or key of G-sol-re-ut, which is the one used to play on the guitar, is made of twenty three natural signs, which for the sake of clarity, are divided into Regrabes or Segraves, seven graves, seven acute, and seven super acute.

This description of the G scale shows little resemblance to our traditional concept of scale (major, minor, or even modal). The explanation, however, is simple: since the author is basically concerned with the guitar tessitura, he arranges the natural (unaltered) pitches, found in the fingerboard, in an ascending twenty-three-note scale from g to f<sup>3</sup>. For the sake of comparison and because of obvious resemblances with old traditions, this arrangement

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45. Ibid., 45.

may be conveniently described as a type of "Guitar Greater Perfect System." The G scale as illustrated by the author is shown in Example 4.<sup>46</sup> For this example Vargas y Guzmán employs both music and cipher notation. Also, with regard to the G scale, he explains that in addition to the twenty three "natural signs," there are thirty one "accidental signs" (sixteen sharps and fifteen flats). Although theoretically there could be one sharp and one flat for each sign, he explains that in some cases these accidentals are "superfluous," as for instance: e-sharp = f, and f-flat = e.<sup>47</sup>

On Figures. In chapters 8 and 9 Vargas y Guzmán defines the term figura and names the two basic types:

La figura en la Musica es cierta señal, que representa voz, y silencio, por quanto todas las composiciones, estan tejidas con cantables e yncantables.<sup>48</sup>

Figure in music is a certain sign which represents sound or silence; therefore, all compositions are woven by means of singable and unsingable figures.

The singable figures are the notes--maxsima, longo, brebe, semibrebe, minima, semiminima, corchea, and semicorchea.<sup>49</sup>

46. Ibid., 50.

47. Ibid., 48: "y aunque a todos se les ponen ambas claces, se ha de notar que ay algunos en quienes son superfluos por lo correspondiente a su tono, . . ."

48. Ibid., 51-52.

49. Ibid., 52. He also explains that the maxsima and longo were not used for instrumental music. In their place, the shorter notes fusa and semifusa were added.

Example 4. The G. sol-re-ut scale

E, la, mi - - - - -		♩	III	Regraves
F, fa, ut - - - - -		♩	I	
G, sol, rre, ut - -		♩	I	Graves
A, la, mi, rre - -	0	♩	I	
B, fa, B, mi - - -	2	♩	I	
C, sol, fa, ut - -	3	♩	I	
D, la, sol, rre - -	0	♩	I	
E, la, mi - - - - -	2	♩	I	
F, fa, ut - - - - -	3	♩	I	
G, sol, rre, ut - -	0	♩	I	
A, la, mi, rre - -	2	♩	I	
B, fa, B, mi - - -	0	♩	I	
C, sol, fa, ut - -	1	♩	I	
D, la, sol, rre - -	3	♩	I	
E, la, mi - - - - -	0	♩	I	
F, fa, ut - - - - -	1	♩	I	
G, sol, rre, ut - -	3	♩	I	Sobreagudos
A, la, mi, rre - -	5	♩	I	
B, fa, b, mi - - -	7	♩	I	
C, sol, fa, ut - -	8	♩	I	
D, la, sol, rre - -	10	♩	I	
E, la, mi - - - - -	12	♩	I	
F, fa, ut - - - - -	13	♩	I	

The unsingable figures are the rests, interchangeably called yncantables, mudas, aspiraciones, or espiraciones.<sup>50</sup>

The Music clefs. Chapter 10 is devoted to define and explain the three clefs most commonly used in music:

Las Claves fueron assi nombradas, a imitacion del vocablo latino Clavis que significa la Llave. Clave en la Musica es un abrimiento del canto que trae a conocimiento los lugares de los Signos y de cada punto en qual esta puesto.<sup>51</sup>

The term clef gets its name from the latin word Clavis, which means key. Clef in Music is an opening to the understanding of music signs and figures, according to their different position in the music staff.

An interesting reference to the Guidonian hand is found in the following statement about the music clef:

Es la que demuestra en que sitio estan las voces fuera de la Mano, . . .<sup>52</sup>

It the clef shows the site where the pitches are located, in addition to their location on the hand, . . .

The above statement is important because it reveals that Vargas y Guzmán was perhaps acquainted with Guido's theories, or at least with other authors' descriptions of the Guidonian hand. Of greater significance, however, is the familiarity with which he addresses that subject. The

50. Ibid., 55, 56.

51. Ibid., 60.

52. Ibid., 61.



fact that he gives no further explanation, on how or where were the different pitches located in the hand, is a reliable indication that the Guidonian system--or one similar to it--was considered common practice among his prospective readers. Another aspect which attests to the author's keen theoretical mind is the fact that he not only limits himself to present concepts but, most often, he also attempts to state the reason behind such concepts. In his explanation of music clefs, for instance, he states that they are called "clefs," which means keys, because they "open" the door to the understanding of music signs and figures. In similar fashion he also approaches other concepts. As for the clefs themselves, he says, they are three: the G clef, which is used for instruments and is placed on either the first or the second line of the music staff; the C clef, used for writing voices and placed on the first, second, third, or fourth lines; and finally the F clef (also called Bass clef), used for writing accompaniments in the guitar and placed on the third or fourth lines of the staff.<sup>53</sup>

Accidentals. The author's discussion of accidentals, as compared to other elements, is rather simple: he shows the traditional signs (flat, sharp, and natural) and explains their function. However, one paragraph stands out as noteworthy because of a clear reference to solmization.

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53. Ibid., 61, 62.

Haviendo en la Clave  
sobstenido en Fe: fa: ut  
que por razon de el es,  
Mi: si a otro su seme-  
jante se le pone el B.  
quadro lo hace Fa,  
quitandole medio punto.  
Estando el B: mol en  
B: fa: be: mi: que por  
este motibo ha de cantar  
Fa, con el B: quadro le  
adelanta medio punto  
haciendolo Mi.<sup>54</sup>

And if the signature has  
a sharp on F-fa-ut then,  
because of it, that note  
becomes Mi; but if we put  
a natural sign in front  
of another F-fa-ut, then  
this one becomes Fa,  
because it is lowered one  
half step. If a flat sign  
is placed in front of  
B-fa-be-mi this will be  
sung Fa, but if it has a  
natural sign, then the  
pitch is raised one half  
step and becomes Mi.

Here we see that Vargas y Guzmán is explaining how alterations also cause a change of hexachord within the solmization system. Referring to Example 4, we see that his natural hexachords begin at F, G, and C. However, when a certain pitch is altered by means of accidentals, then its name must also change. Example 5 illustrates how such mutation occurs, as explained in the above written example by the author.<sup>55</sup>

Example 5. Mutation.

ut-re-mi    ut-re-mi--fa    ut-re-mi-fa    ut-re--mi

54. Ibid., 64.

55. By mutation we mean changing the name of a tone to another name having the same sound; a change of hexachord.

Again, the author does not offer any further explanation on solmization or on how to change from one hexachord to another; obviously, he takes for granted that the average reader was familiar with that practice.

Key signatures and tempo marks. Following his usual procedure, the author begins with the definition of the terms.

La palabra Tiempo en la Musica es el Compás con que se mide el Canto, y la señal yndicial que se pone al principio de la composicion, para dar a entender el valor y ayre de las Figuras.<sup>56</sup>

The word time in music is the measure by which a song is divided; it is also the indication written at the beginning of the composition which indicates the air and value of the figures.

By tiempo, therefore, the author means two things: meter signature, and tempo marks. He also employs the word compás with two different meanings: measure (to mean divisions as in the statement above), and meter signature, as in the following statement.

El compás es la tardanza de tiempo que ay del Golpe que hiere en bajo, a otro siguiente que hiere en bajo.<sup>57</sup>

Compás is the distance between one down beat and the next.

Vargas y Guzmán recognizes two general types of meters: perfect (binary), and imperfect (ternary).<sup>58</sup> Of

56. Ibid., 67.

57. Ibid., 67-68.

58. Ibid., 77. In this he does not follow older practice which considered binary division to be imperfect, and ternary division as perfect.

these, the four principal meters are Compasillo, Compás Mayor, Proporcioncilla, and Proporción Mayor.<sup>59</sup> The first two meters are discussed in a great detail: Compasillo (C) is a duple meter in which each measure consists of one semibreve divided in four semiminims, two at the down beat and two at the up beat; Compás Mayor (♠) requires two semibreves, one on the down beat and the other on the up beat.<sup>60</sup> He does not explain the last two meters because he regards them as not useful for instrumental music. Although the exact meaning of Proporcioncilla and Proporción Mayor is not very clear, it is possible that these terms may be related to the use of proportions (augmentation and diminution of metrical values in certain arithmetical ratios) in the notation of vocal polyphony, especially found in Flemish music of the fifteenth and early sixteenth centuries. Other meters discussed are 2/4, 3/4, 3/8, 6/8, 12/8, and Tiempo de Gavota which he describes as a combination of Compás Mayor and Compasillo because while it belongs to the first meter, it is expressed in terms of figures (notes) of the second: a ♠ governing a measure containing four semiminims.<sup>61</sup> Example 6 illustrates Vargas y Guzmán's own examples of these meters.<sup>62</sup>

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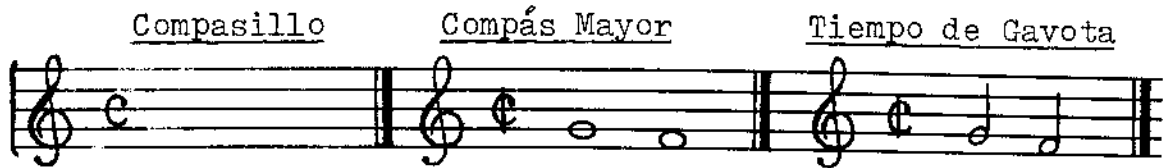
59. Ibid., 69.

60. Ibid., 69, 71, 75, 78.

61. Ibid., 76, 78

62. Ibid., 78.

## Example 6. Meter Signatures.



With regard to tempo marks, the author only names the most common ones without any explanation as to how they should be performed: Allegro, allegretto, Fuga, Andante, Adagio, Grave, Largo, Spiritoso, Presto, Giga, Pastorela, and Andantino.<sup>63</sup>

Music signs. After a lengthy discussion on ornamentation (chapters 15-17)--including the appoggiatura, the passing note, the trill, and the pause--the author concludes this treatise with a few illustrations of music signs such as the repetition sign, the al segno, and a few others.

Analytical Study: Second Treatise

The second treatise of Explicación begins with a brief introduction in which the author exalts the supremacy of music in which both voices and instruments are employed over the purely vocal or instrumental music.

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63. Ibid., 69.

Poderosa eficacia y correspondencia tiene el corazon la consonancia de voces e ynstrumentos acomodandose a el genio y moviendole con oculta simpatia a los afectos predominantes; por eso los Gentiles fingieron que Orfeo con sus Canciones, y Anfion con sus cuerdas de su Ynstrumento, y sonora voz atrayan aquel las Fieras y Selvas, y este los Peñascos para la Fabrica de la célebre Ciudad de Thebas. Dixe de Voz é ynstrumentos por que aunque la primera sea suave, sonora y dulce, faltandole los segundos, esta sin adorno armonioso o sin alma que la vivifique acorde. Resultando de su union sin duda la mas segura, perfecta y suma melodia qual es la que se forma de la ligacion de ambos.<sup>64</sup>

There is a strong correspondence in the consonance of voices and instruments, which touches the heart and brings out the highest affections of the human being. For this reason, the Gentiles pretended that Orpheus with his songs attracted the wild beasts and the forest, and Amphion with his sonorous voice and his stringed instruments attracted the rocks needed to build the city of Thebas. I said voice and instruments because, no matter how smooth, sonorous and sweet the voice may be, it stands by itself without the harmonious array and without the lifegiving soul which the instruments provide. But when both are united, they produce the most certain, the most perfect, and the highest of all melodies.

The author's purpose in his second treatise is not merely to teach the art of accompanying but, more importantly, how to make harmony. For him this is the final stage in the construction of the musical edifice for which he laid the foundation in the first treatise.

#### Basic Principles of Harmony

Following the logical sequence of subject matter, this second treatise begins with some basic principles of practical

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64. Ibid., 127-128.

harmony: some elementary rules for harmonizing the F-scale pattern, and the different ways of harmonizing the diatonic, chromatic, and enharmonic genera of such scale.

Just as the G clef was used in the first treatise for illustrating melodic realization in the guitar, the F clef is now used to demonstrate how to accompany and harmonize the bass line. Although the author calls it "the F scale" (escala de F-fa-ut), it is nothing more than the diatonic arrangement of the natural (unaltered) pitches of the guitar fingerboard written in the F clef. There is, in fact, no specific annotation to any particular tonality or mode. For the harmonization (of the F scale) he establishes the following principles:

La regla general de acompañar las voces solas de una Escala es con tercera y Quinta, eceptuando los Mies que se les dá la sexta.<sup>65</sup>

The general rule for harmonizing each note of this scale is with a third and a fifth, except for the Mies which are given the sixth.

Previous to him, there was some discussion regarding certain diatonic notes which are to be harmonized with a sixth. Both Santiago de Murcia and Pablo Minguet y Yrol placed a sixth on E and B; José de Torres, however, assigned the sixth only to B.<sup>66</sup> Keeping with "common practice," Vargas y Guzmán

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65. Ibid., 131.

66. Ibid., 131, 132. The author cites Murcia, op. cit., 28; Minguet y Yrol, op. cit., first rule; and José de Torres, Reglas generales de acompañar, en órgano, clavicordio, y arpa (Madrid: Imprenta de Música, 1702), 36.

follows the discourse of Murcia and Minguet. The harmonization of the diatonic or natural F scale, as presented by Vargas y Guzmán, is illustrated in Example 7.<sup>67</sup>

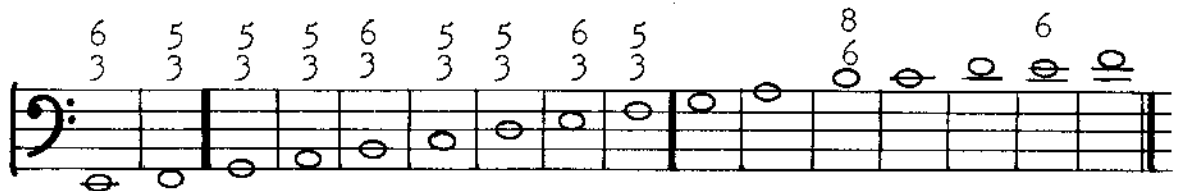
Example 7. Harmonization of the diatonic F scale.

Signos Naturales

Regraves

Graves

Agudos



As can be observed, all diatonic scale degrees are harmonized with intervals of third and fifth with the exception of E and B which are harmonized with a third and a sixth. Although Vargas y Guzmán does not state a reason for this, it is clear that in the B-chord the sixth is given in order to avoid the tritone (B-F); in the E-chord it is perhaps to avoid the hard B and also for the convenience of harmonizing both Mies (B and E) alike. It is important also to keep in mind that the author's only purpose, in the above illustration, is to demonstrate the diatonic chords which are naturally built upon each step of the F scale, but without any reference to a specific tonality. Another aspect which calls one's attention

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67. Ibid., 133.



is the fact that throughout the entire treatise the author does not use the terms "major" or "minor" in differentiating the triadic quality; in fact, he never uses the terms "triad" or "chord." Nevertheless, he illustrates two different sets of chord series with each of the diatonic steps as chord root: one consisting exclusively of major triads and the other of minor triads. He describes these as: "accompanying with major thirds" (Example 8a), and "accompanying with minor thirds" (Example 8b).<sup>68</sup>

Example 8a. Accompanying with major thirds.

Regraves      Graves      Agudos

same as  
graves

Example 8b. Accompanying with minor thirds.

Regraves      Graves      Agudos

same as  
graves

To conclude his illustration on how to harmonize the F scale, the author discusses the diatonic, chromatic, and

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68. Ibid., 135.

enharmonic genera. The diatonic scale, shown in Example 7, is defined as follows:

A esta Escala se dice Diatonica o Natural por que sube el Baxo de Tono en Tono con naturaleza y sin accidente de sobstenido o Bemol . . . Este genero es el mas antiguo y fué nombrado Diatonico por que procedia por dos Tonos.<sup>69</sup>

This scale is called Diatonic or Natural because the bass ascends from one tone to the next, naturally and without accidentals of sharps or flats . . . This genus is the oldest and it was named diatonic because it proceeds by two tones.

With regard to the chromatic and enharmonic genera, Vargas y Guzmán bases his concepts on Correa de Arauxo.<sup>70</sup>

Al primer Genero se dice Cromatico por que hermosea y adorna la Musica con la blandura de los semitonos: Y al segundo llaman Enharmonico por que contiene en si el conocimiento y templanza de las voces.<sup>71</sup>

The first genus is called chromatic because it embellishes and ornaments music with the softness of the semitones. The second is called enharmonic because it contains in itself the knowledge and temperance of the voices.

The chromatic and enharmonic genera are further differentiated as follows:

Al Cromatico pertenecen propriamente los Sobstenidos de Fe: fa: ut: y Ce: sol: fa: ut: y los

To the chromatic genus belong the F-sharp and the C-sharp, and also the B-flat and the E-flat

69. Ibid., 134.

70. Ibid., 137, 138, citing Francisco Correa de Arauxo, Libro de tientos y discursos de música práctica, y theórica de órgano, intitulado Facultad orgánica (Alcalá: A. Arnao, 1626), chapt. 3.

71. Ibid., 138.

Bemoles de Be: fa: be:  
 mi: y E: la: mi: por ser  
 su virtud u oficio sacar  
de Faes naturales mies  
fuertes; y al contrario  
de Mies naturales Faes  
bemoles.<sup>72</sup>

because their virtue  
 and function is to change  
 diatonic F's into strong  
 E's and the opposite:  
 diatonic E's into soft  
 F's.

The effect of accidentals (f-sharp, c-sharp, b-flat, and e-flat) on the chromatic genus, as explained above, is illustrated in Example 9.

Example 9. Mutation in the chromatic genus.

ut-re--mi-fa    ut-re-mi    ut-re-mi-fa    ut-re-mi  
 | changes to |                    | changes to |

ut-re-mi    ut-re-mi-fa    ut-re-mi    ut-re-mi-fa  
 | changes to |                    | changes to |

About the enharmonic genus he states:

A el Enarmonico tocan  
 los sobstenidos de Ge:  
 sol: rre: ut: y De: la:  
 sol: rre: ut: y De: la:  
 sol: rre:, y los Bemoles  
 de A: la: mi: rre: y

To the enharmonic  
 belong g-sharp and  
 d-sharp, and also a-flat  
 and d-flat, because  
 their function is to  
 change diatonic G's into

72. Ibid., 137.

D: la: sol: rre: por ser	sharp E's and
su comision hacer de	diatonic D's into
<u>soles Naturales Mies</u>	soft F's.
<u>sobstenidos y de los</u>	
<u>Rees naturales Faes</u>	
<u>Bemoles . . .</u> <sup>73</sup>	

This is illustrated in Example 10.

Example 10. Mutation in the enharmonic genus.

ut-re-mi -fa-sol ut-re-mi ut-re-mi-fa-sol ut-re-mi  
 [changes to] [changes to]

ut-re-mi ut-re-mi-fa ut-re-mi ut-re-mi-fa  
 [changes to] [changes to]

Finally, Vargas y Guzmán incorporates accidentals (flats and sharps) to his diatonic F scale and proposes the following series of chords: scale degrees altered by a sharp are harmonized with a third and a sixth (i.e., triads in first inversion), scale degrees altered by a flat are harmonized with a third and a fifth (i.e., triads in root-position). This is illustrated in Example 11.<sup>74</sup>

73. Ibid., 137.

74. Ibid., 139, 140.

Example 11. Harmonization of chromatic scale degrees.



To conclude the above discussion, one may state that, up to this point, the author's main purpose has been to present an introduction to triadic harmony including major and minor chords in root position and first inversion only. So far, he has not shown any concern with either tonality or with chord-to-chord progressions.

#### Modality versus Tonality

During the seventeenth and eighteenth centuries Spanish theorists showed a rather conservative approach with respect to modal-tonal theory. In fact, as shown by Almonte Howell, there is very little evidence of new ideas and practices from Francisco de Montanos, Arte de música teórica y práctica (Valladolid, 1592) to Pablo Nassarre, Escuela música (Zaragoza, 1723-1724).<sup>75</sup> In almost every aspect, but especially with respect to modal theory, Spanish writers seem to remain adherent to theoretical traditions of foregone eras. With the exception of Cerone and Correa de Arauxo, who dealt

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75. Almonte Howell, "Symposium on Seventeenth-Century Music Theory: Spain," Journal of Music Theory XVI (1972), 65.

with twelve modes, most Spanish theorists of the seventeenth century remained attached to the system of the eight transposable modes. As observed in Spanish treatises of the seventeenth and eighteenth centuries, the evolution from the modal tradition to a bimodal (major-minor) system was a long process.

Vargas y Guzmán was caught in the middle of such process. Despite his evident acquaintance with other European (non-Spanish) theorists, he remained faithful to the conservative Spanish theoretical tradition. Stevenson supports this position when he states that "In no respect does Vargas y Guzmán reveal himself as more firmly riveted in Peninsular traditions than in his obsession with modes = tones."<sup>76</sup> Therefore, Vargas y Guzmán's bimodal theory is far from being advanced; perhaps because being a resident of the New World he had no immediate contact with current developments in Europe, or perhaps because he based his own theory on authors such as José de Torres and Santiago de Murcia, who were not particularly advanced, especially in the field of bimodal theory, as briefly narrated below.

José de Torres, in his Reglas de acompañar (Madrid, 1702), also does not show any progressive ideas when dealing with modal theory. Following the traditional dodecachordal system he states:

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76. Robert Stevenson, "A Neglected Guitar Manual of 1776," Inter-American Music Review 1/2 (Spring-Summer 1979), 209.

Los tonos en canto de órgano, según la opinión de todos los teóricos son doce, porque a cada signo (exceptuando a Be: fa: be: mi) le dan dos tonos.<sup>77</sup>

The modes, according to the opinion of all theorists, are twelve, because they assign two to each note (except to B-fa-be-mi).

According to León-Tello, the transition from traditional modal theory to a bimodal system is less evident in Torres than in other Spanish authors. He even shows preference for studying the eight ecclesiastical modes alone:

Por ser mas practicados son mas conocidos . . . como porque transportados pueden suplir a los cuatro últimos.<sup>78</sup>

Because they are the most frequently used, they are also the best known . . . and because when transposed they contain the other four.

In comparison, Santiago de Murcia shows a little more progressive attitude in his exposition of modal theory. He classifies the modes (tones) in two categories: natural and transposed. León Tello distinguishes in Murcia's modal theory a tendency towards bimodality in that his transposed tones do not always correspond with the Gregorian octave species.<sup>79</sup> Murcia's classification of tones is as follows:

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77. José de Torres y Martínez Bravo, *op. cit.*, 5, as cited in Francisco José León-Tello, La Teoría Española de la música en los siglos XVII y XVIII (Madrid: Instituto Español de Musicología, 1974), 667.

78. Torres y Martínez, *Ibid.*, 5.

79. León-Tello, *op. cit.*, 708.

	<u>Natural</u>	<u>Transposed</u>
First tone:	D minor without flat. (Dorian mode).	G minor with one flat; and C minor with two flats. (Dorian mode).
Second tone:	G minor with one flat. (Dorian mode).	F minor with three flats. (Dorian mode).
Third tone:	E minor with one sharp. (Minor mode).	A minor without accidentals. (Minor mode).
Fourth tone:	E minor without accidentals. (Phrygian mode).	
Fifth tone:	C major without accidentals. (Major mode).	E-flat major with three flats. (Major mode).
Sixth tone:	F major with one flat. (Major mode).	
Seventh tone:	A minor without accidentals. (Minor mode).	B minor with two sharps; and E minor with one sharp. (Minor modes). Also D natural without accidentals. (This does not match the other three).
Eighth tone:	G major with one sharp. (Major mode).	C major without accidentals. (Major mode).

In this classification, it is worthy of note an evident reduction of the traditional modal system (modes third, fifth, sixth, seventh, and eighth are either major or minor), as well as a significant approach towards bimodality. In addition to the eight tones Murcia also includes four additional which he calls: octavo por el final, segundillo por bajo, segundillo simple, and another kind of segundillo; all of which correspond to either major or minor modes.



It seems apparent that Vargas y Guzmán was acquainted with both Torres y Martínez' and Murcia's modal theories, as some influence from both authors can be detected in his own explanation of the modal-tonal system (chapters 4-6 of his second treatise). However, as shall be shown, he clearly surpassed these two writers.

Vargas y Guzmán begins his discussion of modal-tonal theory with a definition of the term "tone":

Tono es calidad de armonia que se halla en una de las siete especies de la Diapazon modulada, por aquella de Diapente, y Diatesaron que a su forma es combeniente: o de otra suerte mas clara es la distancia que hay de un punto a otro inmediato como de el ut: al rre: de el re: a el mi: de el fa: a el Sol: y de el Sol: a el la: Nacen los tonos de la union o composicion de el Diapente y Diathesaron.<sup>80</sup>

Tone is the quality of the harmony found in each of the seven species of the octave conveniently divided by a fifth and a fourth. More clearly stated: it is the distance from one note to the next, as from ut to re, from re to mi, from fa to sol, and from sol to la. The tones are born from the union of the fifth and the fourth.

Here, "tone" is given two distinctive meanings: first, it is the distance from one note to the next; and, second, and more importantly, it is the octave species formed by the union of the diapente and the diatessaron. In his discourse on tonos naturales and tonos accidentales, Vargas y Guzmán follows Murcia rather than Torres y Martínez.

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80. Vargas y Guzmán, op. cit., 147-148.

Although Vargas y Guzmán's classification of tones shows a considerable resemblance with that of Murcia (previously discussed), there are notable differences between the two.

The following is Vargas y Guzmán's own classification of tones.<sup>81</sup>

	<u>Naturales</u>	<u>Accidentales</u>
First tone:	D minor without flat. (Dorian mode).	<u>Primero punto bajo</u> : C minor with three flats. (Minor mode; does not match its natural mode).
Second tone:	G minor with two flats. (Minor mode).	<u>Segundo punto bajo</u> : F minor with three flats. (Dorian mode; does not match its natural mode).
Third tone:	E minor with one sharp. (Minor mode).	<u>Tercero punto alto</u> : F-sharp minor with three sharps. (Minor mode).
Fourth tone:	E major with four sharps. (Major mode).	<u>Quarto punto bajo</u> : D-flat major with five flats. (Major mode).
Fifth tone:	C major without accidentals. (Major mode).	<u>Quinto punto alto</u> : D major with two sharps. (Major mode).
Sixth tone:	F major with one flat. (Major mode).	<u>Sexto punto bajo</u> : E-flat minor with five flats. (Dorian mode; does not match its natural mode), and; <u>Sexto medio punto bajo</u> : E-flat major with three flats. (Major mode).
Seventh tone:	A minor without accidentals. (Minor mode).	<u>Séptimo punto alto</u> : B minor with two sharps. (Minor mode).
Eighth tone:	G major with one sharp. (Major mode).	<u>Octavo punto alto</u> : A major with three sharps. (Major mode).

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81. Ibid., 149-150, and 160-164.

In addition, Vargas y Guzmán adds three more tones to the list of transposed ones: Segundillo, B-flat major with two flats (major mode); Segundillo con tercera menor, B-flat minor with five flats (minor mode) and; Segundillo punto bajo, A-flat major with four flats (major mode). Segundillo receives its name from the fact that music cast in tone two ends at times with an intermediate cadence, B<sup>b</sup>-A-B<sup>b</sup>.<sup>82</sup> There is, however, one irregularity in the above classification of tones: transposed tones one punto bajo, two punto bajo, and six punto bajo do not correspond with their respective natural tones. It would be reasonable to assume that such discrepancies are due to unintentional mistakes on the part of the author. However, the fact that he gives two transposed tones for the sixth tone--one "correct" and the other "incorrect"--proves that he was well aware of such theoretical discrepancies. Therefore, instead of believing him wrong, it may be proposed that such irregularities result from the fact that Vargas y Guzmán was not yet completely free from the hold of the modal tradition. At the same time, there are clear evidences to support Vargas y Guzmán's bimodal thinking: with the only exception of tone one, all of his tones are either major or minor. Furthermore, he classifies all tones (including tone one) as having either a major third or a minor third in their final

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82. Ibid., 161: "Quando la composicion acabare en Be: fa: be: mi: se llamará segundo por la Mediacion, o Segundillo como vulgarmente se nombra, y si empieza y concluye en Ge: sol: rre: ut: Segundo Tono."

chord.<sup>83</sup> The fact that he did not embrace in his classification all twenty-four possible major and minor tones does not necessarily imply that he did not recognize them. Instead, it is only a matter of practical expediency, as he states that it is not convenient to use tones with more than four flats or sharps:

Ay otros tonos tambien accidentales y se forman atendiendo siempre al Diapazon de el Natural y assi se le ponen los sobstenidos, o Bemoles que le combienen, aunque nunca es bueno pasar de quatro accidentes. Tambien ay otros tonos que se llaman quimericos, y se forman a fuerza de ellos, pero son muy poco usados.<sup>84</sup>

There are other transposed tones which are formed by adding the necessary sharps or flats, to conform with the octave arrangement of the Naturals, although it is not convenient to use more than four accidentals. There are also other tones which have been named Chimerical: they are also derived from the Naturals but they are rarely used.

The author also illustrates each of the eight tones separately by way of notation, with identification of intermediate cadences, final cadences, characteristic octaves, and finales, as shown below:<sup>85</sup>

<u>Naturales</u>	Intermediate cadence	Final cadence	Octave	Final
Tone one: D dorian	A-G#-A	D-C#-D	D-d	D
Tone two: G minor	Bb-A-Bb	G-F#-G	G-g	G
Tone three: E minor	G-F#-G	E-D#-E	E-e	E
Tone four: E major	B-A#-B	E-D#-E	E-e	E

83. Ibid., 149-151.

84. Ibid., 151.

85. Ibid., 160-163.

Tone five:	C major	A-G#-A	C-B-C	C-c	C
Tone six:	F major	A-G-A	F-E-F	F-f	F
Tone seventh:	A minor	D-C#-D	A-G#-A	A-a	A
Tone eight:	G major	C-B-C	G-F#-G	G-g	G

The transposed tones are illustrated separately; each with a IV-V-I cadence written in cipher notation.<sup>86</sup>

Chapter 5 is devoted to give instructions on how to recognize the tone of a given composition. Essentially, the author recommends two aspects:

Para conocer el  
tono que corresponde a  
la composición que se  
va a acompañar se han  
de observar Claves, y  
Finales . . .<sup>87</sup>

In order to  
recognize the tone of  
a composition, look  
at the key signature  
and the final note . . .

Finally, after giving a list of key signatures (up to four flats and sharps) the author illustrates how to harmonize each of the major scales with these signatures. His harmonizations are basically the same as the one previously given to the diatonic scale where the third and seventh degrees were harmonized with first-inversion chords and the rest with chords in root position.<sup>88</sup> Of particular interest is the fact

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86. Ibid., 164.

87. Ibid., 152.

88. There are, however, two exceptions: in the A major and E major scales, he also harmonizes the sixth degree with a first-inversion chord.

that he harmonizes all scales employing the same ambitus: that of the F scale, from G to f<sup>1</sup>. For instance, the A-major scale is harmonized as illustrated in Example 12.<sup>89</sup>

Example 12. Harmonization of the A-major scale.



From above observations, it may be concluded that Vargas y Guzmán's bimodal theory was definitively more advanced than that of Torres y Martínez or Murcia. Vargas y Guzmán shows a definite transitional trend from the ecclesiastical modal system to bimodality. Although he does not actually speak in terms of major and minor tonalities, his entire system of natural and transposed tones is reducible to the major and minor scales. Furthermore, his classification of chords into major and minor, according to the quality of their third, his employment of the leading tone in harmonizing the seventh scale degree as well as in cadential patterns, his discussion of key signatures, and his harmonization of major scales, are all clear indications towards the new bimodal system.

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89. Vargas y Guzmán, op. cit., 156-157.

## Intervals

Chapters 7 and 8 of the second treatise are devoted to the study of intervals. The placement of interval discussion appears somewhat less logical, since the author has made repeated references to intervals such as "major third," "minor third" and others in preceding chapters.

Intervals are referred to as elements or species and are defined in the following manner:

Los Elementos o Especies de la Musica es la distancia que ay de un Signo grave a otro mas o menos Agudo como del uno al dos, de el uno a el tres, de el uno a el quatro etc. . . . Nombranse Unisonus, Segunda, Tercera, Quarta, Quinta, Sexta, y Septima.<sup>90</sup>

The Elements or Species in music are the distances from a grave tone to another more or less acute, as from one to two, from one to three, from one to four, etc. . . . They are called Unison, Second, Third, Fourth, Fifth, Sixth and Seventh.

Vargas y Guzmán classifies intervals in four traditional terms: simples, compuestas, decompuestas, and tricompuestas.

The author's own illustrations would perhaps best serve to elucidate this system, as shown in Example 13.<sup>91</sup>

Intervals are further classified in terms of consonant and dissonant, and consonances are further divided into perfect and imperfect:

90. Ibid., 166-167.

91. Ibid., 168.

Example 13. General classification of intervals.

Simple	1	2	3	4	5	6	7
Compuestas	8	9	10	11	12	13	14
Decompuestas	15	16	17	18	19	20	21
Tricompuestas	22	23	24	25	26	27	28

Llamanse estas assi [imperfectos] por que sus voces se pueden aumentar o disminuir por medio del sostenido o Bemol quedando siempre en especies consonantes a distincion de las perfectas que en alterandolas con qualquiera de estos accidentes pasan a ser Disonantes.<sup>92</sup>

These are called [imperfect] because when they are augmented or diminished, by a sharp or a flat, they always remain consonant. In this, they contrast with the perfect intervals which, when they are altered by a flat or a sharp, they become dissonant.

Consonant intervals, both perfect and imperfect, are illustrated in Example 14.<sup>93</sup>

Example 14. Perfect and imperfect consonances.

1	3	5	6
8	10	12	13
15	17	19	20
22	24	26	27
P	Y	P	Y

92. *Ibid.*, 169-170.

93. *Ibid.*, 170.



Dissonant intervals, also called falsas, are illustrated as shown in Example 15.<sup>94</sup>

Example 15. Dissonant intervals.

2	4	7
9	11	14
16	18	21
23	25	28
F	F	F

Finally, all intervals are classified into major and minor, as illustrated in Example 16.<sup>95</sup>

#### Harmonization of the Bass Line: Chord Progressions

Chapters 9 through 17 form the core of the entire second treatise. This portion contains detailed demonstrations on harmonizing each of the twenty-four possible intervallic movements in the bass line,<sup>96</sup> enumerated as by minor semitone, tone, semitone, major and minor thirds, major and minor fourths, major and minor fifths, major and minor sixths, major and minor sevenths, and by octave, all ascending and descending.

94. Ibid., 171.

95. Ibid., 176.

96. Ibid., 216. The author actually enumerates twenty eight movements (fourteen ascending and fourteen descending) as he counts twice the semitone (minor semitone and semitone), and the tritone ("major fourth" and "minor fifth").

Example 16. Vargas y Guzmán's classification of intervals.

<p>Hetacordio maior Hetacordio men.<sup>r</sup> Diapazon - - -</p>	<p>Sep.<sup>a</sup> maior Sep.<sup>a</sup> men.<sup>r</sup> Octava - -</p>	<p>Tono - - - Semitono - - Ditono - - - Semiditono - Tritono - - - Diathesaron - Diapente - - Semidiapente Hesacordio ma.<sup>r</sup> Hesacordio me.<sup>r</sup></p>	<p>Seg.<sup>a</sup> maior Seg.<sup>a</sup> men.<sup>r</sup> Terc.<sup>a</sup> maior Terc.<sup>a</sup> men.<sup>r</sup> Quarta maior Quarta men.<sup>r</sup> Quinta mai.<sup>r</sup> Quinta men.<sup>r</sup> Sex.<sup>a</sup> maior Sex.<sup>a</sup> men.<sup>r</sup></p>	
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In chapters 9 and 10 the author gives several theoretically and practically important perspectives preceding the study of bass-line harmonization: 1) that the bass is the foundation of harmony, and that all the voices are considered consonant or dissonant according to their intervallic relationship with the bass;<sup>97</sup> 2) that three voices (the bass, the third and the fifth or the sixth), or at least two (including the bass), are necessary to make harmony;<sup>98</sup> 3) that it is important to interpret the figured bass symbols correctly;<sup>99</sup> and 4) that all chords formed by the bass, the third, and the fifth, are called consonancias llanas.<sup>100</sup> Whenever consonancia llana is mentioned, it is major or minor triad in root position that is always implied.

Until now, Vargas y Guzmán's discussion of chords includes only two triadic structures: root position and first inversion. Using these two triadic positions only, he then demonstrates various manners of harmonizing bass lines by way of two-chord conjugations, based on his previously presented

97. Ibid., 181: "se regulan con el Bajo por ser fundamento y Baza con quien se deven medir todas las voces . . ."

98. Ibid., 181: "es de obligacion poner tres voces o al menos dos, incluyendo en ellas la de el Bajo . . ."

99. Ibid., 184: "Que esté atento y vigilante a los movimientos y numeros que expresaren . . ."

100. Ibid., 185-186: "Es Regla general que sobre el Punto considerado por si solo se han de poner tercera y quinta (como ya se ha dicho) que es la consonancia que nombraré Llana por ser comun a todas las notas exceptuando las que carecen de quinta . . ."

twenty-four possible intervallic movements.<sup>101</sup>

Progressions by seconds (chapters 11-12). Progressions by both major and minor seconds are described in terms of two basic types: in ascending or descending motion (gradatim), and in cadential patterns (clausulear). An ascending chromatic motion, as the one illustrated in Example 17a, is harmonized with root-position chord above each diatonic note, and first-inversion chord above each altered note.<sup>102</sup> The result is a series of secondary dominant chords. A descending chromatic passage, on the other hand (Example 17b), is harmonized by retaining two common tones and changing the third (i.e., the note of the bass line) to alter the quality of the chord.

Example 17. Harmonizing minor seconds, ascending and descending.

The author's harmonization of a bass line in ascending motion by major seconds is not illustrated; he simply states that, as long as the notes in the bass ascend diatonically

101. Ibid., 192: "el qual no consta mas que de dos notas para no herrar la Postura que propriamente le corresponde."

102. Ibid., 190, 191.

(that is without accidentals), each of them should be harmonized with a triad in root position. This results in a series of root-position triads with parallel fifths.<sup>103</sup> It should be remembered that Vargas y Guzmán's harmonization is for instrumental writing; he never deals with the matter of voice leading. That is, his demonstration is to show how to harmonize each of two adjacent bass notes and is not concerned, or at least never expressly deal with how each of the voice parts proceeds to the next. This assertion can be supported by his rather angular harmonization examples in the entire Explicación.

With regard to cadential patterns, the minor seconds are usually found in ascending motion (cf. Example 18a), while the major seconds are most often in descending motion (cf. Example 18b).<sup>104</sup>

Example 18. Harmonizing seconds in cadential patterns.

The image shows two musical examples, (a) and (b), on a single staff with a bass clef. Example (a) illustrates ascending motion with minor seconds. It consists of six chords: a triad of G2, B2, D3; a triad of A2, C3, E3; a triad of B2, D3, F3; a triad of C3, E3, G3; a triad of D3, F3, A3; and a triad of E3, G3, B3. The figured bass symbols below are 6, 3, 6, 6, 6, 6. Example (b) illustrates descending motion with major seconds. It consists of six chords: a triad of G2, B2, D3; a triad of F2, A2, C3; a triad of E2, G2, B2; a triad of D2, F2, A2; a triad of C2, E2, G2; and a triad of B1, D2, F2. The figured bass symbols below are 6, 3b, 6, 3b, 6, 3b.

103. Ibid., 193.

104. Ibid., 194, 198.

In later discussions of cadences (chapters 31-34) Vargas y Guzmán classifies the above two progressions as cadencia de segunda o thenor (Example 18b), and cadencia de tiple (Example 18a). With regard to Example 18b, the author indicates that the interval of major third (in the first chord in each of the two-chord progressions) should be changed to a minor third, evidently, as his examples imply, to create a stronger cadential motion (cerrar cláusula) since the altered note forms the interval of the tritone with the note above it:

Quando el Bajo  
hiciera Descenso de Tono  
diciendo fa: sol: se ha  
de acompañar la primera  
figura con tercera menor  
y su Sexta aunque le  
correspondan mayores.<sup>105</sup>

When the bass  
descends by a tone as  
from fa to sol, the first  
chord should be harmoni-  
zed with a minor third  
and a sixth although a  
major third is more  
natural.

Furthermore, the author indicates that all the intervals of sixths during a musical passage should be "natural" (i.e., according to the diatonic steps) but the last sixth (i.e., in the penultimate chord) must be major--even if not so notated--in order to create a proper cadential motion:

. . . bien entendido que  
todas las sextas que me-  
diaren han de ser natu-  
rales y solo la ultima  
se ha de egecutar sobs-  
tenida aunque no lo sea

. . . and let it be known  
that all sixths in the  
middle are diatonic, but  
the last should be played  
as a major sixth, even if  
it is not naturally so.

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105. Ibid., 196.

para que de esta forma  
sierre clausula.<sup>106</sup>

This is done in order to  
execute the cadence.

Progressions by thirds (chapter 13). The general rule to harmonize the interval movement of thirds in the bass line, in either direction, is by root-position triads on each of the two bass notes. However, in order to add variety, the author also shows other variants. Example 19 illustrates how minor-third movements (both ascending and descending) can be harmonized by alternating root-position with first-inversion chords.<sup>107</sup>

Example 19. Harmonizing minor thirds in the bass line.



Linear bass line movements by major third may be harmonized in the same manner, except when a bass note is altered or when the fifth is false (tritone). In such cases, as illustrated in Example 20, a first-inversion chord is more appropriate.<sup>108</sup>

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106. Ibid., 199.

107. Ibid., 203.

108. Ibid., 205.

Example 20. Harmonizing major thirds in the bass line.

The musical notation shows a bass line with four two-chord progressions. The first progression consists of a first-inversion chord (6/3) followed by a root-position chord (3/6). The second progression consists of a first-inversion chord (6/3) followed by a root-position chord (5/3#). The third progression consists of a root-position chord (3#/6) followed by a first-inversion chord (6/3). The fourth progression consists of a root-position chord (3#/6) followed by a first-inversion chord (6/3). The notation includes a bass clef, a common time signature, and various accidentals (sharps) on the notes.

What is actually realized in each of the four progressions illustrated above is an identical chord progression pattern: a first-inversion chord followed by a root-position chord, and vice versa. However, the author not only fails to recognize this harmonic relationship but he does not consider the second chord in each of the two-chord progression patterns to be merely a different arrangement (i.e., inversion) of a tertially constructed chord. For him, one is a consonancia llana, and the other a sixth chord. It is quite surprising that, never in his entire treatise does he speak of the invertibility of chords or of a fundamental bass, in spite of the fact that he recognizes the bass to be the foundation of harmony,<sup>109</sup> and at no time does he address the matter of chord-roots. What is important for him in the above progressions (Example 20) is that some bass notes need to be harmonized with a sixth because: 1) they are altered ( by sharps or flats), or 2) they do not have a perfect fifth.

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109. Ibid., 181: "Que todas las consonancias . . . se regulan con el Bajo por ser fundamento y Baza con quien se deven medir todas las voces . . ."



Vargas y Guzmán's approach to harmony in this regard can be viewed as more practical than theoretical.

Progressions by a perfect fourth down or a perfect fifth up (chapter 14). Perhaps the most significant aspect in this chapter is the author's recognition of the invertibility of intervals. Although he does not necessarily elaborate on this topic, it is obvious that he recognizes the principle of intervallic inversion in practice. His following statement substantiates this viewpoint:

Siempre que en el Bajo se hallare movimiento de Quarta así a abajo o Quinta arriba (que todo es uno) se han de tener presentes los preceptos siguientes.<sup>110</sup>

Everytime the bass skips down a fourth or up a fifth (which is the same), the following precepts should be observed.

In any two-chord progression where the bass line makes a skip of a perfect fourth down or a perfect fifth up, both should be harmonized with root-position triads (consonancias llanas).<sup>111</sup> The intervals of diminished fourth (quarta menor) and augmented fifth (quinta mas que mayor) are considered equivalent and, as shown in Example 21, are harmonized alike.<sup>112</sup>

Progressions by a perfect fifth down or a perfect fourth up (chapter 15). The author explains this only as another progression among the twenty four possibilities.

110. Ibid., 206-207.

111. Ibid., 207, 208.

112. Ibid., 209.

Example 21. Harmonizing diminished fourths and augmented fifths in the bass line.

diminished fourth                      augmented fifth

No distinction of hierarchical order in these numerous progressions is ever made. Chord progressions are only explained with respect to the distance between the bass note of one chord to the one following, and no recognition of different functions of chords built on various scale degrees is made. It seems odd that Vargas y Guzmán does not touch upon this important aspect, in the light of the fact that he indeed recognizes a certain hierarchy among intervals: some are consonant, some are dissonant; some are perfect, some are imperfect, and so on. It appears that for him this intervallic hierarchy has only vertical significance and there is no comparable horizontal application. There is, however, some evidence which suggests that Vargas y Guzmán recognized a special functional relationship in what is currently called a V-I progression. The following statement from Explicación attests to this perception:

Quando el Baxo hi-  
ciere descenso de Quinta  
o ascenso de Quarta

When the Bass  
descends a fifth or  
ascends a fourth

(que todo es uno) se ha de acompañar generalmente la primera nota con tercera Mayor, y las demás voces donde les corresponda llanamente . . . Adviertase que estos movimientos para que su tercera sea mayor no necesitan de prevención alguna por ser regla general que así se ha de ejecutar . . . por que es del cargo de el Compositor quando quiere se acompañe con tercera menor el expresarlo . . .<sup>113</sup>

(which is the same) the first note is usually harmonized with a major third and the other voices are placed according to the diatonic scale . . . Let it be known that it is not necessary, in such progressions, to give a specific indication with regard to the major third because it is performed as such by general rule . . . furthermore, if on any occasion the composer wants the first chord to be harmonized with a minor third, he should explicitly state it . . .

Therefore, even for conservative Vargas y Guzmán, there is a special relationship in this fifth progression that differ from the others: the first chord must be major, the second may be either major or minor. On the other hand, he simply regards it as according to the "general rule" of the practice. Example 22 gives some of his examples of such "V-I progressions."<sup>114</sup>

Progressions by tritones (chapter 15). The author's illustrations (see Example 23) demonstrate that a third chord (chord of resolution) is required to complete the harmonization of tritone bass-voice motion. It is also noteworthy (cf. Example 23) that the author recognizes the existence of a

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113. Ibid., 210-211.

114. Ibid., 212.

Example 22. Progressions by fifths.



leading tone and its resolution. What the author illustrates in Example 23 is essentially a IV (iv)-V<sub>6</sub>-I (i) pattern of progressions.<sup>115</sup>

Example 23. Harmonizing tritones in the bass line.



Progressions by sixths, sevenths and octaves

(chapter 16). In this chapter there are again evidences that the author fully recognizes the invertibility of intervals. For example, he expedites the discussion of progressions by sixths, sevenths, and octaves by simply stating that these are to be treated exactly as progressions by thirds, seconds,

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115. Ibid., 213.

and unisons already explained previously.<sup>116</sup>

### Dissonant Harmony (chapters 19-28)

Up to this point, Vargas y Guzmán's harmonic vocabulary has consisted exclusively of consonant intervals (thirds, fifths, sixths, and octaves). In fact, he previously stated that "voices united through dissonances do not make music."<sup>117</sup> However, he recognizes that under certain circumstances, dissonant intervals which he calls especies falzas can also be employed. He therefore describes three procedures borrowed from José de Torres y Martínez:<sup>118</sup> pasando mala por buena, pasando mala por glosa, and ligando. By means of these three procedures he explains all chords containing intervals of seconds, fourths, sevenths, and tritones.

Pasando mala por buena and pasando mala por glosa are essentially based on the same principle of passing tones in the bass line; the first an unaccented passing tone and the second an accented passing tone. The explanation the author gives to the use of these two non-harmonic tones is of considerable interest because he invokes the theory of supposition much in the same manner as Mersenne and Rameau. There is, however, one basic difference between Vargas y

116. Ibid., 214: "por que el movimiento de Sexta es lo mismo que el de Tercera pues aunque es menor el de esta viene a concurrir en los propios signos que el de sexta . . ."

117. Ibid., 34: "vozes unidas en disonancia no hacen Musica."

118. Ibid., 221-222. He cites Torres y Martínez, op. cit., tratado segundo, chapt. 1, pp. 68-69.

Guzmán's concept of supposition and that of the French theorists: Vargas y Guzmán's supposition is horizontal whereas Mersenne's and Rameau's is basically vertical.<sup>119</sup>

Vargas y Guzman's concept of supposition is explained in his definition of mala por buena and mala por glosa:

Mala por buena se llama a la segunda nota que supone por la primera o a la segunda nota que se hace mala por suponer por la primera que es buena.<sup>120</sup>

Mala por buena is when the second note supposes the first, or when the second note becomes incorrect because it supposes the first which is correct.

Para que pueda pasar mala por glosa suponiendo la primera Nota por la segunda o haciendo mala a la primera por suponer por la segunda que es buena . . .<sup>121</sup>

Mala por glosa supposes the first note for the second, or makes the first note incorrect because it supposes the second which is correct . . .

These concepts will be further clarified and illustrated in the following discussion.

According to Vargas y Guzmán mala por buena, equivalent to an unaccented passing note, requires three conditions: 1) a three note progression by step (gradatim) ascending or descending, 2) the first two notes must be of equal value, and 3) the first of the three notes must begin on a strong

119. Jean Philippe Rameau, Treatise on Harmony (Paris, 1722), trans. Philip Gossett (New York: Dover Publications, 1971), particularly 48-52, and 88-91.

120. Vargas y Guzmán, op. cit., 222.

121. Ibid., 228.

beat.<sup>122</sup> As a general rule, only the first and third notes of the three note succession are harmonized whereas the middle note, which creates dissonance, is tolerated because it supposes the first. Example 24 shows one of Vargas y Guzmán's own examples in illustrating such dissonant-tone usage (circled note--the dissonance--is by the present writer).<sup>123</sup>

Example 24. Pasando mala por buena.



An accented passing tone, called mala por glosa by the author, requires two conditions: 1) a three note progression by step (gradatim), and 2) the last two notes must be of equal value and must be placed on the up beat.<sup>124</sup> In such case, after the proper chord is realized on the first note, the second note then takes the chord which belongs properly to the third note as the second supposes the note which follows

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122. Ibid., 222-223.

123. Ibid., 224.

124. Ibid., 228.

it.<sup>125</sup> This is illustrated in Example 25.<sup>126</sup>

Example 25. Pasando mala por glosa.



Ligaduras. Ligadura is explained as follows:

Lo que se llama ligadura en la Musica es usar de la especie Dissonante en puesto principal de el Compás haviendo antes prevenido, y teniendo despues su salida a especie ynperfecta.<sup>127</sup>

Ligature in music is when a dissonant chord is placed on one of the strong beats of the measure, having first been prepared, and then resolved to an imperfect consonance.

A ligadura can be found on either one of the three voices and it consists of three parts:<sup>128</sup> 1) prevención, or preparation, 2) ligadura, or dissonance, and 3) avono, or resolution. The author explains five types of ligaduras, one for each of the following dissonant intervals: perfect fourth,

125. Ibid., 229: "se le ha de dar a la primera figura negra la consonancia que le corresponde a su siguiente, de la propria clase por no suponer por si, sino por la imediata, . . ."

126. Ibid., 230.

127. Ibid., 232.

128. Ibid., 234.



seventh, diminished fifth, second, and augmented fourth.

The ligadura containing the interval of the perfect fourth is essentially explained as a 4-3 suspension; it can be prepared by any interval, consonant or dissonant, as illustrated in Example 26.<sup>129</sup>

Example 26. Ligaduras featuring the interval of perfect fourth.

prepared by  
octave

by seventh

by sixth

by fifth

Vargas y Guzmán is very careful in his use of dissonances. For instance, in suspensions prepared by a dissonant interval, such dissonance itself must also be prepared and introduced in an oblique motion, as illustrated in the 4-3 suspension prepared by a seventh in the above example.<sup>130</sup>

Ligaduras employing the interval of the seventh, however, do not correspond to the traditional 7-6 suspension. Rather, they are actually dominant-seventh chords which

129. Ibid., 238.

130. Ibid., 240: "Tengase por Regla general que haviendo de ligar dicha quarta previniendo en Especie falsa, se ha de cuidar que la prevencion no se de golpe o por movimiento de ambas voces, . . ."

resolve to their tonic. Judging from the author's own examples, seventh chords always resolve to the chord a fifth below them; therefore, and according to his previous instructions on this type of progressions, a seventh chord must always be harmonized with a major third, a perfect fifth, and then a minor seventh, thus achieving the structure of a regular dominant-seventh chord. His examples, some of which are illustrated in Example 27, confirm this position.<sup>131</sup>

Example 27. Ligaduras de séptima = dominant-seventh chords.

prepared by octave      by seventh      by sixth

It is unfortunate, however, that Vargas y Guzmán does not recognize the dominant-tonic relationship, even in cadences such as the ones illustrated above. This position is further supported by the fact that immediately after discussing the same progressions (Example 27), he seems to feel obligated to present another type of cadence which he calls cláusula de séptima (seventh-cadence):

. . . advirtiéndole que      . . . and whenever after  
dándose despues de dicha      the seventh comes a major

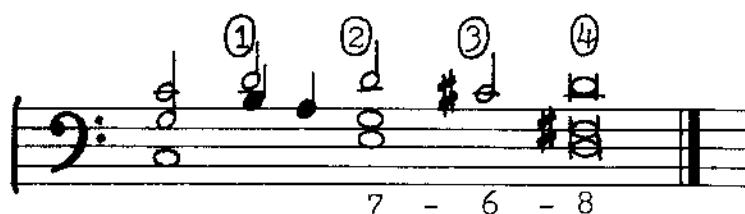
131. Ibid., 244

Falsa sexta Mayor; y luego octava . . . se llama entonces clausula de septima por contener en si las quatro partes de que deve constar que son Prevencion, Ligadura, Abono, y serrar la clausula . . .<sup>132</sup>

sixth and then an octave . . . this is called cadencing by a seventh because it contains the four parts necessary to make a cadence: preparation, suspension, resolution, and closing the cadence . . .

This type of cadence, illustrated in Example 28, can be best classified as a modal cadence. It is quite clear that in his own analysis of such cadence (cf., above quotation) Vargas y Guzmán is dealing with a 7-6-8 intervallic motion (modal cadence) and not with a V<sub>7</sub>-I cadence, despite the fact that it is called cláusula de séptima. The author's four steps (those necessary to execute a cadence) are indicated by circled numbers in Example 28 and correspond to: preparation, seventh-suspension, sixth, and octave.<sup>133</sup>

Example 28. Cláusula de séptima.



132. Ibid., 244-245.

133. Ibid., 244.

Chords containing tritone are explained as of two kinds: ligadura de quinta menor (diminished fifth), and ligadura de cuarta major (augmented fourth). It is important to remember that intervals are calculated in terms of the distance between the bass and anyone of the upper voices; the intervallic relationship between the upper voices is not recognized. For instance, the author considers the second chord in Example 27 (E-G<sup>#</sup>-D) as a ligadura de séptima (dissonance of the seventh) but he does not take into consideration the interval of the diminished fifth between G<sup>#</sup>-D as it occurs between the two upper voices. This, again, is another evidence of Vargas y Guzmán's adherence to modal practices.

With respect to chords containing a diminished fifth between the bass and one of the upper voices, they are explained in the same manner as all other dissonant chords: the dissonant interval needs to be prepared and resolved. However, in the examples he shows three different ways of treating this dissonance: 1) replacing the diminished fifth by a sixth (Example 29a),<sup>134</sup> in which case the chord is no longer dissonant, 2) placing the diminished fifth above the bass (Example 29b) and resolving the dissonance in the next chord, as he does with all other dissonant chords, and 3) placing the diminished fifth in the weak part of the beat,

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134. Ibid., 248, 249.

after a consonance, in passing tone fashion, thus concealing its dissonant effect (Example 29c).

Example 29. Ligadura de quinta menor.

It is worthy of note that in the majority of his examples of chords containing a diminished fifth between the bass and one of the upper voices, Vargas y Guzmán actually avoids the tritone and substitutes it with a sixth (as in Example 29a). It is unlikely that such procedure is due to an error in notation, as he clearly maintains the appropriateness of this manner of treatment.

El modo de poner las voces quando se egecuta dicha ligadura es poniendo la que cubre la falsa en la sexta y la otra en la dezena, o tercera . . . 135

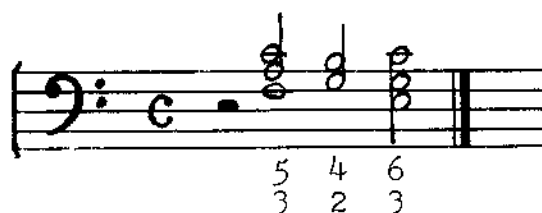
The proper way to harmonize a chord using such dissonance is by placing a sixth instead of the fifth in one voice, and a tenth or a third in the other voice . . .

Although he does not offer justification for such procedure, two possible explanations may be proposed. The first is that the theory of supposition is again applied,

but now vertically. When he states that the sixth is placed "instead of the fifth," it is evident that the fifth is supposed for the sixth. In other words, the C<sup>#</sup>-E-A chord (cf., Example 29a) is regarded as dissonant because, to him, A is not a real member of the chord but only a substitute for G which forms a diminished fifth interval with the bass. The second explanation has to do with the previously established rule that altered bass notes such as C<sup>#</sup>, for instance, were to be harmonized with a third and a sixth (e.g., C<sup>#</sup>-E-A). This rule, however, does not apply to diatonic notes (e.g., second chord in Example 29b) where a diminished fifth (B-flat) is placed above the bass note (E).

Chords containing the interval of augmented fourth are called ligadura de cuarta mayor, o de el Baxo because, according to Vargas y Guzmán, it is the bass who prepares, executes, and resolves the dissonance. This is illustrated in Example 30.<sup>136</sup>

Example 30. Ligadura de cuarta mayor o de el Baxo.




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136. Ibid., 255.

It is to be noted that chords containing a diminished fifth are discussed separately from chords containing an augmented fourth. These two chordal formations, illustrated in Examples 29 (diminished fifth) and 30 (augmented fourth), are both dominant-seventh chords, only in different positions (i.e.,  $V_2^6$  and  $V_2$  respectively), who resolve properly to their tonic (I and  $I_6$ ). The fact that Vargas y Guzmán refers to them as two different chord structures (i.e., ligadura de quinta menor and ligadura de quarta mayor) further supports the opinion that he did not recognize the invertibility of chords.

Chords containing the interval of a second or a ninth are called ligaduras de segunda o novena. According to Vargas y Guzmán, this dissonant formations were mostly used to prepare other dissonant chords. Example 31a illustrates a chord whose ninth resolves to an octave and then is followed by another dissonance--a seventh chord. Example 31b shows a chord whose ninth resolves to a sixth and then moves on to a chord having a dissonant fourth between the bass and the upper voice.<sup>137</sup>

Example 31. Ligaduras de segunda o novena.

The image shows two musical examples, (a) and (b), on a single bass clef staff. Example (a) consists of four chords. The first chord is a whole rest. The second chord has a bass note on the second line (G) and a whole note on the second space (B), with a '9' below. The third chord has a bass note on the second line (G) and a whole note on the second space (B), with an '8' below. The fourth chord has a bass note on the second line (G) and a whole note on the second space (B), with a '7' below. Example (b) consists of four chords. The first chord is a whole rest. The second chord has a bass note on the second line (G) and a whole note on the second space (B), with a '9' below. The third chord has a bass note on the second line (G) and a whole note on the second space (B), with a '6' below. The fourth chord has a bass note on the second line (G) and a whole note on the second space (B), with a '4' below. The fifth chord has a bass note on the second line (G) and a whole note on the second space (B), with a '3' below.

The last type of ligadura--ligadura burlada, a term borrowed from Lorente--is merely a chain of dissonant chords in which the resolution (abono) of one chord serves as the preparation (prevención) of the next until the final chord of resolution is arrived. This is illustrated in Example 32.<sup>138</sup>

Example 32. Ligadura burlada.

In summary, the author used ligadura as a convenient term to designate all dissonant chords containing seconds, fourths, sevenths, or tritones falling on an accented beat. The term ligadura, therefore, connotes several different types of non-harmonic tones or dissonant chords such as suspensions (Example 26), dominant-seventh chords in root position (Example 27) or in inversions (Examples 29 and 30), appoggiaturas (Example 31), and any chord he regards as dissonant.

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137. Ibid., 253.

138. Ibid., 260, 261. Andrés Lorente's El porqué de la música (Alcalá de Henares: Nicolás de Xamares, 1672) is cited here.



### Cadences (chapters 32-34)

Although the author made a few scattered references to cadence in previous chapters, it is only in the last four chapters of his Explicación that he defines, classifies, and explains in detail the different types of cadences which were in use at his time:

Clausula o Cadencia (que es lo mismo) es un descanso General, o una terminacion de las partes de la composicion con la qual se concluye, juntamente con la letra el Periodo de la Ymbencion Musical. Ay tres generos de Clausulas, la principal y propia de el Bajo es la que llaman Clausula cerrada y es quando salta Quarta arriba o Quinta abajo cantando Re: sol: la: re: o sol: ut: La segunda se nombra de Segunda o Tenor quando baja de grado diciendo Fa: mi: re: La tercera se dice de Tiple que es quando el Bajo canta fa: mi: fa: robandole a el Tiple este motivo.<sup>139</sup>

A clause or cadence (which is the same) is a general pause, or a conclusion where all the parts of a composition, words as well as music, come together to an end. There are three kinds of cadences: the principal, which belongs to the bass and is called closed cadence, is that in which the bass skips up a fourth or down a fifth singing Re-sol, la-re, or sol-ut. The second, called Tenor cadence, is that which descends by steps singing Fa-mi-re. The third is called Soprano cadence because the bass sings fa-mi-fa stealing this motive from the soprano.

After giving general definitions and classification, the author discusses each cadence separately.

Cláusula de el Bajo. As already stated in the above quotation, the characteristic factor of this cadence is the progression of the bass line: down a fifth or up a fourth;

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139. Ibid., 277-278.

hence the name cláusula de bajo. The author also states that this is the main cadence and the most frequently used. The two chords in this cadence are harmonized according to his rules on harmonizing the interval of a descending fifth in the bass: both chords must be in root position and the first of the two must be a major triad--the second may be either major or minor. It should be remembered that he does not recognize major or minor chord; he simply refers to them as chord with a major or minor third, or chord with a major or minor sixth. His examples on cláusula de bajo are illustrated in Example 33.<sup>140</sup>

Example 33. Cláusula de bajo.

5 3# 6 4 5 4 3# 3      5 3# 6<sup>b</sup> 4 5 4 3# 3<sup>b</sup>

The above two-chord progressions correspond to a V-I cadence with  $\frac{6}{4} \frac{5}{-} \frac{3}{-}$  linear embellishment. Although he does not fully recognize the theoretical principle of dominant-tonic harmonic (or functional) relation, it appears that he realizes its significance in practice and regards the pattern

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140. Ibid., 280. This same example is given in each of the twelve possible keys, following the order of the circle of fifths which he calls círculo o rueda.

as the principal cadential formula.

Cláusula de el Tenor en el Baxo. This type of cadence is briefly discussed in chapter 23 dealing with seventh chords (cf., pp. 116-117, cláusula de séptima). Here, he elaborates further and provides additional examples.

Quando el Bajo ejecuta clausula de el Tenor es hallandose dos Notas que descienden gradatim constando su descenso de un tono.

The bass executes a tenor cadence when it has a two note progression which descends the interval of one tone.

El modo de acompañar dicha Clausula es ejecutando sobre ella Cadencia de septima en la forma que queda demostrado en el ejemplo octavo de el Capitulo 23, . . . .<sup>141</sup>

This cadence is harmonized executing a seventh-cadence, as it was illustrated in example number eight of the twenty third chapter, . . .

The characteristic feature of this cadence (as shown in Example 34) is a descent of a diatonic step in the bass.<sup>142</sup>

Example 34. Cadencia del tenor en el bajo.

5 6 7 6 5 5 5 7 6# 5  
3 5 4 3 3 3 3 3 3 3

141. Ibid., 285.

142. Ibid., 285.

As previously stated (cf., pp. 116-117), this cadence is merely a typical modal cadence featuring the characteristic 7-6-8 intervallic progression. It is called "tenor cadence" because the bass behaves as a tenor--in stepwise motion--descending by a second instead of by a fifth as in a typical bass-line motion at cadential point. It is important to note that, in this cadence, the author emphasizes not the vertical aspect ( $V_3^4-I$ ) but the horizontal (7-6-8) and, therefore, names it cadencia de séptima because of the 7-6 suspension.

Cadencia de Tiple en el Bajo. This cadence (see Example 35) receives its name from the fact that the bass sings fa-mi-fa--a motif that normally belongs to the soprano voice (tiple).<sup>143</sup>

Example 35. Cadencia de Tiple.



It can be seen that Vargas y Guzmán's classification of cadences is made in terms of which chord member (the root, third, or fifth) is in the bass in the penultimate chord. Though short of recognizing the theoretical implication, he

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143. Ibid., 288.

nonetheless appears fully aware of the unique relationship that exists between one triad and its two inversions. The three types of cadences he discussed can be expressed via functional chord symbols: bass cadence = V-I; tenor cadence =  $V_4^6$ -I; and soprano cadence =  $V_6$ -I.

### Other Contemporary Mexican Treatises

Based on surviving documents, it appears that the number of music treatises written in Mexico during the eighteenth century is very limited.<sup>144</sup> Moreover, the few which survived have been largely neglected. Several references indicate the existence of one treatise, presumably written in the New World by Juan José de Padilla (died July 17, 1749), master of ceremonies at the Guatemala Cathedral.<sup>145</sup> This treatise, entitled Arte de música combinatoria, con que aún los menos diestros pueden componer facilmente, appeared to have been published in Guatemala around 1733. However, so far as I can ascertain, no copy of it is extant.

In his book, Historia de la música en México, Saldívar discusses an anonymous twenty-three-page violin treatise written probably around 1760. This book, although devoted mainly to violin teaching, also includes a short section on the basic

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144. "Mexican treatises" refers to those treatises written in Mexican territory, by a Mexican author, or both.

145. References to this treatise are found in Saldívar, op. cit., 131; and in Stevenson, "A Neglected Mexican Guitar Manual of 1776," Inter-American Music Review 1/2 (1979), 210.

elements of music.<sup>146</sup> Another theoretical book, Arte de canto llano written by Vicente Gómez, is also mentioned by Saldívar. According to Saldívar, Vicente Gómez graduated in art in January 12, 1791 from the Real y Pontificia Universidad de la Nueva España, and later became cantor at the Mexico City Cathedral.<sup>147</sup> This book, written around the 1790's was probably never published; the only copy of it is preserved in the Gabriel Saldívar's collection at Mexico City.<sup>148</sup> Arte de canto llano deals almost exclusively with plainchant theory but, at the end, contains a short section on musica figurata. Saldívar includes in his book a two page-facsimile of the manuscript in which the author discusses the medieval modes.

One last treatise was written in Mexico during the last decade of the eighteenth century. The title of this treatise is: Juego filarmónico con el que cualquiera puede componer con facilidad un gran número de contradanzas a dos violines y bajo. It was printed in Mexico in 1794.<sup>149</sup> This work, though no longer extant, was written by the Mexican-born Marqués de San Cristobal, son of Pedro Romero de Terreros, Conde de Regla (died 1782) who was one of the wealthiest men of his time in Mexico.

146. Saldívar, op. cit., 132-136.

147. Ibid., 141.

148. Ibid., 136-141.

149. Ibid., 132.

Chapter IV  
DEVELOPMENT OF MEXICAN THEORY:  
NINETEENTH-CENTURY TREATISES

The nineteenth century represents a period of special importance in the sociopolitical organization of Mexico. The first decades of the century mark the beginnings of national independence. The declaration of independence in 1810 arose a strong sentiment of nationalism which dominated almost every aspect of social life. Colonial institutions gradually disappeared in favor of new organizations which were to represent the distinctive identity of the new country.

In the arts, the abandonment of colonial practices was gradual but evident. European influence, however, continued to be notable well into the nineteenth century. Besides Spain, Italy also exercised great influence in the musical life of Mexico, specially in the field of opera. As in the rest of the continent, Italian opera dominated the musical scene during the first half of the nineteenth century. At the same time, several government-sponsored institutions were created to promote the development of the arts and to train national musicians. In 1822 the first symphonic orchestra was founded with the sponsorship of the government of Agustín de Iturbide. The first philharmonic society was organized two years later, in March 14, 1824, and officially inaugurated by

President Guadalupe Victoria. Furthermore, the first conservatory of music in Mexico (and perhaps in the entire American continent) was founded on April 18, 1825. A distinctive national idiom in music, however, did not develop until after the latter part of the century. Of special importance is the opera Guatimotzín, written by the Mexican composer Aniceto Ortega and premiered in 1871 by the famous Mexican soprano Angela Peralta and the Italian tenor Enrico Tamberlick. The plot was based on the story of Cuauhtémoc, the last Aztec emperor, and the score incorporated, for the first time, native musical elements.

As stated, the era of independence in Mexico (first decades of the nineteenth century) was a time in which the new country attempted to break bonds with the past colonial traditions. In music, this period represents the final break with past colonial theory--modality--and the establishment of the new system--tonality. This definitive transition is manifested notably in the works of several Mexican theorists who wrote important treatises during this period. Among the several treatises written in Mexico during the first three quarters of the nineteenth century, three stand out because of the high reputation of their authors and the importance of their content. These are: José Mariano Elízaga, Elementos de música (1823); José Antonio Gómez, Gramática razonada musical (1832); and Felipe Larios, Método de armonía teórico-práctica (1866). These three nineteenth-century treatises



will be the main subject of study in this chapter.

### Biographical Information and Description of Treatises

During the era of independence, the most influential musician in Mexico was José Mariano Elízaga Prado. A composer, theorist, pianist, organist, and educator, Elízaga has been called "the father of Mexican music."<sup>1</sup> Born in Morelia on September 27, 1786, Elízaga was a child prodigy who at the age of six, and by the command of the viceroy Juan Vicente de Güemes Pacheco de Padilla, was taken to Mexico City to study music. After one year of study in Mexico City he went back to Morelia to study under José María Carrasco (1781-1845), the cathedral's chapelmaster. Following a short period of study with Carrasco, Elízaga received a grant from the cathedral chapter to study in Mexico City under Soto Carrillo, the leading piano teacher in the capital. In 1799 Elízaga returned to Morelia as assistant organist at the cathedral. There he had the opportunity to study Latin and soon became the first organist. In recognition to Elízaga's great musical talent, the cathedral chapter purchased the best pianoforte they could find, in order to enable him to offer piano lessons to the local aristocracy. This provision had significant consequences in Elízaga's future career: one of his students, Ana María Huarte, later became the wife of Agustín de Iturbide, the first

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1. Jesús C. Romero, José Mariano Elízaga (Mexico: Ediciones del Palacio de Bellas Artes, 1934), xix.

emperor of Mexico. With this privileged connection, Elízaga was appointed imperial chapelmaster in 1822.

During this time Elízaga wrote his first theoretical treatise, Elementos de música, published in Mexico City in 1823. Later, in 1835, he published a second treatise entitled Principios de la armonía y de la melodía. Elízaga has been justly considered the most important Mexican musician of his time: his contributions, specially in the fields of music theory and music education, speak eloquently of his capacity as musician and educator. He organized the first symphonic orchestra in Mexico in 1822; he was the author of the first didactic work published in Mexico, Elementos de música (1823); he was one of the founders of the first Sociedad Filarmónica Mexicana in 1824; he was the founder of the first conservatory of music in Mexico in 1825; and finally, he founded the first music press in Mexico in 1826.<sup>2</sup>

As a composer, Elízaga wrote mostly sacred works. Among the best are: two masses (one for Guadalajara, the other for Morelia), a Miserere, a set of Lamentations, a set of responses, and music for the Matins of Transfiguration, all of which survive in the Morelia Cathedral archive.<sup>3</sup> From 1827 to 1830 he served as chapelmaster at the Guadalajara Cathedral

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2. Ibid., 19, 29, 51, 101-107. See also Francisco Moncada García, Pequeñas biografías de grandes músicos Mexicanos, 2nd ed. (Mexico: Ediciones Framong, 1979), 100.

3. Robert Stevenson, "José Mariano Elízaga," The New Grove Dictionary of Music and Musicians, 20 vols., ed. Stanlie Sadie (London: Macmillan, 1980), VI, 132.

and, in 1830, he returned to Mexico City where he taught privately for the next eight years. In 1838 he moved to the state of Michoacán to work for the rich landholder Mateo Echaniz as a music teacher for his children. After this, he spent some time in Guanajuato giving several concerts and, finally, he returned to his native city, Morelia, where he again accepted the position of chapelmaster at the cathedral. There he died on October 2, 1842, at the age of fifty six.

For the purpose of our study we will deal primarily with Elízaga's first theoretical book, Elementos de música. He wrote this treatise in Mexico City in 1823 while serving as imperial chapelmaster--a factor of great significance and one which presented Elízaga with the good fortune of having his book printed and published by the government itself. The complete bibliographic information as given in the title page is as follows: Elementos de música / Ordenados / por Don Mariano Elízaga / México año de 1823 / Imprenta del Supremo Gobierno, en Palacio. Although Elementos must have achieved wide circulation in its time, since it was used as a textbook in the Academia Filarmónica Mexicana, only a very few original copies survived: one copy is housed in the Biblioteca Nacional in Mexico City; another is preserved in the Library of the University of Texas at Austin as part of the Genaro García collection.<sup>4</sup> Each copy measures 14.5 X 10 cms. and is bound

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4. For this study the copy at the University of Texas at Austin has been examined.

in light brown leather with gold borders. The book contains eighty seven pages.<sup>5</sup>

Our next author, José Antonio Gómez, was a contemporary of Elízaga and in some ways his collaborator. Gómez was born in Mexico City on April 21, 1805, and died in Tulancingo, Hidalgo, sometime between 1868 and 1870. He received his first music lessons from his father José Santos Gómez; later he studied piano and composition under Manuel Izquierdo, Magín Ginesta, and Manuel Corral. He composed his first music works at the age of ten.<sup>6</sup> Throughout his life he contributed extensively to the development of music in Mexico. He achieved fame as pianist, organist, orchestra conductor, educator, composer, and theorist. In recognition to his musical achievements and his decided influence on later generations of composers, Gómez has been acclaimed as "el maestro de los maestros Mexicanos."<sup>7</sup>

Gómez began his music career as keyboard instructor and orchestra conductor in the famous opera company of Manuel García. Later he became chapelmaster at the cathedral in Mexico City and orchestra conductor at the San Gregorio school. He also had the honor of being a distinguished member of the jury which, in 1854, selected the Mexican national anthem.

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5. A complete Table of Contents, not included by Elízaga in his book, is provided in Appendix B.

6. Moncada, op. cit., 112.

7. Romero, op. cit., 140-141.

On December 15, 1839, Gómez founded the Gran Sociedad Filarmónica, a music society which established a conservatory and sponsored several important series of concerts. Gómez also is given credit for having founded the first Repertorio de música (music store) in Mexico. As a composer, he was best recognized for his sacred works: several masses, and a famous Miserere for eight voices and orchestra. He also composed the nationalistic work Cantata a la consumación de la independencia.

In the field of music theory, Gómez wrote a treatise in the form of dialogue which was probably used as a textbook in his conservatory. The complete title of the book as it appears in the front page is: Gramática razonada musical / compuesta en forma de diálogos / para los principiantes. / Dedicada / y publicada en México / para / EL BELLO SEXO, / por / J. Antonio Gómez. / México: 1832 / Imprenta de Martín Rivera.

Concerning the publication of this work, Romero believed that the first edition was probably published around 1839 or 1840. Romero admits, however, that he was not able to locate a copy of the first edition; the copy he examined was dated 1846 and reprinted by J. M. Lara.<sup>8</sup> Moncada-García, following Romero, also places the date of the treatise around 1839 and 1840.<sup>9</sup> Miguel Galindo believes that the very first edition of this work was perhaps published undated by H. Nagel.

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8. Ibid., 143.

9. Moncada-García, op. cit., 113.

Galindo also quotes another edition of 1841 published by J. M. Lara.<sup>10</sup> However, I have been able to locate a copy of Gramática which antecedes all of the above mentioned editions. This copy is presently housed in the Biblioteca México as part of the important Carlos Basabe collection. It is dated in Mexico, 1832 and published by the Imprenta de Martín Rivera.<sup>11</sup> This copy measures 16 X 11 cms. and is bound in brown leather. It consists of the title page, seventy two pages of text, two pages of Index, and seven pages of musical examples. This treatise is divided in two parts: in part one the author presents the elements of music (signs, notes, keys, rhythm, meter, ornamentation, and tempo); in part two he discusses the origin of sounds, formation of intervals, a theory of mode, a theory of chords, cadences and figured bass.<sup>12</sup> Later editions of Gramática (there are at least three) state in the title page that the work was "revised and enlarged." However, there are only minor differences in content between the 1832 edition and any of the later ones.<sup>13</sup>

The last major treatise to be considered is Método de armonía teórico-práctica written in 1866 by Felipe Larios.

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10. Miguel Galindo, Nociones de historia de la música Mexicana (Colima, México: Tip. de "El Dragón," 1933), 530.
  11. For complete bibliographical information of Gramática, consult the bibliography at the end of this work.
  12. The complete Index of Gramática is reproduced in Appendix C.
  13. In this study, both the 1832 copy and the later edition by H. Nagel have been consulted.

Unlike the two previous authors, Larios (1817-1875) spent all of his fifty-eight years in Mexico City. Larios began his musical training at an early age under the direction of Eduardo Campuzano, then chapelmaster in Mexico City and one of the most celebrated musicians of his time. Later he studied church music and solfeggio under Mariano Malpica and, at the age of thirteen, studied piano with Mateo Velazco. However, Larios received his most formal musical training from José Antonio Gómez (our previous author) with whom he studied harmony, counterpoint, and orchestration. In 1866 he became one of the founders of a conservatory of music where he served as its first professor of harmony. From this conservatory later emerged the government-subsidized Conservatorio Nacional de Música (1877).<sup>14</sup>

It was also in the same year that he wrote his treatise, Método de armonía teórico-práctica (completed on April 19, 1866), with the intention of using it as a textbook for his harmony class in the conservatory. However, this treatise was never published and exists only in manuscript form in the library of the Conservatorio Nacional de Música. As the title implies, this book places the greatest emphasis on the study of harmony. A table of contents, not included by Larios in his book, is provided at the end of this work in Appendix D. The Método is an extensive treatise on harmony consisting of

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14. Gerard Béhague, Music in Latin America: An Introduction (Englewood Cliffs, New Jersey: Prentice-Hall, 1979), 97.

121 pages of text and musical examples, and forty additional pages of exercises.

Elízaga, Elementos de Música: Analytical Study

In order to fully comprehend the technical aspects of this treatise, one must first understand the national climate under which it was written, the purpose for which it was intended, and the theoretical sources which influenced and shaped the author's own ideas. At the time when Elízaga wrote his Elementos, the development of the arts in Mexico was neglected in favor of other more pressing matters of national interest. The people's attention and efforts were focused on the movement of national independence and the establishment of a new government. This situation, however, did not deter Elízaga from his task. In the prologue to his treatise he describes the musical conditions of his time:

Tenemos genios á propósito para que en América se reprodujeran los Jomelis, Tartinis, Ducecs, Aydms, y tantos otros que han sido la admiracion de la Italia y demas estados de la culta Europa: la dulzura del clima, el carácter nacional, la flexibilidad del idioma, todo presenta las mas felices ventajas para que la Música no yaciera en el abandono en que hoy desgraciadamente se encuentra, . . . ¿en que pues consistirá esta decadencia de una facultad

We have in America musical geni capable of reproducing the Jomelis, Tartinis, Ducecs, Aydms, and many others which have been the cause of admiration in Italy and other European countries: the favorable climate, the nationalistic character, the flexibility of our language, everything converges to present the most favorable circumstances for music not to suffer the abandonment which it now encounters, . . . what is then the cause for the degeneration



tan encantadora que al paso que conmueve los ánimos excita los mas dulces afectos?<sup>15</sup>

of such a delightful activity which at the same time can renew the spirit and stimulate the sweetest affections?

Elízaga was aware that such a state of annihilation, in which music had fallen, was in part due to the lack or recognition and support of musicians.<sup>16</sup> However, he also recognized that perhaps the main reason for such decline in music was the lack of an adequate musical training.

Para superar tanta traba como las que se oponen á la prosperidad de todas las artes en nuestra América, se requiere una avides de conocimientos: un esfuerzo extraordinario para poder perfeccionarse en ellos, . . .<sup>17</sup>

It takes eagerness for knowledge, as well as an extraordinary effort to achieve perfection, in order to overcome all the obstacles that hinder the development of the arts in America, . . .

Trying to acquire the best musical education for himself, Elízaga consulted every possible treatise available to him. In that process he studied works by numerous authors such as Athanasius Kircher (1602-1680), Andrés Lorente (1624-1703), Pablo Nassarre (1664-1730), and Benito Bails (1750-1797).<sup>18</sup> However, these authors did not meet Elízaga's

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15. Elízaga, Elementos de música (México: Imprenta del Supremo Gobierno, 1823), ii.

16. Ibid., ii-iii: "Ya he indicado que el ningun estímulo, ni proteccion es lo que ocasiona el anonadamiento de nuestros músicos; . . ."

17. Ibid., iii.

intellectual needs:

Las teorías de Kirker, Lorenti y Nazarre no llenaron mis deseos y aunque algo se aclararon estas con las lecciones de clave de D. Benito Bails todavía quedaba un hueco en mi entendimiento que me inquietaba de continuo.<sup>19</sup>

The theories of Kircher, Lorente, and Nassarre did not fulfill my expectations and, although these were clarified, to some degree, by Benito Bails, Lecciones de Clave, there remained a gap in my mind that disturbed me continuously.

Perhaps the main reason for Elízaga to seek beyond the works by the above-mentioned theorists was because they did not substantiate the current practices. Kircher, Lorente, and Nassarre were exponents of traditional medieval theory and only Bails showed some more progressive ideas.<sup>20</sup> These books, however, were perhaps the only ones that were allowed into the colony by the ecclesiastical censorship. Nevertheless, Elízaga found the answers to his questions when he became acquainted with the theories of Antonio Eximeno y Pujadas (1729-1808), presented in his treatise Dell'origine e della regole della musica colla storia del suo progresso, decadenza,

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18. Athanasius Kircher, Musurgia Universalis (Rome, 1650); Andrés Lorente, El porque de la música (Alcalá de Henares: Imprenta de Nicolás de Xamares, 1672); Pablo Nassarre, Escuela Música según la práctica moderna, 2 vols. (Zaragoza: Herederos de Diego Larrumbe y Manuel Roldán, 1723, 1724); Benito Bails, Lecciones de clave y principios de armonía (Madrid, 1775).

19. Elízaga, op. cit., iv.

20. However, Bails' Lecciones de clave was not entirely original; rather, it was a translation of the French theorist Bemetzrider's Leçons de Clavecin et Principes d'Harmonie (Paris, 1771).

e rinnovazione, published in Rome in 1774.<sup>21</sup> Elízaga himself describes the impression that this treatise made on him:

desde sus primeras  
páginas creí haber en-  
contrado lo que tanto  
anhelaba: . . . á pro-  
porcion que iba leyendo  
el Eximeno iba recibien-  
do mi entendimiento  
nuevas luces y me iban  
formando aquella idea  
que en la materia han  
tenido los mejores maes-  
tros de la Italia . . .<sup>22</sup>

from its first pages I  
knew I had found that  
which I had so much  
longed for: . . . as I  
read the book, my mind  
was illuminated and I  
conceived the same  
musical idea which has  
been characteristic  
of the best Italian  
masters, . . .

Elízaga was a revolutionary in spirit and he found in Eximeno's theories a very adequate expression of his own inquietudes: a reaction against medieval theory--still existent in Mexico at his time--and against contrapuntal practices, in favor of a more harmonic approach to music. Therefore, Elízaga writes his treatise, Elementos de música, in order to propagate in Mexico the teachings of Eximeno,<sup>23</sup> and also, as he himself explains, in order to correct errors and to free music from "the labyrinth and confusion in which up to our days music has been taught."<sup>24</sup> Elízaga then

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21. Elízaga probably studied the Spanish version of this book, translated by Francisco A. Gutiérrez as Del origen y reglas de la música, con la historia de su progreso, decadencia y restauración (Madrid: Imprenta Real, 1796).

22. Elízaga, op. cit., iv-v.

23. Ibid., vi: "me he propuesto en este pequeño tratado compendiar las mejores doctrinas de Eximeno . . ."

24. Ibid., v: "el laberinto y confusion con que hasta nuestros días se ha enseñado la Música, . . ."

gives a general description of the content of his own book which he divides into four sections:

La primera parte tendrá por objeto las doctrinas generales, explicar el sistema de las cuerdas, claves, formación de modos y todo aquello que he juzgado provechoso para ponerse en aptitud de comenzar á tocar cualquier instrumento. En la segunda tratare del solféo y buen gusto en el canto. La tercera de las reglas de armonía y composición, y la cuarta se reducirá á dar un conocimiento filosófico de la música y á unas máximas, ó sean reglas generales sobre la misma materia.<sup>25</sup>

The first section is intended to present the general doctrines; to explain the system of strings, keys, formation of modes, and everything that I have considered useful for anyone to start playing an instrument. The second section deals with solfeggio and good taste in singing. The third, with rules of harmony and composition. Finally, the fourth section gives a philosophical knowledge of music and several maxims, that is, general rules on the same matter.

This division of the treatise into four sections, however, is not clearly manifested in the actual text. For the purpose of our analysis, the main text of the treatise will be divided into the following four sections: 1) basic elements of music; 2) theory of mode; 3) theory of harmony; and 4) applied harmony.

#### Basic Elements of Music

At the beginning of his treatise the author presents several principles that, in his view, are essential to the understanding of music before attempting a serious study.

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25. Ibid., vi-vii.

Diatonic scales. Elízaga teaches the concept of "scale" by using two terms: escala común and escala tendida. He explains escala común as follows:

Las ocho teclas largas del clave ó del Organo sucesivas, comenzando por la nombrada C, dan los ocho tonos sucesivamente mas agudo uno que otro, por los cuales sube y baxa la voz humana con mucha facilidad, y forman la Escala comun que es hoy el sistema fundamental de la Música.<sup>26</sup>

The eight larger keys of the harpsichord or the organ played in succession, beginning with the one named C, give the eight tones successively one more acute than the other, by which the human voice ascends and descends with great ease. They form the Common scale which is today the basic system in music.

Next, Elízaga explains that, from the time of Pope Gregory, the eight strings (cuerdas) were named according to the first seven letters of the alphabet: A, B, C, D, E, F, G, a; but the correct order of pitches in the escala común is: C, D, E, F, G, A, B, c. From this explanation it is clear that by escala común Elízaga means the C major scale as found in the white keys of the keyboard. Escala tendida is nothing else than extending the escala común beyond its range of eight notes in either direction:

Despues de haber entonado las ocho cuerdas sucesivas de la Escala subiendo ó bajando la voz ácia lo grave ó lo agudo se repite la misma Escala con tonos

After one sings the eight successive notes of the scale, raising or lowering the voice to the grave or the acute, the same scale is repeated in

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26. Ibid., 1.

mas graves, o mas agudos; y la Escala asi tendida es:

Do: Re: Mi: Fa:  
Sol: La: Si: do: re:  
mi: fa: sol: la: si:  
do: re: mi: fa: &c.<sup>27</sup>

lower or higher tones; so the expanded scale is:

Do: Re: Mi: Fa:  
Sol: La: Si: do: re:  
mi: fa: sol: la: si:  
do: re: mi: fa: etc.

Solmization. As already stated, one of the purposes of Elízaga in writing his treatise was to do away with old practices and to establish the new methods. With regard to solmization, he shows the advantages of the new system over the old Guidonian system. Following old practices, he explains, a given pitch could be sung with several syllables. For instance:

la C se entonaba ya con el Sol, ya con el Fa, ya con el Ut, por esta razon se llamaba C-sol-fa-ut.<sup>28</sup>

the note C could be sung with the syllable Sol, with Fa, or with Ut. For this reason it was called C-sol-fa-ut.

However, he says, the French abandoned almost completely the names C-sol-fa-ut, D-la-sol-re, etc. and substituted in their place the syllables Ut, Re, Mi, Fa, Sol, La, Si.<sup>29</sup>

de manera que lo mismo significa en la boca de un Frances la cuerda Sol, que en la de un

so, the syllable Sol, for a Frenchman, means exactly the same as G-sol-re-ut

27. Ibid., 6.

28. Ibid., 2.

29. Ibid., 2, 3. Elízaga attributes to the Ultramontanos (followers of Francisco de Montanos) the addition of the syllable si as the seventh note of the scale.

Italiano ó Español  
G-sol-re-ut.<sup>30</sup>

for an Italian or a  
Spaniard.

From the above statement it is clear that Elízaga was referring to a change of solmization system; that is, replacing the system of the movable do (Guidonian system which changes hexachords) by the system of the fixed do, which has been, in fact, the one used in Mexico from Elízaga's time to our days. For Elízaga it was too confusing to name a single sound with more than one syllable since he considered that pitches and words relate so closely among themselves that a certain pitch evokes the image of its corresponding name; in the same manner, any of the musical syllables (ut, re, mi, fa, etc.) bring to mind its corresponding pitch.

porque á el que haya  
aprehendido á cantar con  
dichas sílabas, viendolas  
despues escritas, se le  
representan en la imagi-  
nacion las sensaciones  
de los sonidos corres-  
pondientes.<sup>31</sup>

so, anyone who has  
learned to sing with  
such syllables, when he  
sees them written, he  
immediately evokes in  
his imagination the  
sound sensations of the  
corresponding pitches.

It should be remembered that one of Elízaga's main purposes in writing his treatise was to simplify the study of music. Therefore, when he introduces the new solmization system, which he calls Solfeo moderno (modern solfeggio), he

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30. Ibid., 3. According to Elízaga, the Italians also adopted the new system with the only difference that they replaced the syllable ut with the syllable do.

31. Ibid., 3.

is, in fact, speaking of a fixed-do system in which each of the seven syllables (ut, re, mi, fa, sol, la, si) has one, and only one, corresponding pitch.

Intervals. Elízaga teaches intervals in the most traditional manner. He classifies them according to their size (seconds, thirds, etc.) and according to their quality (perfect or natural, major, minor, diminished, and augmented). He also explains the invertibility of intervals (trastrueque or transmutación), an important concept in his later discussion of chords.

En general lo que falta á cualquiera intervalo para completar la Octava es precisamente su trastrueque: v.g. la Séptima menor y la Segunda mayor componen la Octava luego del trastrueque de la una debe resultar cabalmente la otra.<sup>32</sup>

In general, the difference between the Octave and a given interval is precisely its inversion: e.g., the minor seventh and the major second make an octave since the inversion of one produces exactly the other.

Notation. The author includes a rather detailed explanation of the system of notation. Evidently, he considered that a good knowledge of the basic notation was indispensable before anyone attempted to play a musical instrument. In his discussion of notation he includes the following topics: history of notation, origin of the music staff and notes, accidentals, clefs, note values, measures, time signatures, tempo marks, rests, pauses, dots, and other

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32. Ibid., 8.



signs employed to notate music. Since the main emphasis of the treatise is not on the study of notation, and since the author merely presents traditional material and concepts on the topic, the present study will pursue this subject no further.

### Theory of Mode

Elízaga is the first Mexican theorist to present the theory of major-minor modes, and to explain the transition from the old modal tradition to the more current bimodal system. In this respect, more than in anything else, Elízaga was influenced by the theories of Eximeno, a fervent exponent of bimodality.

Origin of the modes. Elízaga's explanation about the origin of modes clearly reveals a pattern of thinking which was bound to interpret everything in terms of the major-minor concept. For example he states that

Tanto el canto figurado como el llano se formaban sobre el sistema de cuerdas dispuesto por Guido, del cual además de los tres Exacordos mayores y fundamentales de G-sol-re-ut, C-sol-fa-ut y F-fa-ut, se sacaban otros tres secundarios de D-la-sol-re, E-la-mi y A-la-mi-re . . . Estos Exacordos, secundarios tienen como se deja ver, la Sexta y la Tercera menores de cuyo intervalo saca la

Mensural music, as well as plainchant, was composed using the system of strings arranged by Guido. In that system, besides the three fundamental major hexachords of G-sol-re-ut, C-sol-fa-ut, and F-fa-ut, three other secondary hexachords were also used: D-la-sol-re, E-la-mi, and A-la-mi-re . . . These secondary hexachords have, as one can see, the intervals of a minor sixth and a minor third which

modulacion cierta gracia que no puede sacar de los Exacordos mayores. Por esta razon para formar un canto unas veces se tomaba por Exacordo fundamental uno de los tres primarios con Tercera y Sexta mayores, otras uno de los Secundarios con Tercera y Sexta menores; y este es el origen de los Modos, llamados vulgarmente Tonos de Género Diatónico.<sup>33</sup>

produce a special effect that can not be obtained in the major hexachords. For this reason, a song was sometimes based on one of the three primary hexachords with major third and sixth, and in other occasions it was built on one of the three secondary hexachords having a minor sixth and a minor third. This is the origin of the modes, commonly known as Tones of the diatonic genus.

As can be seen in the above statement, Elízaga explains the origin of the modes in direct relationship with the nature of their intervals of third and sixth, counting from the final tone up. However, he is not altogether correct in such conception. Ancient modes were actually explained according to the different arrangements or species of the octave, which in turn, was affected depending on the quality and position of the diapente (fifth) and diatessaron (fourth) which divided it. It was not until the seventeenth century, in the works of Lippius, Burmeister, Crüger, and other theorists, that the modes were differentiated and classified according to the triad built on the final note.<sup>34</sup> Even then, modes were not necessarily classified as major and minor. Elízaga also

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33. Ibid., 34-35.

34. For further discussion on this subject, see Joel Lester, "Major-Minor Concepts and Modal Theory in Germany, 1592-1680," Journal of the American Musicological Society XXX (1977), 208-253.

related the origin of the modes with the concept of a tonic or final note.

Un sistema de cuerdas sobre el que se pudiese formar un canto, se llamó Tono demostrándose con este nombre la cuerda fundamental del sistema que despues se llamó Modo con expresion mas conforme al language musical de los Griegos . . .<sup>35</sup>

A system of strings upon which a song could be composed, was called Tone, denoting by that name the fundamental string of the system which was later called Mode, a term more in accordance with the musical language of the Greeks . . .

Elízaga gives one more evidence of his rather modern approach to the study of medieval modes: he always refers to a system of twelve modes and never of eight, as most Spanish theorists did. This is explained from the fact that he considered six original modes--three principal (major modes) and three secondary (minor modes)--and each of the six modes was then divided into two, one authentic and one plagal.

Seis son, pues, los Modos del canto diatónico fundados en las seis cuerdas del Exacordio de natura C, D, E, F, G, A, : los tres primeros C, F, G, por razon de la Tercera y Sexta mayores se llamaron Modos mayores y los tres restantes Modos menores. Sobre B-mi que no pertenece al Exacordio de natura y que tiene la Quinta falsa, no se formó Modo.

Therefore, there are six diatonic modes in music, based on the six strings of the natural hexachord C, D, E, F, G, A. The first three: C, F, G, because of their major third and major sixth, were called Major modes; the remaining three were called Minor modes. On B-mi, which does not belong to the natural hexachord and which has a false fifth, no mode

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35. Elízaga, op. cit., 35.

Este origen tan sencillo de los Modos diatónicos, ha venido á ser confuso con la distincion de Modos auténticos y plagales. De cada uno de los mencionados seis Modos se han formado dos, uno llamado auténtico ó principal en que se supone que la modulacion va á tocar la Quinta aguda del modo; y el otro plagal ó servil, en que la modulacion va á tocar la misma Quinta grave.<sup>36</sup>

was built. Such simple origin of the diatonic modes has been confused with the division of authentic and plagal modes. Each of the above mentioned six modes was divided into two: one authentic or principal which ascends and dwells on the fifth above its final; and one plagal or servant, which descends to the same fifth but one octave lower.

Elízaga illustrates his point by means of a musical example (see Example 1).<sup>37</sup>

Example 1. Authentic and plagal modes.



It goes without saying that the modal system was completely obsolete in Elízaga's time, and that the only

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36. Ibid., 35-36.

37. Ibid., 36.

references to it were found in textbooks or in formal musical instruction. This is confirmed in the following statement by Elízaga:

Estas opiniones, y la distincion de Modos auténticos y plagales con el orden de primero, segundo, tercero &c, son cosas enteramente arbitrarias que solo sirven hoy día de confusion á la mente del principiante y de llenar los libros de cosas sin substancia.<sup>38</sup>

Such opinions, together with the distinction of authentic and plagal modes in the order of first, second, third, etc., are concepts entirely arbitrary which nowadays contribute only to create confusion in the mind of the beginner and to fill books with vain stuff.

Modern system of modes. After having explained the old modal tradition, the author proceeds to present the modern system of modes which, supposedly, was the one in current use in Mexico. According to Elízaga, the transition from the old to the new system took place in the sixteenth century.

Despues del siglo XVI advirtieron los Profesores de Música que en el Exacordo no habia todas las cuerdas necesarias para componer en un Modo, especialmente debiendo cantar juntas muchas voces. Entonces se abandonó el sistema de Guido y en su lugar se substituyó el de la Octava, y habiéndose tambien observado que con la Octava de C-sol-fa-ut se compone la mas

After the sixteenth century, musicians found out that the hexachord did not have all the necessary strings to compose in a given mode, specially when many voices were to sing simultaneously. Then the system of Guido was abandoned and replaced by a system based on the octave. Having also observed that the most perfect harmony was found in the octave of C-sol-

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38. Ibid., 36-37.

perfecta armonía, se  
 escogió por modelo de  
 los Modos mas perfectos;  
 así llegó á ser sistema  
 fundamental la Escala.<sup>39</sup>

fa-ut, this arrangement  
 was chosen as model for  
 the most perfect modes;  
 thereby, this scale  
 became the fundamental  
 system in music.

Elízaga is not correct when he states that the modal system was replaced by the major-minor system in the sixteenth century; some of the most influential treatises which dealt with modal theory--such as Glareanus' Dodecachordon (Basel, 1547) and Zarlino's Le istituzioni harmoniche (Venice, 1558)--were written in the sixteenth century, and it was precisely during that time that the number of modes was enlarged, not reduced, from eight to twelve. This inaccuracy is borrowed from Eximeno who in his own treatise, Dell'origine e delle regole, exposes the same idea.<sup>40</sup> However, the correct date was not as important to Elízaga as the actual fact. The core of Elízaga's above declaration is the idea that the hexachord was finally replaced by the octave. According to him, this change was necessary mainly because the hexachordal system lack in harmonic possibilities. This, in Elízaga's point of view, was the most important step in the transition from modality to bimodality. He further states that just as the major scale was adopted as the fundamental system in music, the minor scale was also incorporated as a secondary system.

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39. Ibid., 37.

40. Antonio Eximeno, Del origen y de las reglas de la música, trans. Francisco A. Gutiérrez (Madrid: Imprenta Real, 1796), I, 66.

La suavidad del Exacordo de Tercera y Sexta menores se consideró digna de anotarse también. Por lo mismo tomó por sistema secundario la Escala de A-la-mi-re.

La, Si, Do, Re, Mi, Fa, Sol, la.

que tiene menores dichos intervalos, y que por esta razón se llamó Modo menor, y la de C-sol-fa-ut Modo mayor.<sup>41</sup>

The suavity of the hexachord with minor third and minor sixth was also considered worth of being included. Therefore, the scale of A-la-mi-re was established as the secondary system.

La, Si, Do, Re, Mi, Fa, Sol, la.

because it has such minor intervals, and for that reason it was named minor mode, and that on C-sol-fa-ut major mode.

Next, Elízaga demonstrates how the original major mode (C-sol-fa-ut) can be transposed to each step of the chromatic scale, maintaining the same arrangement, by the use of accidentals. These major modes, he explains, form a "perfect circle": modes with sharps move through a circle of fifths; modes with flats through a circle of fourths, but in both cases the thirteenth mode in the succession returns to the first. His entire explanation on modes related through circles of fifths and fourths is summarized in his Table of Modes, reproduced here in Example 2.<sup>42</sup> The first column, which should be read in downward direction, illustrates the major modes related by ascending fifths; the second column illustrates major modes related through a circle of fourths

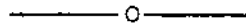
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41. Elízaga, op. cit., 37-38.

42. This Table appears at the end of his treatise. The scale marked with an asterisk contains an obvious mistake: the first note, fa<sup>b</sup>, should be f natural.

Example 2. Elizaga's Table of Modes.

TABLA DE LOS MODOS



C.	do re mi fa sol la si do	D.	{ re <sup>b</sup> mi <sup>b</sup> fa <sup>b</sup> sol <sup>b</sup> la <sup>b</sup> si <sup>b</sup> do <sup>b</sup> re <sup>b</sup>
G.	sol la si do re mi fa <sup>#</sup> sol	D.	{ do re mi fa sol la si do
D.	re mi fa <sup>#</sup> sol la si do <sup>#</sup> re	A.	{ la <sup>b</sup> si <sup>b</sup> do <sup>b</sup> re <sup>b</sup> mi <sup>b</sup> fa <sup>b</sup> sol <sup>b</sup> la <sup>b</sup>
A.	la si do <sup>#</sup> re mi fa <sup>#</sup> sol <sup>#</sup> la	A.	{ sol la si do re mi fa <sup>#</sup> sol
E.	mi fa <sup>#</sup> sol <sup>#</sup> la si do <sup>#</sup> re <sup>#</sup> mi	E.	{ mi <sup>b</sup> fa <sup>b</sup> sol <sup>b</sup> la <sup>b</sup> si <sup>b</sup> do <sup>b</sup> re <sup>b</sup> mi <sup>b</sup>
B.	si do <sup>#</sup> re <sup>#</sup> mi fa <sup>#</sup> sol <sup>#</sup> la <sup>#</sup> si	E.	{ re mi fa <sup>#</sup> sol la si do <sup>#</sup> re
F.	{ fa <sup>#</sup> sol <sup>#</sup> la <sup>#</sup> si do <sup>#</sup> re <sup>#</sup> mi <sup>#</sup> fa <sup>#</sup>	B.	{ si <sup>b</sup> do <sup>b</sup> re <sup>b</sup> mi <sup>b</sup> fa <sup>b</sup> sol <sup>b</sup> la <sup>b</sup> si <sup>b</sup>
F.	{ sol <sup>b</sup> la <sup>b</sup> si <sup>b</sup> do <sup>b</sup> re <sup>b</sup> mi <sup>b</sup> fa sol <sup>b</sup>	B.	{ la si do <sup>#</sup> re mi fa <sup>#</sup> sol <sup>#</sup> la
C.	{ do <sup>#</sup> re <sup>#</sup> mi <sup>#</sup> fa <sup>#</sup> sol <sup>#</sup> la <sup>#</sup> si <sup>#</sup> do <sup>#</sup>	F.	{ fa <sup>b</sup> sol <sup>b</sup> la <sup>b</sup> si <sup>b</sup> do <sup>b</sup> re <sup>b</sup> mi <sup>b</sup> fa <sup>b</sup>
C.	{ re <sup>b</sup> mi <sup>b</sup> fa sol <sup>b</sup> la <sup>b</sup> si <sup>b</sup> do reb	F.	{ mi fa <sup>#</sup> sol <sup>#</sup> la si do <sup>#</sup> re <sup>#</sup> mi
G.	{ sol <sup>#</sup> la <sup>#</sup> si <sup>#</sup> do <sup>#</sup> re <sup>#</sup> mi <sup>#</sup> fa <sup>x</sup> sol <sup>#</sup>	C.	{ do <sup>b</sup> re <sup>b</sup> mi <sup>b</sup> fa <sup>b</sup> sol <sup>b</sup> la <sup>b</sup> si <sup>b</sup> do <sup>b</sup>
G.	{ la <sup>b</sup> si <sup>b</sup> do reb mi <sup>b</sup> fa sol la <sup>b</sup>	C.	{ si do <sup>#</sup> re <sup>#</sup> mi fa <sup>#</sup> sol <sup>#</sup> la <sup>#</sup> si
D.	{ re <sup>#</sup> mi <sup>#</sup> fa <sup>x</sup> sol <sup>#</sup> la <sup>#</sup> si <sup>#</sup> do <sup>x</sup> re <sup>#</sup>	G.	{ sol <sup>b</sup> la <sup>b</sup> si <sup>b</sup> do <sup>b</sup> re <sup>b</sup> mi <sup>b</sup> fa sol <sup>b</sup>
D.	{ mi <sup>b</sup> fa sol la <sup>b</sup> si <sup>b</sup> do re mi <sup>b</sup>	G.	{ fa <sup>#</sup> sol <sup>#</sup> la <sup>#</sup> si do <sup>#</sup> re <sup>#</sup> mi <sup>#</sup> fa <sup>#</sup>
A.	{ la <sup>#</sup> si <sup>#</sup> do <sup>x</sup> re <sup>#</sup> mi <sup>#</sup> fa <sup>x</sup> sol <sup>x</sup> la <sup>#</sup>	D.	re <sup>b</sup> mi <sup>b</sup> fa sol <sup>b</sup> la <sup>b</sup> si <sup>b</sup> do reb
A.	{ si <sup>b</sup> do re mi <sup>b</sup> fa sol la si <sup>b</sup>	A.	la <sup>b</sup> si <sup>b</sup> do reb mi <sup>b</sup> fa sol la <sup>b</sup>
E.	{ mi <sup>#</sup> fa <sup>x</sup> sol <sup>x</sup> la <sup>#</sup> si <sup>#</sup> do <sup>x</sup> re <sup>x</sup> mi <sup>#</sup>	E.	mi <sup>b</sup> fa sol la <sup>b</sup> si <sup>b</sup> do re mi <sup>b</sup>
E.	{ fa <sup>b</sup> sol la si <sup>b</sup> do re mi fa	B.	si <sup>b</sup> do re mi <sup>b</sup> fa sol la si <sup>b</sup>
*	{ si <sup>#</sup> do <sup>x</sup> re <sup>x</sup> mi <sup>#</sup> fa <sup>x</sup> sol <sup>x</sup> la <sup>x</sup> si <sup>#</sup>	F.	fa sol la si <sup>b</sup> do re mi fa
B.	{ do re mi fa sol la si da	C.	do re mi fa sol la si do



and should be read in upward direction, beginning again with letter C. Elízaga also explains the special relationship between major and minor modes, although he does not use the terms relative major or relative minor.

El modo menor de A-la-mi-re consta de las mismas cuerdas que el Modo mayor de su tercera menor C-sol-fa-ut, . . . El modo menor de B-mi consta de las mismas cuerdas que el mayor de D-la-sol-re. El menor de C-sol-fa-ut de las mismas que el mayor de E-la-fa, y el menor de D-la-sol-re de las mismas que el mayor de F-fa-ut. . . .

Para determinar los accidentes propios de un Modo menor se buscarán por la regla antecedente los que pertenecen al Modo mayor de su Tercera.<sup>43</sup>

The minor mode on A-la-mi-re is composed of the same strings than the major mode located one minor third above, C-sol-fa-ut, . . . The minor mode on B-mi is composed of the same strings as the major mode on D-la-sol-re. The minor mode on C-sol-fa-ut has the same strings as the major mode on E-la-fa; and the minor mode on D-la-sol-re has also the same strings as the major on F-fa-ut. . . .

To determine the appropriate accidentals for a minor mode, one only needs to find, using the previous rule, the accidentals which belong to the major mode a minor third above it.

In summary, it may be stated that Elízaga explains the origin of the major and the minor modes in direct relation with the origin of the medieval modes. According to his rather doubtful version, the medieval modes were originally divided in two groups--three major and three minor--and finally reduced to only two modes: the one built on C-sol-fa-ut, and

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43. Elízaga, op. cit., 47, 48.

the other on A-la-mi-re. These two modes became, according to him, the basis of the modern system, one that he will explain in terms of harmonic formations.

### Theory of Harmony

Elízaga's harmonic theory is based, almost in its entirety on the teachings of Eximeno--specifically in the Introduzione, articolo sesto, pp. 54-60, of Eximeno's Dell'origine e delle regole della musica. Before he begins his exposition on harmony, Elízaga defines the term "counterpoint," perhaps for the only reason that Eximeno also includes a short discussion of the term in the above mentioned section of Dell'origine.

La palabra  
Contrapunto es una  
reliquia del tiempo en  
que la Música se escri-  
bía con puntos. . . .  
Por esta razón la parte  
que hace armonía con la  
otra se llamó y se lla-  
ma todavía Contrapunto.<sup>44</sup>

The vocable  
Counterpoint is a  
vestige of the time when  
music was written with  
points. . . . For this  
reason, one voice that  
makes harmony with  
another was called,  
and is still called,  
Counterpoint.

Certainly, Elízaga was not a contrapuntal theorist; he dealt with counterpoint as something that belonged to the past. In fact, one of the reasons of Elízaga's close following of Eximeno's writings was, in his own words:

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44. Ibid., 53.

sus festivas impugna-  
ciones contra los  
Contrapuntistas y  
Cantollanistas . . . 45

his decided attacks  
against the  
contrapuntists and the  
plainchantists . . .

As previously stated, Elízaga approaches the study of music from a harmonic point of view. He defines harmony as follows:

Armonía generalmen-  
te significa una convi-  
nacion de sonidos agra-  
dables al oído. Si con  
estos sonidos se forma  
el canto de una sola  
voz la armonía es  
sucesiva y simultanea,  
si aquellos sonidos se  
ponen juntos; aunque  
con el nombre absoluto  
de armonía se entiende  
comunmente la simultanea.  
En particular significa  
Armonía la convinacion  
de cuerdas que consti-  
tuyen la Tercera, Quinta  
y Octava: bien que en  
este sentido se la suele  
añadir el epíteto de  
perfecta; así la armonía  
perfecta de C-sol-fa-ut  
son las cuatro cuerdas  
Do, Mi, Sol, do. La  
Octava como se hará ver  
en otra parte se puede  
omitir sin perjuicio de  
la armonía perfecta pues  
esta esencialmente  
consiste en Tercera y  
Quinta.<sup>46</sup>

Harmony generally  
means a combination of  
sounds agreeable to the  
ear. If these sounds  
compose a song for one  
voice alone, then the  
harmony is called suc-  
cessive; it is called  
simultaneous when those  
sounds are put together.  
Actually, by harmony  
properly speaking, it is  
understood as the  
simultaneous. More speci-  
fically, harmony means the  
combination of the strings  
of the third, fifth, and  
octave. Such harmonic  
arrangement is commonly  
known as perfect; there-  
fore, the perfect harmony  
of C-sol-fa-ut is composed  
by the four strings Do, Mi,  
Sol, do. The octave, as it  
will be explained later,  
can be omitted without  
causing any detriment to  
the perfect harmony, since  
the latter consists  
essentially of the third  
and the fifth.

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45. Ibid., v.

46. Ibid., 53-54.

The above definition of harmony is almost a verbatim reproduction of Eximeno's definition of the same term.<sup>47</sup> Elízaga accepts, without question, the supremacy of tertian harmony, but he makes no attempt to justify its "perfection." Perhaps he also accepted the explanation given by Eximeno on that regard. Eximeno explained the perfection of the triad on the basis of its natural origin. For him, the consonant intervals (third, fifth, and octave), given to us by nature, are the essential elements of perfect harmony. In his second treatise, Don Lazarillo de Vizcardi (written in Valencia during the last part of the eighteenth century but not published until 1872), Eximeno clearly states his belief:

Ahí, pues, teneis amigo  
D. Lazarillo, dijo  
Ribelles la tercera,  
quinta y octava, sin  
irla a buscar ni con  
todos los músicos y  
filósofos en las razo-  
nes y proporciones  
matemáticas, ni con  
Euler en las fórmulas  
algebraicas, ni con  
Tartini en las propie-  
dades del círculo, ni  
con Rameau en la reso-  
nancia de las cuerdas;  
ahí digo, teneis la  
perfecta armonía, ins-  
pirada de la naturaleza,  
sin arte y sin reglas,  
a las personas que ella  
misma ha formado aptas

There, you have, my  
friend Lazarillo, said  
Ribelles, the third, the  
fifth, and the octave,  
without having to look  
for them among the  
musicians or philosophers  
in arithmetical ratios or  
proportions, nor with  
Euler in algebraic for-  
mulas, nor with Tartini  
in the properties of the  
circle, nor with Rameau  
in the resonance of the  
strings; there, I say,  
you find the most perfect  
harmony, inspired by  
nature, without art and  
without rules, to the  
people to whom she has  
granted the gift of

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47. Eximeno, op. cit., I, 78-79, as cited in León-Tello, La Teoría Española de la música (Madrid: Instituto Español de Musicología, 1974), 306.

para el canto. La perfecta armonía no puede componerse de intervalo alguno disonante.<sup>48</sup>

singing. Perfect harmony cannot be made of any kind of dissonant intervals.

Disregarding scientific and theoretical demonstrations, Eximeno invokes the "eloquent" testimony found in the popular songs of the people to substantiate the supremacy of the harmonic triad. This was, for Elízaga, a language easily understood since he was also trying to reconcile music theory with current practices. Both Elízaga and Eximeno reacted against the complex harmonic theories of authors such as Tartini and Rameau. Of these, they had greater respect for Rameau because they considered him to be more practical; both Elízaga and Eximeno borrowed several concepts and terminology from Rameau. However, they differ with Rameau on several concepts as for instance, the supremacy of harmony over melody. As is well known, Rameau maintained that all music, even an unaccompanied melody, has its foundation and origin in harmony. For Elízaga, harmony has its origin in the major-minor system, since both the major and the minor triads are contained in the scale of C-sol-fa-ut.

De aqui se deduce que  
la Escala comun

Do, Re, Mi, Fa, Sol,  
La, Si, do.

From this we conclude  
that the common scale

C, D, E, F, G, A, B, c.

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48. Eximeno, Don Lazarillo de Vizcardi (Valencia, end of eighteenth century), edited with critical notes by Barbieri (Madrid: Sociedad de Bibliófilos Españoles, 1872), II, 71, cited in León-Tello, op. cit., 307.

suponiendo el Re transportado á su Octava aguda se compone de tres armonías de Tercera mayor.

Armonía de la Primera.  
Do, Mi, Sol.  
Armonía de la Quinta.  
Sol, Si, Re.  
Armonía de la Cuarta.  
Fa, La, Do.

supposing the D transposed one octave higher, consists of three major harmonies:

Harmony on the first degree. C-E-G.  
Harmony on the fifth degree. G-B-D.  
Harmony on the fourth degree. F-A-C.

y convinando de otra manera las mismas cuerdas resultan otras tres armonías de Tercera menor.

Armonía de la Segunda.  
Re, Fa, La.  
Armonía de la Tercera.  
Mi, Sol, si.  
Armonía de la Sexta.  
La, Do, Mi.

Combining the same strings differently, we also obtain three minor harmonies:

Harmony on the second degree. D-F-A.  
Harmony on the third degree. E-G-b.  
Harmony on the sixth degree. A-C-E.

Solamente la Séptima carece de armonía porque su Quinta Si, Fa es falza.<sup>49</sup>

Only the seventh degree lacks a harmony because its fifth B-F is false.

Elízaga, therefore, did not see any need to depend on scientific demonstrations to prove the legitimacy of the triad. For him, the major chord is perfect because it has its origin in the major scale which, according to him, "contains the most perfect harmony."<sup>50</sup> Example 3 illustrates how he derives the three primary major triads from the natural arrangement of thirds found in the major scale. For this purpose he

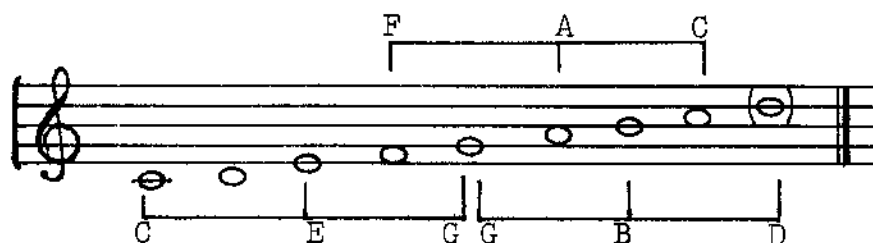
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49. Elízaga, op. cit., 54-55.

50. Ibid., 37: "habiendose tambien observado que con la Octava de C-sol-fa-ut se compone la mas perfecta armonía, . . ."

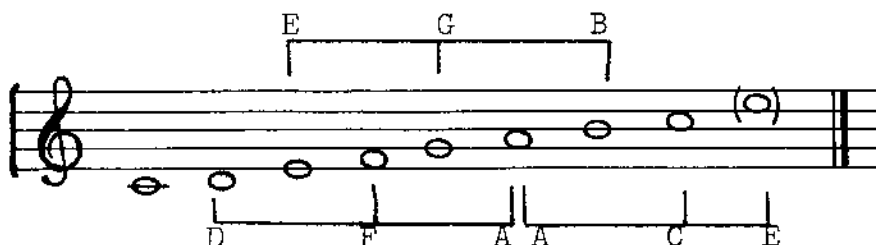
previously explained the concept of "successive harmony" (see quotation on p. 157).

Example 3. The origin of the major triad.



Having accepted the supremacy of tertian harmony, almost without question, it was not difficult for Elízaga to find the three major triads within the major scale. However, he needed to go beyond the range of the octave and "suppose" the low D (second note of the scale) one octave higher. Following the same procedure he explains the origin of the minor scale. In this case, however, he needed to "suppose" the E (third degree of the basic scale of C-sol-fa-ut) one octave higher. This procedure is illustrated in Example 4.

Example 4. The origin of the minor triad.



With regard to minor harmony, Elízaga offers still one more argument to support its legitimacy; its different aesthetic quality.

La suavidad del Exacordo de Tercera y Sexta menores se consideró digna de anotarse también.<sup>51</sup>

The softness of the Hexachord with minor third and sixth was also considered worth of being included.

It is unquestionable that Elízaga recognized the special functions of the chords built on the first, fourth, and fifth degrees of the scale. While not calling them tonic, subdominant, and dominant, he confers on them a special nomenclature: posture of the mode (I), posture of the fourth (IV), and posture of the fifth (V).

Cualquier combinación de cuerdas armónicas se llama Postura. La armonía perfecta es la postura más perfecta que también se llama Postura del Modo porque la Primera de un Modo se acompaña siempre con la Armonía perfecta. Si la base de la Armonía de una postura es la Quinta del Modo se llama postura de Quinta y si la base es de Cuarta la Postura es de Cuarta.<sup>52</sup>

Any combination of harmonic strings is called Posture. The perfect harmony is also the most perfect posture and is called Posture of the Mode because the first degree of the scale is always harmonized with the perfect harmony. If the fifth degree of the scale is the basis of a harmonic posture, then it is called posture of the fifth, and if the harmony is built on the fourth degree then it is a posture of the fourth.

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51. Ibid., 37-38.

52. Ibid., 55-56.



Unfortunately, Elízaga does not provide any musical examples on this regard, perhaps due to the impossibility of finding a music press; the few musical examples included in Elementos were all written by his own hand.

Chord inversions. Elízaga explains the concept of chord inversions in a single paragraph, under the heading of Armonía Trastocada.

Puesto que la Armonía perfecta es un compuesto de dos intervalos Tercera y Quinta trastrocándolas conforme se dijo en el artículo de las trasmutaciones la Armonía se entenderá también trastrocada, y su primer trastrueque ó transmutacion será Mi, Sol, do de Tercera y Sexta y el otro Sol, Do, Mi de Cuarta y Sexta: Del uso de estas trasmutaciones hablaremos mas adelante.<sup>53</sup>

Since the perfect harmony is made of two intervals, the third and the fifth, if we invert them, as it was explained in the article on inversions, the harmony then also becomes inverted. Its first inversion is E-G-C featuring a third and a sixth, and the other is G-C-E having a fourth and a sixth. About these inversions we will speak later.

At the end of this paragraph Elízaga promises to deal again with the subject; he indeed does so when he discusses the fundamental bass. Nevertheless, it is apparent (cf., lines 1-8 in the above paragraph) that Elízaga explains the inversion of chords in direct relationship with the theory of intervallic inversion, or more specifically, as a direct result of it.

Fundamental bass. As expressed in his own words, Elízaga borrows from Rameau not only the term but also the

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53. Ibid., 55.

entire concept.

Llámase Bajo en general el sonido mas grave de una postura aunque no sea siempre Bajo fundamental. El nombre de Bajo fundamental fue inventado por el célebre Rameau profesor de Música Frances, y aunque el origen y las reglas que acerca de este Bajo estableció, se hallan refutadas, no obstante se ha conservado el nombre para distinguir la cuerda de cada postura que es mas apta para regir la armonía perfecta y determinar el Modo.<sup>54</sup>

Bass is the name given to the lowest sound of a posture even when it may not always be the fundamental bass. The name, Fundamental Bass, was invented by Rameau, the famous French theorist, and although the origin and the rules established by him have now been refuted, the name has, nevertheless, been preserved to designate the note of each chord which is the most appropriate to rule the perfect harmony and to determine the Mode.

When Elízaga states, in the above paragraph, that Rameau's theory of the Fundamental bass had been refuted, he does not offer any arguments to substantiate the statement. Rather, he seems to be making an indirect reference to Eximeno, who in fact attempted to discredit any scientific explanations of music--as those of Rameau and Tartini--in favor of his purely aesthetic and rather simplistic approach to the study of music. Nevertheless, Elízaga (and even Eximeno) borrowed from Rameau more than just the term, as it will be shown in the forthcoming analysis of his own exposition of the subject. Elízaga further expands his concept of the fundamental bass by means of another contrasting term that he introduces:

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54. Ibid., 56-57.

Bajo Sensible. Continuing the previous paragraph in which he had just defined the term Bajo Fundamental, Elízaga states:

Y como esta cuerda no se pone siempre en la parte mas grave de una composicion, el Bajo de esta para distinguirlo del fundamental se podrá llamar Bajo Sensible. Por ejemplo del Modo de C-sol-fa-ut sale la postura de Quinta Sol, Si, Re, Fa cuyo Bajo fundamental es la cuerda Sol, ya por que es la base de la armonía perfecta Sol, Si Re, contenida en aquella postura como porque la Quinta como se verá adelante es la cuerda mas apta despues de la Primera para determinar el Modo. Pero si una postura semejante se pone en una composicion haciendo sonar al Bajo, la Séptima del Modo que es Si, y á una voz aguda la Quinta Sol, el Si será Bajo sensible y no fundamental; no solo porque siendo falsa su Quinta Si, Fa carece de Armonía perfecta, sino tambien porque la Séptima no es cuerda tan apta como la Quinta para determinar el Modo: El Sol pues, aunque se ponga en lo agudo, siempre es Bajo fundamental de aquella postura. Del mismo modo si en el Bajo de una composicion se pone la segunda Re, esta será el Bajo Sensible; pero

And since this note is not always placed as the lowest part of a composition, the bass in this case is called Sensible Bass in order to distinguish it from the fundamental bass. For instance, if in the mode of C-sol-fa-ut we have the posture of the fifth G-B-D-F, the fundamental bass is G because it is the root of the perfect harmony G-B-D which is contained in the previous chord, and also because as we will later explain, the fifth degree is the note more apt, after the first, to determine the Mode. But if in the same posture we place in the bass the seventh degree of the scale which is B, and the fifth degree G is placed on an upper voice, B will be the Sensible Bass and not the fundamental bass; not only because its fifth B-F is false and lacks perfect harmony, but also because the seventh degree is not a string as apt as the fifth to determine the Mode. Therefore, G will always be the fundamental bass even when it is placed in an upper voice. Also, if in a given composition we place D, the second degree, in the bass, it will be the Sensible Bass; but

el fundamental siempre será Sol tanto porque la Segunda no es tan apta como la Quinta para determinar el Modo, como porque si á Re se le dá la armonía perfecta Re, Fa, La. Dejando las otras cuerdas Sol, Si, Fa, la Armonía de la pos-tura se destruye.<sup>55</sup>

the fundamental bass will always be G, so much because the second degree is not as apt as the fifth to determine the mode, as well as because if we concede to D the perfect harmony, D-F-A, and maintain the previous strings G-B-F, the harmony is then destroyed.

From the above written example it is clear that, for Elízaga, the first note (i.e. root) of the triad--to which all chords must be reduced--is the fundamental bass of the chord, whether it lies on the bass or on either one of the upper voices. We also learn that Elízaga recognizes the special function of the chord built on the fifth degree of the scale, since he states that "the fifth degree is the note more apt, after the first, to determine the mode." Finally, we can deduce from the last part of the paragraph that, much in the same vein as Rameau, Elízaga sets the octave as the limit for chord formations on superimposed thirds. This is clear when, after considering the seventh chord G-B-D-F, he declares that if the two triads, G-B-D and D-F-A, are put together--thus making the chord G-B-D-F-A--the harmony is destroyed. Therefore, as one can clearly see, Elízaga's concept of the fundamental bass is not much different from Rameau's, although Elízaga may not

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55. *Ibid.*, 57-58. The chord spelled G-B-F in the antepenult line should probably spell G-B-D to conform with the original chord of the example. In any case, the combined formation alluded by the author is G-B-D-F-A.

be in perfect accord with this conclusion.

Other chords beyond the triad. Elízaga does not seem very willing to discuss other more complex chordal formations. Perhaps faithful to his purpose of presenting music in a simple and easily-understood manner; perhaps because he felt that, doing so, it would cause confusion among his prospective readers; or perhaps because he did not feel the need to explain concepts that were not considered common practice in Mexico at his time. Besides the triad, the only larger chord which he describes with some familiarity is the dominant seventh chord. As was observed (see last quotation), Elízaga recognized the special function of this chord when it is built upon the fifth degree of the scale. He further mentions this, as well as other chords in the following statement:

Toman tambien las posturas el nombre de algun intervalo que no constituya la Armonía perfecta como la postura Sol, Si, Re, Fa que por causa de la Séptima Sol, Fa. Se llama postura de Séptima. A este tenor se encuentran especialmente en los Escritores Franceses los nombres de postura de Quinta falsa, de Séptima diminuta, de Sexta superflua y otros varios que omitiremos para no incidir en el vicio bastante comun de hacer confusas las ciencias con la multitud de palabras inútiles.<sup>56</sup>

Chords also take the name of the interval which does not belong to the perfect harmony, as for instance, the chord G-B-D-F, that, because of the seventh between G and F, it is called chord of the seventh. On this regard, we find, specially among French writers, names of chords such as the diminished fifth, the diminished seventh, the augmented sixth, and several other chords that we will presently omit trying not to fall on the vice so common among us, of making the sciences confused by the multitude of vain words.

Finally, one more reference to Rameau is found in Elízaga's discussion of the seventh chord D-F-A-C.

Hay algunas posturas que contienen dos Armonías perfectas como Re Fa La Do: Re Fa La es la una y Fa La Do es la otra. En tales posturas, puesto que hay dos cuerdas Re y Fa aptas para regir la Tercera y la Quinta podrán una y otra ser Bajo fundamental, suponiendo que ambas sean aptas para determinar el Modo; porque de otra manera deberá tomarse por Bajo fundamental la que segun las circunstancias sea mas apta al mencionado fin.<sup>57</sup>

There are some chords that contain two triads such as D-F-A-C: D-F-A is one of them, and F-A-C is the other. In such chords, being that we find two notes, D and F, both apt to rule over a third and a fifth, either one could be considered as fundamental bass assuming that both are equally apt to determine the mode. Otherwise, the fundamental bass should be the note most apt, according to the circumstances, to determine the mode.

This statement presents a clear reference to Rameau's theory of the "double employment" first proposed in his Nouveau Systéme (1726) and given its fullest explanation in Nouvelles Reflections (1752). According to Rameau, the chord F-A-C-D-- actually the same as the one illustrated in Elízaga's above example--can be interpreted as either a  $II_5^6$  or as a IV with an added sixth. It all depends on whether A represents the fifth of the chord--in which case the chord is a  $II_5^6$  going to a V and having D as the root--or whether A represents the

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56. Ibid., 56.

57. Ibid., 58.

third, in which case the chord is a IV with the added dissonance of a sixth, having F as its root and proceeding to the tonic. Although Elízaga's statement on this regard is not entirely clear, its resemblance with Rameau's theory of the "double employment" is evident: both authors discuss a chord having the same pitch content (D, F, A, C), and both concede that such chord is subject to two interpretations depending on whether D or F behave as the actual root of the chord.

### Applied Harmony

Consonances and dissonances. Previous to his explanation on how to deal with non-harmonic tones, Elízaga briefly discusses the subject of consonance and dissonance. From his previous discussion on harmony, it is clear that the only useful intervals for Elízaga are the consonances: octave, fifth, fourth, major and minor thirds, and major and minor sixths. Elízaga justifies the consonant character of these intervals from the fact that they are, for him, the essential elements of harmony.

Consonancia es un intervalo constitutivo de la Armonía perfecta, ya se encuentre esta en el orden de cuerdas, que constituyen la Tercera y Quinta ó trastocada en Tercera y Sexta ó en Cuarta y Sexta; por lo mismo la disonancia será un intervalo incapaz de constituir armonía perfecta.<sup>58</sup>

Consonance is a constitutive interval of the perfect harmony, whether it is in root-position with a third and a fifth or inverted with a third and a sixth or a fourth and a sixth. Therefore, dissonances are incapable of constituting perfect harmony.

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58. Ibid., 59.

Non-harmonic tones. Elízaga explains, in simple fashion, the correct use of the two basic types of non-harmonic tones: accented and unaccented. His basic rule in dealing with dissonances is that they must always be prepared and resolved. He illustrates the proper way of using a dissonance on the beat, as shown in Example 5.<sup>59</sup> In this example the dissonance (a seventh) is prepared and resolved by two consonances, a sixth and a third.

Example 5. An accented non-harmonic tone.



Elízaga uses two terms to classify all the notes of a melodic progression, according to their function within the harmonic scheme. These two terms are: notas sensibles and notas de tránsito.

Llámanse Notas sensibles las que mas distintamente hieren el oído y se acostumbra

Sensible notes are those which strike the ear more clearly. These notes are usually

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59. Ibid., 60.



determinar estas notas con el compas cuyo dar y alzar se suponen las partes mas sensibles. En este supuesto . . . las notas sensibles son las que se hallan en el dar, ó en el alzar, y tambien las que saltan; bien que la nota del alzar no es sensible siempre que en un compas de cuatro notas la segunda salte y las dos siguientes se muevan de grado con la segunda. Las notas que no son sensibles se llaman Notas de transito.<sup>60</sup>

distinguished according to their position in relationship with the up-beat and the down-beat which are the most sensible parts of the measure. Therefore . . . sensible notes are those which are placed on the down-beat or on the up-beat, and also those who skip. However, the note which falls on the up-beat is not sensible when, in a four-note measure, the second note skips and the next two notes proceed by step with the second. Those notes which are not sensible are called Passing notes.

This explanation is illustrated by the author as shown in Example 6.<sup>61</sup>

Example 6. Notas sensibles and notas de tránsito.



60. Ibid., 61-62.

61. Ibid., 62.

According to Elízaga's explanation of notas sensibles and notas de tránsito, Example 6 may be analyzed as follows: in the first measure, the first and the third notes--placed on the down-beat and on the up-beat--are notas sensibles, the second and the fourth are notas de tránsito; in the third measure, the first and the second are notas sensibles and the third and the fourth are notas de tránsito (based on his rule stated in the previous quotation, lines 16-22); finally, all the notes in the fourth and fifth measures are sensibles because they all move by skip; notes in measures two, six, and seventh are also understood to be sensibles. From this type of analysis we see that Elízaga considers the horizontal relationship of the notes also important, in addition to their vertical significance. In Example 5 he stressed the dissonant character of the suspension on the basis of the vertical relationship (i.e., dyadic relation) between the upper and the lower notes. In Example 6, while he still respects vertical relationships, the emphasis is on the horizontal character (i.e., monadic relation) of the melodic succession.

Cadences. With regard to cadences, Elízaga follows Rameau very closely. The resemblance between the two authors, in this respect, becomes apparent as soon as one begins to consider Elízaga's explanation on cadences. In addition to such close resemblance of content, Elízaga also cites Rameau directly to substantiate his concepts. Elízaga defines the term "cadence" as follows:

Cadencia significa el descanso que hace la voz en una cuerda cualquiera; por lo que en una composición apenas hay compas sin alguna especie de cadencia. Sin embargo las verdaderas cadencias son solamente dos; la una perfecta, cuando el Baxo fundamental va desde la quinta á la Primera Exemplo.

La cadencia imperfecta es cuando el Baxo fundamental va desde la Cuarta al Modo Exemplo.<sup>62</sup>

Cadence means the rest which the voice makes on any string; so in any composition one can hardly find one measure which does not have a cadence of some kind. However, the real cadences are only two: perfect, when the fundamental bass descends from the fifth to the first degree as shown in the Example.

The imperfect cadence is that in which the fundamental bass descends from the fourth to the first degree.

In the first lines of this paragraph Elízaga distinguishes between "real cadences" and those cadences which only represent "a rest that one voice makes on any string." This last type of cadences, he says, can be found almost everywhere and on any string. This idea seems to correspond with what Rameau described as "avoiding cadences while imitating them."<sup>63</sup> Although Elízaga does not elaborate on this point any further, it seems clear that for him any place where the music makes a pause, or takes a rest, is a cadence of some kind. On the "real cadences" Elízaga is more specific. He illustrates them as shown in Example 7.<sup>64</sup>

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62. Ibid., 62-63.

63. Jean P. Rameau, Treatise on Harmony (Paris, 1722), trans. Philip Gossett (New York: Dover Publications, 1971), 83.

64. Elízaga, op. cit., 63.

Example 7. The perfect and the imperfect cadence.

Cadencia Perfecta                      Cadencia Imperfecta

The musical notation is presented on two staves. The upper staff uses a treble clef and the lower staff uses a bass clef. A double bar line separates the two sections. In the 'Cadencia Perfecta' section, the treble staff contains three chords: a triad of G4, B4, D5; a triad of G4, B4, D5 with a flat sign over the B; and a triad of G4, B4, D5. The bass staff contains three notes: G3, B3, D4. In the 'Cadencia Imperfecta' section, the treble staff contains three chords: a triad of G4, B4, D5; a triad of G4, B4, D5 with a flat sign over the B; and a triad of G4, B4, D5. The bass staff contains three notes: G3, B3, D4.

Again, Elízaga reveals his concepts very simply. His perfect cadence is actually a V-I cadence, just as Rameau's. However, Elízaga does not require for the penultimate chord to be a seventh-chord (i.e., V<sub>7</sub>) whereas for Rameau the interval of the seventh was essential in the relationship. For Elízaga, the V-I relationship between the fundamental basses of both chords was enough to make the perfect cadence because both the fifth and the first degrees were apt to establish the mode. With regard to the imperfect cadence, Elízaga does not follow Rameau's terminology. As we observe in the above Example, Elízaga's imperfect cadence is nothing more than a IV-I cadence. Rameau, however, named the IV-I cadence differently. For him imperfect cadences are those in which the "only imperfection is that the fundamental bass is suppressed, transposed, or inverted."<sup>65</sup> In other words, for

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65. Rameau, op. cit., 77.

Rameau the imperfect cadence can still be a V-I cadence but one in which the fundamental bass is either absent or placed in one of the upper voices. The term Rameau uses to designate the IV-I cadence is Irregular because, he says: "the term 'imperfect' seems to be closer to 'perfect' than is 'irregular,' or at least so it appear to us."<sup>66</sup> Elízaga also illustrates two other types of cadences but, although Rameau also includes them in his discussion of cadences, Elízaga does not consider them to fall in the category of "real cadences."

Cuando el Baxo fundamental, salta de Tercera . . . O se mueve de grado hácia lo agudo . . . la canturia no hace verdadera cadencia; Sin embargo Rameau llama á la primera cadencia interrumpida y á la segunda burlada la cual se llama con mas propiedad en Itália cadencia falsa ó fingida.<sup>67</sup>

When the fundamental bass skips a third . . . or moves by step upwards . . . the music does not make a real cadence; however, Rameau called the first interrupted and the second deceptive which in Italy is more properly called false cadence or fuggita.

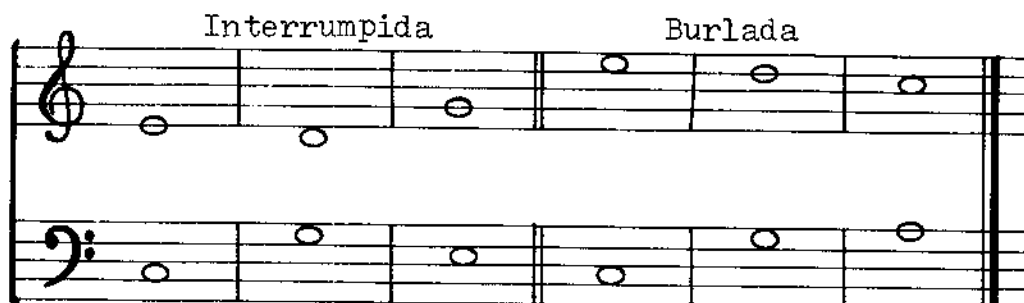
Example 8 shows Elízaga's own illustrations of these two types of cadences.<sup>68</sup>

66. Ibid., 78.

67. Elízaga, op. cit., 64. Actually, Rameau also uses the term "interruption" in relation to the deceptive cadence. See Rameau, op. cit., 71-72.

68. Elízaga, op. cit., 64.

Example 8. Interrupted and deceptive cadences.



Modulation. Elízaga's discussion of modulation is very brief; nevertheless, it is important because it reflects his more current tonal thinking, in contrast with previous Mexican theorists. The following paragraph is the entire statement on modulation in his treatise:

La modulacion se transporta muchas veces de un Modo á otro lo cual se llama mudar de modo. Para hacer sensibles estas mudanzas se debe hacer cadencia perfecta en el nuevo Modo: pues llevando consigo alguna cuerda nueva, esta junta con el Baxo fundamental excluye el Modo antiguo y declara el nuevo.<sup>69</sup>

Modulation is moving from one mode to another; this process is called changing the mode. To make this change noticeable, it is necessary to execute a perfect cadence on the new mode, since when a foreign string is used, this, in combination with the fundamental bass, deny the previous mode and confirm the new.

Example 9, by Elízaga himself, illustrates the process of modulation.<sup>70</sup>

69. Ibid., 65-66.

70. Ibid., 66.

## Example 9. Modulation.



In this example, modulation takes place from the mode of C-sol-fa-ut to the mode of G-sol-re-ut. Elízaga explains this modulation by showing that the two requirements--implicit in his above definition of the term--are thereby fulfilled: 1) the fundamental bass makes a cadence on the new key, and 2) the presence of a string (f-sharp) foreign to the previous mode denies the former tonality and establishes the new.

Voice leading. Another significant point in Elementos is that it contains an important, though brief, explanation of voice leading. The author emphasizes that it is important to give proper consideration to the movement of the voices when changing from one verticality to another.

En la Armonía simultanea se deve atender al movimiento relativo de las voces, que se dividen en contrario, recto y oblicuo.<sup>71</sup>

In simultaneous harmony, it is necessary to give proper attention to the relative movement of the voices which can be of three types: contrary, similar, and oblique.

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71. Ibid., 66-67.

While this is all that Elízaga has to say on voice leading, this statement is important because he recognizes that in all harmonic progressions the different voices must have a definite sense of direction. On this regard, an important contrast should be noted between Elízaga and our previous theorist, Vargas y Guzmán: while Vargas y Guzmán gave explicit instructions on how to place chords above the notes of a given bass line, his main preoccupation was in choosing the appropriate chord to precede or to follow another; however, he showed little concern on how each of the voices in one chord should lead into the corresponding voices in the next. As for Elízaga, when he states that "in simultaneous harmony, it is necessary to give proper attention to the relative movement of the voices," he is in fact considering the importance of a smooth progression from chord to the next. Thus, Elízaga may be regarded as the first Mexican theorist to place importance on voice leading in harmonic successions.

Gómez, Gramática Razonada Musical: Analytical Study

The Gramática razonada musical has been recognized by Mexican historians as one of the most influential treatises of its time.<sup>72</sup> Its wide circulation and popularity are confirmed by the fact that it was published several times--at least three editions are known. In addition, the author,

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72. Galindo, op. cit., 531, 537.



José Antonio Gómez, was one of the leading Mexican musicians of his time, and his Gramática was probably used as a textbook in his own academy. In Mexican theory, this work represents a direct continuation of Elízaga's Elementos.

There is no prologue to this treatise and since the entire text is written in dialogue form, the author never really speaks directly to the reader. Therefore, unlike the two previous theorists, Gómez does not offer any reason or motives which moved him to write this work. However, it seems reasonable to speculate that, as a contemporary of Elízaga, Gómez was faced with the same problems and the same deficiencies in the current musical instruction; therefore, just as Elízaga, he also perceived the need of writing a manual designed to explain and clarify the new developments of the musical system. It is important to note that the theory of harmony was a concept only introduced in Mexico during the first decades of the nineteenth century and consequently, it was not yet fully established during Gómez' time. The author writes his book in dialogue form imitating a rhetorical style of several well-known earlier treatises such as Odo of Cluny's Enchiridion musices (tenth century) or Johann Joseph Fux's Gradus ad Parnassum (1725). In Gramática, however, it is the master who asks the questions, and the disciple has the role of providing the answers. Gramática is quite original in that the author does not quote directly from other sources or cite any authors by name.

The title Gramática razonada musical is appropriate in that the author makes constant comparison between music and grammar and also because, as part of the dialogue, the master constantly forces the disciple to explain his answers in the most rational manner. Every answer is to be substantiated with a logical theoretical explanation.

Gramática is divided into two parts: 1) musical characters, and 2) application of musical characters or syntax of music. The first of these two parts deals specifically with the basic elements of music, such as: notes, signs, keys, signatures, accidentals, and basic notation. This should unduly occupy our attention.<sup>73</sup> Therefore, the following analytical study deals almost exclusively with the second part of the book, the syntax of music. For the purpose of organization, our analysis will be divided into the following five sections: origin and nature of sounds; scales; intervals; theory of mode; and theory of chords.

### The Origin and Nature of Sounds

The author begins his treatise in the most traditional manner by attempting to define the term "music."

Maestro. ¿Qué se entien-  
de por música?

Discípulo. La ciencia  
de los sonidos.<sup>74</sup>

Master. What is music?

Disciple. The science  
of sounds.

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73. For a detailed description of content, consult the Table of Contents reproduced in Appendix C.

74. José Antonio Gómez, Gramática razonada musical (México: Imprenta de Martín Rivera, 1832), 3.

This brief opening statement represents all that the author feels necessary to say about the definition of music. However, in the beginning of the second part the master requires the disciple to elaborate more on this definition, to give a more scientific explanation about the nature of music and the origin of sounds.

Maestro. ¿Qué se entiende por sonido?

Discipulo. El resultado del choque de dos cuerpos que ponen el aire en movimiento, de lo que resulta una sensación que hiere el órgano del oído con más ó menos impulso.

- M. ¿Qué especie de sensaciones son las que produce este choque, y cuántas son?
- D. Dos; y se distinguen con el nombre de ruido y sonido. El primero produce una sensación indeterminada é irracional; el segundo la produce determinada y racional.
- M. Qué es lo que produce el ruido, y por qué su sensación es indeterminada, é irracional?
- D. El ruido lo produce el tiro de un arma de fuego, el choque de las armas blancas, el golpe de los martillos, la caída de un cuerpo cualquiera á su centro &c., y se llama indeterminada é irracional su sensación, porque no es

Master. What is sound?

Disciple. The result of the collision between two bodies which set the air in movement and produce a sensation that strikes the ear with a certain degree of impulse.

- M. What kinds of sensations are produced by such collision, and how many are there?
- D. Two; and they are named noise and sound. The former produces an indeterminate and irrational sensation; the latter a determinate and rational one.
- M. What produces the noise, and for what reason is its sensation said to be indeterminate and irrational?
- D. The noise is produced by the shot of firearms, the collision of swords, the stroke of hammers, the fall of any body to its center, etc., and its sensation is said to be indeterminate and irrational because it is impossible to harmonically fix its intonation, pitch level,

- posible fijar harmónicamente su entonacion, elevacion y valor musical.
- M. ¿Qué es lo que produce el sonido y por qué su sensacion es determinada y racional?
- D. La voz humana, una cuerda mas ó menos tirante, un tubo de cualquiera dimension, una campana &c., y su sensacion se llama determinada y racional, porque se puede fijar exactamente su estension, elevacion y valor musical.
- M. ¿Cuántas son las atribuciones del sonido?
- D. Son tres: 1.<sup>a</sup> el tono, que en esta acepcion se toma por la elevacion ó progresion de los sonidos, desde el mas grave al mas agudo: 2.<sup>a</sup> la fuerza, que es lo que clasifica la calidad de los sonidos, desde el mas endeble al mas fuerte: 3.<sup>a</sup> la cualidad ó timbre, que determina la clase de los sonidos, desde el mas obscuro al mas brillante.<sup>75</sup>
- and musical value.
- M. What produces the sound and for what reason is its sensation said to be determinate and rational?
- D. The human voice, a string somewhat stretched, a pipe of any dimension, a bell, etc., and its sensation is said to be determinate and rational because its length, pitch level, and musical value can be determined with accuracy.
- M. How many attributions does the sound have?
- D. Three: first, the tone, which under this meaning denotes the pitch level or progression of sounds from the lowest to the highest; second, the intensity, which classifies the sounds from the weakest to the loudest; third, the timbre which determines the quality of the sounds from the darkest to the most brilliant.

In the above passage the author has attempted to explain, in a rational manner, the origin and nature of sounds which for him are the basic components of music. The Mexican historian Miguel Galindo criticized Gómez' first definition of music--in which he stated that "music is the science of

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75. Ibid., 31-32.

sounds"--because Galindo believed that Gómez was confusing music with acoustics.<sup>76</sup> However, Galindo is not entirely correct in judging Gómez' concept of music only from his first general definition of the term. Gómez had a much more profound and aesthetic concept of music, as we began to see in the same paragraph where he states a clear distinction between noise and sound. For Gómez the sounds are the building stones used for constructing larger musical works. He explains this process as follows:

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|--|--|
| M. ¿Qué resultado produce el sonido?   | M. What results are produced by the sounds?  |
| D. Dos, y son: <u>la armonía y la melodía.</u>   | D. Two, and they are: <u>harmony and melody.</u>   |
| M. ¿Qué se entiende por armonía?   | M. What is understood by harmony?  |
| D. Llámase armonía, a la reunion simultánea de varios sonidos, mas ó menos gratos, que produce un buen efecto al oido, aunque no se sujete al ritmo ó medida.  | D. Harmony is the simultaneous reunion of several sounds, more or less pleasant, that produce a good effect to the ear, whether or not such combination of sounds is measured rhythmically.  |
| M. ¿Qué se entiende por melodía?   | M. What is understood by melody?   |
| D. Llámase melodía, a la sucesion progresiva de sonido en sonido, algunas veces estraña á la armonía de la que trae su origen; pero siempre arreglada á los sonidos que constituyen el modo, y sujeta á la modulacion y al ritmo ó medida, que es quien determina y divide sus frases. <sup>77</sup> | D. Melody is the successive progression of sounds, sometimes foreign to harmony, from which melody originates, but always arranged according to the proper sounds of the mode, and subject to modulation and rhythm or meter which is the deciding factor for the division of phrases. |

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76. Galindo, op. cit., 531.

77. Gómez, op. cit., 32-33.

Gómez' definition of harmony and melody presents a clearer picture of his general conception of music and justifies its first definition: he defined music as "the science of sounds," not because he confused music with acoustics, but because for him sounds are the basic, indispensable material from which music is made. According to his way of thinking, sounds are the essential constituents of harmony, and harmony, in its turn, gives origin to melody. On this specific point Gómez takes sides with Rameau and openly contradicts his friend Elízaga who, influenced by the doctrines of Eximeno, stated that the major-minor scale was the source which gave origin to harmony (see pp. 159-160 above). Having completed his prefatory explanation about the origin and nature of music, Gómez is now ready to deal with more advanced concepts which he entitled: "syntax of music."

### Scales

Gómez explains the three basic types of scales-- diatonic, chromatic, and enharmonic--under the heading of "On the octave and its formation."

- |  |  |
|--|--|
| M. ¿Qué se entiende por octava?  | M. What is meant by octave?  |
| D. La escala <u>diatónica</u> de ocho sonidos ó notas.                               | D. The eight-note diatonic scale.  |
| M. ¿Qué quiere decir diatónica?  | M. What does <u>diatonic</u> mean?   |
| D. Esta palabra es griega, y manifiesta que los sonidos ó notas se siguen de grado y | D. This is a Greek word and it states that the sounds or notes must proceed by step and without interruption |

- sin interrupción;  
como: do, re, mi, fa,  
sol, la, si.
- M. ¿Cuántos tonos contiene la octava ó escala diatónica?
- D. Seis tonos, que se dividen en cinco tonos y dos semitonos mayores.
- M. ¿Cuántas clases de octavas hay?
- D. Tres, que se conocen con los nombres siguientes: escala diatónica; escala cromática; escala enarmónica.
- M. ¿Qué significa la voz cromática?
- D. Esta voz es griega, y significa que los sonidos ó notas siguen una progresion diatónica, pero de semitonos.
- M. ¿Y la voz enarmónica?
- D. Tambien es griega, y significa que los sonidos ó notas siguen una progresion diatónica, pero de cuartos de tonos ó comas.<sup>78</sup>
- as: c, d, e, f, g, a, b.
- M. How many tones are contained in the octave or diatonic scale?
- D. Six tones, divided in five tones and two major semitones.
- M. How many species of octave are there?
- D. Three, and they are known by the following names: diatonic scale, chromatic scale, and enharmonic scale.
- M. What does chromatic voice mean?
- D. This is a Greek word and it means that the sound or notes progress diatonically, but by semitones.
- M. What about the term enharmonic?
- D. It is also Greek, and it means that the sounds or notes progress diatonically, but by quarters of a tone or commas.

This definition and classification of scales does not warrant any extensive comment. It is clear that the author was trying to explain an already well-established system. Gómez deals with scales in a somewhat more modern fashion than Elízaga did (see pp. 143-146 above). Gómez explains the system of the octave-scale with no reference--even for the sake of comparison--to the old hexachordal system. Obviously

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78. Ibid., 35-36.

intentional, such omission supports the belief that, by his time, hexachordal scales had become obsolete and that the octave-scale system was the only one in actual practice. Perhaps the most significant aspect of Gómez' discussion of scales is the fact that he assigns specific names to each degree of the scale. To the best of this writer's knowledge, Gómez is the first Mexican theorist to use the terms tonic, mediant, subdominant, dominant, etc., in reference to the various degrees of the scale. The following paragraph contains such reference:

- |   |  |
|---|--|
| M. ¿Bajo qué nombres se distinguen los tonos y semitonos de que se compone la octava? | M. What are the names given to each of the tones and semitones which conform the octave? |
| D. Por los siguientes y son:  | D. They are the following:   |
| 1. <u>do</u> . . . tónica ó primera de tono:  | 1. <u>do</u> . . . tonic or first degree.  |
| 2. <u>re</u> . . . segunda de tono:   | 2. <u>re</u> . . . second degree.  |
| 3. <u>mi</u> . . . mediante ó tercera de tono:  | 3. <u>mi</u> . . . mediant or third degree.  |
| 4. <u>fa</u> . . . subdominante ó cuarta de tono:                                     | 4. <u>fa</u> . . . subdominant or fourth degree.   |
| 5. <u>sol</u> . . . dominante, ó quinta de tono:                                      | 5. <u>sol</u> . . . dominant or fifth degree.  |
| 6. <u>la</u> . . . sexta de tono:   | 6. <u>la</u> . . . sixth degree.   |
| 7. <u>si</u> . . . sensible, ó séptima de tono:                                       | 7. <u>si</u> . . . leading tone or seventh degree.                                       |
| 8. <u>do</u> . . . octave: <sup>79</sup>  | 8. <u>do</u> . . . octave.   |

It should be noted that none of the two Mexican theorists discussed previously (Vargas y Guzmán and Elízaga)

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79. Ibid., 38.



used the terms tonic, dominant, subdominant, or any other equivalent name in reference to scale degrees. It would seem surprising that Elízaga did not use such terms, considering that he appeared to be quite familiar with the theories of Rameau. Perhaps due to his unconditional adherence to Eximeno, Elízaga preferred not to identify himself with such terms since doing so would inevitably reveal a direct linkage with Rameau. On this regard, Gómez had a greater freedom to develop his theories and to express his ideas, since he never committed himself to follow the path established by one particular theorist. One additional point that deserves to be mentioned is the fact that Gómez' designation of scale degrees such as tonic, dominant, etc., should not be considered as just a matter of grammatical significance. As it will be observed later, he also appeared to have a better understanding of functional relationships between chords.

### Intervals

Gómez' discussion of intervals is both traditional and unusual. It is traditional, because his definition and classification of intervals reflect a close following of standard concepts. However, his theories behind such concepts-- particularly those given to justify his classification of intervals--are unique. Gómez defines the concept of "interval" as follows:

- |   |  |
|---|--|
| M. ¿Qué se entiende por intervalo?  | M. What does the term interval mean?   |
| D. En su acepción general significa la distancia que hay de un sonido a otro, sea ascendiendo ó descendiendo. <sup>80</sup> | D. In its most common acceptance, it means the distance between one sound and another, either ascending or descending. |

Gómez appears to have a particular tendency to classify all things. With regard to intervals he enumerates various categories: conjunct and disjunct, consonant and dissonant, perfect and imperfect, simple and double, major and minor, diminished and augmented. The majority of these interval labellings are now of generally-accepted nomenclature and need no further explanation. However, some aspects--particularly those dealing with the parameters used by Elízaga to classify intervals and to explain their qualities--deserve closer consideration. With regard to consonant intervals (P4, P5, M3, m3, M6, m6) Gómez justifies their concordant character on the following basis:

- |   |   |
|---|---|
| M. ¿Por qué se llaman así?  | M. Why are they so called?  |
| D. Porque los consonantes causan una sensación agradable al oído; y los disonantes no solo no forman armonía, sino que disuenan y casi incomodan. <sup>81</sup> | D. Because the consonances cause a pleasing sensation to the ear; the dissonances, however, not only cannot make harmony, but they sound discordant and almost produce a feeling of discomfort. |

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80. Ibid., 39.

81. Ibid., 40.

From this explanation we extract two basic concepts: 1) Gómez does not rely on scientific basis to prove the consonant or dissonant nature of intervals; rather, he calls on the judgment of the human ear to be the sole arbiter, and 2) dissonances cannot make harmony because of their discordant character. Thereafter, he explains consonances as being perfect (fifths and fourths) or imperfect (thirds and sixths) by exposing a rather dubious theory: that of the capability of the intervals to maintain invariable their distance--with respect to the tonic note of the scale--in both the major and the minor modes.

- |  |   |
|--|---|
| M. ¿Cuáles son los intervalos consonantes perfectos, y por qué se denominan así?   | M. Which are the perfect consonant intervals, and why are they so considered?   |
| D. Se llaman perfectos los intervalos de 4. <sup>a</sup> y 5. <sup>a</sup> porque conservan invariablemente una misma distancia de su tónica en ambos modos.                 | D. The intervals of the fourth and the fifth are called perfect because they maintain an invariable distance from their tonic note in both modes.                     |
| M. ¿Cuáles son los intervalos consonantes imperfectos, y por qué se llaman así?  | M. Which are the imperfect consonant intervals and why are they so considered?  |
| D. Por la razón inversa, y son los de 3. <sup>a</sup> y 6. <sup>a</sup> ; pues sus distancias de la tónica se alteran, según el modo á que pertenezcan . . . . <sup>82</sup> | D. For the opposite reason; they are the thirds and the sixths because their distance from the tonic is altered depending on the mode to which they belong to . . . . |

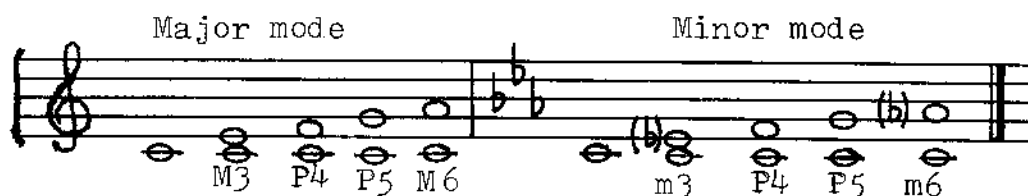
Example 10 illustrates how perfect consonances (P4 and P5)

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82. Ibid., 40-41.

remain invariable in both modes while imperfect consonances (thirds and sixths) vary their distance--with regard to the tonic note--when the mode changes.

Example 10. Perfect and imperfect consonances.



This method of classification seems rather dubious, arbitrary, and elaborated after the fact. One could reasonably ask: which came first, the perfect intervals or the major and minor scales? Consonances had already been classified as perfect and imperfect in the thirteenth century, by John of Garland, in a manner that henceforth has become standard. The concept of major and minor modes, on the other hand, was a much later development, and one that was not theoretically explained in Mexico until the early nineteenth century in the works of Elízaga and Gómez. How, then, could one concept (that of perfect and imperfect consonances) be substantiated on the basis of another (major and minor modes) when the former was formulated several centuries before the latter? This approach, however, does not necessarily imply that Gómez was ignorant of the past theoretical formulae. On the contrary, it may even serve to illustrate the fact that

Gómez and Elízaga employed different methods to formulate their theories: Elízaga tried to prove the superiority of the new systems by comparison with the old ones; Gómez by completely ignoring them. Gómez' classification of dissonances also reveals the use of more contemporary parameters. As can be seen in the following paragraph, he classifies dissonances in direct relationship with the role they play in chordal formations:

- |   |   |
|---|---|
| M. ¿Clasifique V. las atribuciones de los intervalos disonantes.  | M. Please classify the dissonant intervals.   |
| D. Los intervalos disonantes pueden ser mayores y menores: sencillos y dobles.  | D. The dissonant intervals can be major and minor, simple and double.   |
| M. ¿Cuáles son los intervalos disonantes mayores, y por qué se llaman así?  | M. Which are the major dissonant intervals, and why are they so called?   |
| D. Todos los acordes que pueden ser superfluos, como son los de 2. <sup>a</sup> , 4. <sup>a</sup> , 5. <sup>a</sup> , 6. <sup>a</sup> y se llaman mayores, porque contienen la mayor distancia de su intervalo ó el mayor número de semitonos.                  | D. All the chords that may be augmented, as those of the second, fourth, fifth, and sixth; they are called major because they comprise the largest possible distance, that is, the greatest number of semitones within its characteristic interval.     |
| M. ¿Cuáles son los intervalos disonantes menores, y por qué se llaman así?  | M. Which are the minor dissonant intervals, and why are they so called?   |
| D. Todos los acordes que pueden ser diminutos, como son los de 3. <sup>a</sup> , 4. <sup>a</sup> , 5. <sup>a</sup> , 7. <sup>a</sup> y se denominan menores, porque contienen la menor distancia de su intervalo, ó el menor número de semitonos. <sup>83</sup> | D. All the chords which can be diminished, as those of the third, fourth, fifth, and seventh; they are called minor because they comprise the shortest possible distance, that is, the smallest number of semitones within its characteristic interval. |

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83. *Ibid.*, 41-42. "Characteristic interval" only means the interval by which a given chord is identified or classified.

It may appear at first that some confusion exists, in the above paragraph, between the terms "intervals" and "chords": twice the master asks about intervals, and in both occasions the disciple answers using the term "chord" thereby giving the impression that he misunderstands the question and therefore his answers seem to be off the subject; however, this is not the case. Just as he explained consonances from the standpoint of the major and the minor scales, Gómez now explains dissonances in direct relationship with chords. From the above text alone, it would be difficult to determine the exact meaning of "chords of the second, third, fourth, fifth," and so on. This, however, receives clarification from several Tables of musical examples provided by Gómez at the end of the treatise. For instance, Example 11 (Table 7 of the Gramática) shows the chords of augmented second, fourth, fifth, and sixth--classified as major dissonances in the previous paragraph.

Example 11. Major dissonances = chords featuring an augmented interval.

The image shows a musical staff with a treble clef and a key signature of one sharp (F#). It contains four chords, each with a sharp sign above it. The chords are labeled below the staff as A2 Chord, A4 Chord, A5 Chord, and A6 Chord. The notes for each chord are: A2 Chord (F#, G, A, B), A4 Chord (F#, G, A, B, C), A5 Chord (F#, G, A, B, C, D), and A6 Chord (F#, G, A, B, C, D, E).

As we may infer from this example, Gómez classifies each of the chords according to their characteristic dissonance,

i.e., the characteristic interval between the bass and one of the upper voices. We note that the first and second chords are actually the same chord in different positions (a fully diminished seventh chord). Though recognizing this fact, Gómez still classifies them somewhat differently because he considers the first chord to be more strongly identified with the interval of the augmented second, while the second with the interval of the augmented fourth.

His illustrations with regard to minor dissonances are rather confusing. We recall, from the previous quotation, that Gómez listed the chords of a diminished third, fourth, fifth, and seventh as minor dissonances. However, in his Table of chords there are no examples of chords of diminished third or fourth. Example 12 illustrates his chords of diminished fifth and seventh.

Example 12. Minor dissonances = diminished chords.

The image shows a musical staff with a treble clef and a key signature of one flat (B-flat). The staff contains two measures of music. The first measure shows a diminished seventh chord with notes B-flat, D, F, and A-flat. Below it is the label "dim. 7th Chord". The second measure shows an identical diminished seventh chord with notes B-flat, D, F, and A-flat. Below it is the label "Id. dim. 5th Chord".

Since Gómez gives no example of a diminished fourth, his repeated concern about dealing with such a chord, as in the following dialogue, is rather perplexing:

- |  |   |
|--|---|
| M. ¿Luego los acordes de 4. <sup>a</sup> y de 5. <sup>a</sup> pueden ser supérfluos y diminutos? | M. Then, the chords of the fourth and fifth can be both augmented and diminished?                     |
| D. Si señor.   | D. Yes, master.   |
| M. ¿Por qué?   | M. Why?   |
| D. Porque sin formar <u>modo</u> alguno, pertenecen al mayor y al menor. <sup>84</sup>           | D. Because since they do not determine any <u>mode</u> , they belong to both the major and the minor. |

This paragraph may be interpreted as just one more effort by the author to explain why the intervals of the fourth and the fifth may become augmented and diminished--but not major or minor--when altered in either direction. From his previous discussion on perfect and imperfect consonances (pp. 189-190 above), it may be inferred that only the third and the sixth, being imperfect consonances, can be major or minor; consequently, they alone are the determinants of the mode. This interpretation, however, is not based on any statement in the treatise and does not shed any further light on the said diminished-fourth chord mentioned in the above passage.

With regard to the unison, Gómez considers it to be neither consonant nor dissonant.

- |  |  |
|--|--|
| M. ¿Qué se entiende por unísono?                             | M. What is understood by unison?   |
| D. La union de dos sonidos que no se diferencian entre sí.   | D. The combination of two sounds which are not different one from the other. |
| M. ¿La union de estos dos sonidos es consonante ó disonante? | M. Is such a combination consonant or dissonant?                             |

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84. Ibid., 42.



- D. Algunos pretenden que sea consonante; pero generalmente está admitido no ser consonante ni disonante aunque principio de cualquiera intervalo consonante ó disonante.
- M. ¿Qué razon hay para creerlo asi?
- D. La razon es que un sonido solo repetido en muchas octavas, no puede formar armonía, luego no es consonante; ni menos puede causar una sensacion incómoda, luego tampoco es disonante.<sup>85</sup>
- D. Some pretend it to be consonant; but it is now generally accepted to be neither consonant nor dissonant, but the beginning of all intervals.
- M. Is there a reason to believe this?
- D. The reason is that a single sound repeated in several octaves cannot make harmony, therefore, it is not consonant; much less can it cause an unpleasant sensation, therefore, it is not dissonant either.

Finally, Gómez mentions the existence of other types of intervals produced by the use of the enharmonic scale--e.g., c-c#, e#-f, etc. However, for Gómez, such classifications are not very useful since modern keyboard instruments are built "according to the diatonic and chromatic systems." For him, the only significance of enharmonic intervals is with regard to enharmonic modulations.<sup>86</sup>

### Theory of Mode

The theory of mode is presented in the second section of Gramática (Article V: Del Modo y su teoría, "On Mode and its Theory"). This portion, together with his subsequent exposition of harmonic theory, constitutes the core of the

85. Ibid., 47.

86. Ibid., 47-48. However, he does not deal with enharmonic modulations at all.

entire treatise. Gómez' preliminary statement on theory of mode is manifested in the following paragraph:

- M. ¿Qué se entiende por modo?
- D. Una determinada disposición de armonía, que califica toda la octava en relación á su tónica.
- M. ¿Qué diferencia hay entre tono y modo?
- D. En que el tono solo indica el sonido ó nota que debe servir de tónica á una pieza música; y el modo determina la tercera ó mediante, y clasifica toda la octava sobre aquella nota fundamental.
- M. ¿Cuántos modos se conocen en la música?
- D. Dos: modo mayor, y modo menor.
- M. ¿En qué se diferencian?
- D. En la colocación que guardan los dos semitonos mayores que hay en la octava.
- M. Esplique V. su teoría.
- D. Tres son las cuerdas ó notas esenciales del modo, que juntas forman un acorde perfecto, y son: 1.<sup>a</sup> la tónica: que es el signo fundamental del tono y modo: 2.<sup>a</sup> la quinta ó dominante, que se halla á la quinta de la tónica: 3.<sup>a</sup> la tercera ó mediante, que se halla á la tercera de la tónica y es la que propiamente constituye el modo; pero como esta
- M. What is understood by mode?
- D. A specific harmonic arrangement which classifies the entire octave according to its tonic note.
- M. What is the difference between tone and mode?
- D. They differ in that tone refers only to the pitch or note which serves as tonic for a piece of music; mode, on the other hand, determinates the third or mediant, and classifies the entire octave according to its fundamental note.
- M. How many modes are known in music?
- D. Two: major mode and minor mode.
- M. What is their difference?
- D. The different position of the two major semitones in their octave arrangements.
- M. Explain your theory.
- D. The perfect chord is formed by the combination of three strings or essential notes of the mode; they are: 1<sup>st</sup> the tonic, which is the fundamental note of both the tone and the mode; 2<sup>nd</sup> the fifth or dominant which is found a fifth from the tonic; 3<sup>rd</sup> the third or mediant, which is a third from the tonic and is the note that properly determines the mode. Since the third

- puede ser de dos especies, hay dos modos diferentes como queda dicho, y son: modo mayor, y modo menor: es modo mayor, cuando la tercera, ó mediante dista dos tonos de la tónica; como do, mi: es modo menor, cuando la tercera ó mediante solo dista tono y medio de la tónica; como la, do.
- M. ¿Las demas notas de la octava guardan la misma progresion en ambas octavas?
- D. No señor: en el modo mayor, la sesta, y la séptima ó sensible deben ser mayores, . . . en el modo menor, aquellos dos intervalos deben ser menores, . . . pero siendo indispensable que la séptima, sea mayor en ambos modos, (por cuya razon se le llama sensible) en el de tercera menor se hace dicho intervalo mayor accidentalmente como: la, sol sostenido.
- M. Establecida esta teoría ¿donde quedan los dos semitonos mayores en ámbos modos?
- D. En el modo mayor se halla el primero entre la tercera y la cuarta, como mi, fa: y el segundo entre la séptima y la octava como si, do: en el modo menor, el primero entre la segunda y la tercera, como si, do: y el
- can be of two kinds, therefore, there are also two different modes: major mode and minor mode. Major mode is when the third or mediant is two tones away from the tonic; as in do-mi; minor mode is when the third or mediant is only one and one half tones away from the tonic, as in la-do.
- M. Do the other notes of the octave keep the same position in both modes?
- D. No Sir: in the major mode the sixth and the seventh or leading tone must be major, . . . in the minor mode both intervals must be minor, . . . however, since it is indispensable for the seventh to be major in both modes (for which reason it is called leading tone), in the minor mode the seventh becomes major by the use of an accidental as in a-g#.
- M. Now that you have established your theory, where are the two major semitones located in both modes?
- D. In the major mode they are found between the third and the fourth degrees as in e-f, and between the seventh and the octave as in b-c. In the minor mode they are found between the second and the third degrees

segundo entre la  
quinta y la sesta,  
 como mi, fa: . . .<sup>87</sup>

as in b-c, and  
 between the fifth  
 and the sixth as in  
e-f . . .

Once more, the author's persistent disposition to ignore older theories should be noted. When dealing with modes, he deals exclusively with major and minor modes. Nowhere in his treatise is found a slightest reference to the older modal system. Faithful to his belief that harmony is the source of all melodic arrangements, he defines mode as "a specific harmonic arrangement which classifies the entire octave according to its tonic note" (see previous quotation). This definition evidences a decided harmonic approach to modality.

As is known, seventeenth-century theorists began to consider modality from an essentially harmonic point of view. A clear discussion of the relationship between harmony and mode is already found in the works of Lippius. Though still upholding the twelve-mode system, Lippius actually defined mode in terms of triads and not in terms of octave species.<sup>88</sup> With regard to the definitive establishment of the major-minor system, seventeenth-century English theorists seem to have been in the vanguard. According to Atcherson, "Coperario and

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87. Ibid., 48-50.

88. For further discussion of seventeenth-century modal theory in Germany, see Joel Lester, "Major-Minor Concepts and Modal Theory in Germany, 1592-1680," Journal of the American Musicological Society XXX (1977), 208-253.

Campion appear to be among the first to discern clearly that there were only two modes."<sup>89</sup> Early in the seventeenth century, French theorists stressed the importance of the interval of the third as a modal determinant, specially at cadence points. It was not, however, until late in the century that French writers such as Loulié, L'Affilard, Jean Rousseau, Montéclair, Charles Masson, Alexandre Frère, and Michel de St.-Lambert, among others, clearly spoke of the existence of only two modes in music, each distinguished by the quality of its third.<sup>90</sup> Therefore, Gómez' harmonic concept of mode was by no means original nor did he pretend it to be so. However, the fact that he makes no direct references to the works of other authors makes it difficult to speculate about his source of information. For Gómez the three essential notes of a mode are: the tonic, the mediant, and the dominant. Of these three notes, the third or mediant is the one which properly establishes the mode. In Gómez' theory, the third and the sixth degrees of the scale play a decidedly important role since they are the only two variable degrees. The second, the fourth, the fifth, and also the seventh--because of its particular function as the leading tone--remain invariable in both major and minor modes:

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89. W. A. Atcherson, "Symposium on Seventeenth-Century Music Theory: England," Journal of Music Theory XVI (1972), 11.

90. Albert Cohen, "Symposium on Seventeenth-Century Music Theory: France," Journal of Music Theory XVI (1972), 21-23.

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|--|---|
| <p>M. ¿Cuáles son las notas, cuyos intervalos nunca se alteran en una octava, sea en modo mayor ó menor?</p> <p>D. Tres: la <u>segunda</u>, la <u>cuarta</u> subdominante y la <u>quinta</u> dominante.</p> <p>M. ¿Por qué?</p> <p>D. Porque solamente la <u>tercera</u> y la <u>sesta</u> son las que determinan el modo y no otras.<sup>91</sup></p> | <p>M. Which degrees of the octave-scale remain always invariable in both major and minor modes?</p> <p>D. Three: the <u>second</u>, the fourth or <u>subdominant</u>, and the <u>fifth</u> or dominant.</p> <p>M. Why?</p> <p>D. Because it is only given to the <u>third</u> and the sixth to determine the mode and not the others.</p> |
|--|---|

In substance, Gómez' concept of mode is essentially harmonic. The distinctive quality of the tonic chord--either major or minor depending on the quality of its third--constitutes the corner stone of his entire modal theory. The two different melodic arrangements (octave species) of the major and the minor scales, characterized by a different location of the two semitones, are, according to his way of thinking, only the result of changing the quality of the two modal degrees (the third and the sixth) for harmonic reasons. On this regard, Gómez' theory of mode is distinctively more up to date than that of his contemporary Elízaga.

Another concept presented by Gómez, as part of his modal theory, is that of relative modes.

- |   |  |
|---|--|
| <p>M. ¿Se conoce alguna acepcion en los modos?</p> <p>D. Si señor: dos.</p> | <p>M. Is there another division of the modes?</p> <p>D. Yes, Sir: two.</p> |
|---|--|

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91. Gómez, op. cit., 51.

- M. ¿Cuáles son?  
 D. Las de: modo principal y modo relativo.
- M. ¿Cuál es el modo principal?  
 D. Aquel en que se escribe una pieza de música.
- M. ¿Y el modo relativo?  
 D. Aquel á que se sale ó pasa en el discurso de una pieza de música, por breve que sea; y se divide en análogo y desemejante.
- M. ¿Qué se entiende por modo relativo análogo y desemejante.  
 D. Son análogos aquellos, cuya armonía es una parte de la del principal; y desemejantes todos los demas.
- M. ¿Cuáles son los modos análogos al modo mayor?  
 D. Los de 5.<sup>a</sup> y 4.<sup>a</sup> modo mayor, que solo difieren del principal en una cuerda, y los de 6.<sup>a</sup> 2.<sup>a</sup> y 3.<sup>a</sup> modo menor.
- M. ¿Cuáles son los modos análogos al modo menor?  
 D. El de 3.<sup>a</sup> modo mayor, que tambien difiere en una cuerda del principal; el de 6.<sup>a</sup> modo mayor y el de 4.<sup>a</sup> modo menor.<sup>92</sup>
- M. Which are they?  
 D. The principal mode and the relative mode.
- M. Which is the principal mode?  
 D. That in which a piece of music is written.
- M. And the relative mode?  
 D. That to which the music digresses or modulates in the course of the piece, no matter how brief the modulation; and it is divided in analogous and dissimilar.
- M. What is understood by analogous and dissimilar?  
 D. Analogous are those modes whose harmony is part of the harmony of the principal mode; and dissimilar are all the rest.
- M. Which modes are analogous to the major mode?  
 D. The major modes on the fifth and the fourth degrees because they differ from the principal mode in one string only, and the minor modes on the sixth, second, and third degrees.
- M. Which modes are analogous to the minor mode?  
 D. The major mode on the third degree which also differs from the principal in one string; and the major mode on the sixth degree; and the minor mode on the fourth degree.

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92. Ibid., 56-57. Although Gómez does not list the key of the dominant (v) as analogous in minor keys, he actually includes it in his Table of related keys as shown in Example 13.

Gómez explains the concept of relative modes for a practical reason: the practice of modulations in music. It is necessary to observe, however, that Gómez seems to use the term "mode" to denote "key." When he speaks of relative modes he is actually referring to "relative keys." In fact, his discussion of principal mode and relative modes is made in direct reference to modulation. The principal mode of a piece is its tonic key; any other key to which the music modulates is called relative. Gómez' division of relative keys in analogous and dissimilar, actually corresponds to contemporary divisions of "closely related keys" (analogous) and "remote keys" (dissimilar). For major modes, Gómez lists the following keys as analogous: V, IV, vi, ii, and iii; for minor modes the analogous keys are: III, VI, iv, and v. He illustrates such classification in Table 6, figure 1 of Gramática, as shown in Example 13, under the heading of "modulations."

Example 13. Modulations.

Modo mayor

de Do á Sol á fa á la á mi á re

Modo menor

de la á do á mi á re á fa



Gómez establishes two conditions for the above group of keys to be analogous with the tonic: 1) they must differ from the principal key in one string only (one more or less flat or sharp in the key signature), and 2) their harmony must be part of the harmony of the principal mode. While the first condition requires some degree of closeness between key signatures, the second condition requires that the tonic chord of the analogous key must be a diatonic chord in the principal key. On this regard we note in Example 13 that Gómez shows five keys analogous to C major but only four keys analogous to A minor. Each of the five keys listed as analogous to C major fulfill the two conditions. In the minor system, however, there is one key (G major), in addition to the ones listed, that fulfills condition number one but not condition number two. It was noted previously that, according to Gómez, the seventh degree of the minor scale needs to be raised for harmonic reasons. Thus, in the key of A minor, the chord on the seventh degree is actually built on G-sharp (G<sup>#</sup>-B-D) rather than on G-natural (G-B-D). The G major chord is, therefore, a "non-diatonic" chord in the key of A minor and, for this reason, Gómez excludes the key of G major (bVII or subtonic in A minor) from the list of analogous keys. In doing this, Gómez was probably reflecting current practices. If this supposition is accurate, then we may conclude that modulations to the key of the subtonic of the minor mode were not common among Mexican composers at Gómez' time.

It would be erroneous to state that Gómez was confused in differentiating mode and key. Although in his previous explanation of relative modes he employed the term "mode" to denote "key," immediately afterward he proposed a new term in order to distinguish the two concepts clearly:

- |   |   |
|---|---|
| <p>M. Para no confundir el tono con el modo, ¿qué voz deberá adoptarse para especificarlos ambos?</p> <p>D. <u>Sonimodo</u>, palabra compuesta de la voz <u>son</u>, por el sonido ó nota que sirve de tónica á una pieza de música; y de la voz <u>modo</u>, para determinar á cuál pertenece.</p> <p>M. En este caso preguntado, ¿en qué <u>sonimodo</u> se halla una pieza de música que tenga dos sostenidos fijos en la llave, qué se responderá?</p> <p>D. En re, modo mayor, ó si modo menor.<sup>93</sup></p> | <p>M. To avoid confusing the key with the mode, what term should be adopted to specify each of them clearly?</p> <p>D. <u>Sonimode</u>, a term composed of the word <u>son</u>, to denote the sound or note which acts as tonic in a piece of music; and the word <u>mode</u>, to determine the mode of the piece.</p> <p>M. Therefore, if I ask: in which <u>sonimode</u> is a piece of music which has two sharps in its signature, what will be the answer?</p> <p>D. In D, major mode, or in B, minor mode.</p> |
|---|---|

For Gómez, sonimodo is a convenient term to connote both aspects of "key"-ness: modality and tonality--the two terms that, evidently, had caused some misinterpretations at his time.<sup>94</sup>

93. Ibid., 58.

94. For further differentiation of the two terms--"mode" and "tone"--see quotation on p. 196.

### Harmonic Theory

The discussion of harmonic theory is contained in the last three chapters (Articles VI, VII, and VIII) of Gómez' Gramática, entitled: De los acordes y su teoría ("On Chords and their Theory"); De las cadencias ("On Cadences"); and De la tabladura ("On Figured Bass") respectively. For the purpose of this study, however, the order of the last two chapters will be reversed in an attempt to present the author's concepts in a more logical order.

On Chords and their theory. At the outset of his discussion of chords, the author defines the term "chord" and proposes a general classification.

- |   |   |
|---|---|
| M. ¿Qué se entiende por <u>acorde</u> ?   | M. What is understood by chord?   |
| D. La unión de dos ó mas sonidos que se ejecutan á un mismo tiempo, y producen un conjunto armónico.  | D. The union of two or more sounds executed at the same time, and which produce a harmonic compound.              |
| M. ¿En cuántas clases se dividen los <u>acordes</u> ?   | M. How many classes of chords are there?  |
| D. En dos: <u>acordes consonantes</u> , y <u>acordes disonantes</u> ; que tambien se llaman <u>perfectos</u> é <u>imperfectos</u> . <sup>95</sup> | D. Two: <u>consonant chords</u> and <u>dissonant chords</u> ; also known as <u>perfect</u> and <u>imperfect</u> . |

Gómez' theory of chords is intrinsically related to his theory of intervals. Just as he classified intervals according to the effect they produce in chordal formations (see pp. 191-194 above), he now classifies chords based

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95. Gómez, op. cit., 61.

exclusively on their intervallic content: consonant or perfect chords are those formed solely with consonant intervals; dissonant or imperfect chords, on the other hand, contain at least one dissonance in their intervallic content.

- |   |   |
|---|---|
| <p>M. ¿Cuáles son los <u>acordes disonantes</u> ó <u>imperfectos</u>?</p> <p>D. Los que contienen uno ó mas intervalos disonantes.</p> <p>M. ¿Cuántos son los <u>acordes disonantes</u> ó <u>imperfectos</u>.</p> <p>D. Todos aquellos que no pueden de manera alguna constituir, ó producir la 3.<sup>a</sup> 5.<sup>a</sup> y 8.<sup>a</sup>; condiciones esenciales para que el acorde sea consonante perfecto.<sup>96</sup></p> | <p>M. Which are the <u>dissonant</u> or <u>imperfect</u> chords?</p> <p>D. Those which contain one or more dissonant intervals.</p> <p>M. How many dissonant or imperfect chords are there?</p> <p>D. All those chords which are not constituted by the third, fifth, and octave; which are the essential conditions for a chord to be consonant and perfect.</p> |
|---|---|

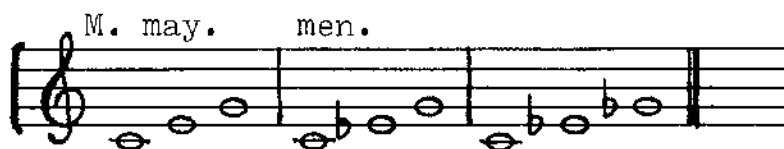
In accordance with this statement, the only consonant chords are the major and minor triads and their inversions. However, in his list of consonant chords Gómez enumerates three different types of chords: the major triad, the minor triad, and the diminished triad.<sup>97</sup> Judging from Gómez' own definition of consonant-perfect chords, it is quite clear that the diminished triad does not belong to this category, since its characteristic interval is precisely that of a dissonance--a diminished fifth. Unfortunately, such apparent inconsistency

96. Ibid., 62.

97. Ibid., 61. We recall that Gottfried Weber also lists the chord built on the seventh degree (vii<sup>o</sup>) as one of his Ground-harmonies. It is very unlikely, however, that Gómez was acquainted with Weber's theories.

on the author's part may not be regarded as just an involuntary error. Besides listing the diminished triad among the consonant-perfect chords, he also refers the reader to his Table of musical examples (Table 6, figure 4 in his treatise) where he again includes the diminished triad--along with the major and minor triads--in his illustration of consonant-perfect chords. This illustration is shown in Example 14.

Example 14. Consonant-perfect chords.



Such classification is somewhat corrected by the fact that, immediately afterwards, the author provides at least two clear indications which prove that he really considers the diminished triad to be a dissonance. The first evidence is observed in his General Table of Chords (reproduced in its entirety in Example 19, p. 213 ahead) where he totally excludes the diminished triad from the group of consonant chords (marked A. C.). A much more explicit evidence, however, is found in the following statement:

M. ¿El acorde de dos  
terceras será conso-  
nante ó disonante?

M. Is a chord formed by  
two thirds consonant  
or dissonant?

- |   |  |
|---|--|
| <p>D. Si ambas terceras son mayores producirán un acorde disonante porque resultará una 5.<sup>a</sup> superflua, y si son ambas menores tambien será disonante, porque formarán una 5.<sup>a</sup> falsa.</p> <p>M. ¿De qué modo este acorde podrá formar armonía?</p> <p>D. Cuando una tercera sea mayor y otra menor.<sup>98</sup></p> | <p>D. If both thirds are major the chord will be dissonant because together they create an augmented fifth. If both thirds are minor the chord will also be dissonant because of the resulting formation of a false fifth.</p> <p>M. How can such a chord make harmony?</p> <p>D. Only when one third is major and the other one is minor.</p> |
|---|--|

Then, he immediately illustrates the two chords just described (augmented and diminished), as to leave no doubt that he considered them equally dissonant (see Example 15).<sup>99</sup>

Example 15. Augmented and diminished chords.



In addition to the augmented and diminished triads, Gómez explains and illustrates several other dissonant formations. He classifies dissonant chords in the following passage:

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98. Ibid., 63.

99. Ibid., Table 6, figure 7.

- |   |   |
|---|---|
| M. Clasifiquelos V.   | M. Please classify them.  |
| D. Son acordes disonantes ó imperfectos, la séptima, la segunda, la quinta falsa, el tritono, y todos los que sean diminutos ó superfluos. <sup>100</sup> | D. The following are dissonant or imperfect chords: the seventh, the second, the false fifth, the tritone, and all diminished and augmented chords. |

Again we note that Gómez classifies dissonant chords according to their characteristic-dissonant interval. Seventh chords are dissonant "because they cannot be part of the 8-5-3 chord; furthermore, they assume a different character depending on the scale degree upon which they are executed, and also depending on the mode."<sup>101</sup> In the Table of Chords (cf. p. 213) he illustrates several different types of seventh chords, including the diminished seventh. In addition to those, he illustrates three other seventh chords separately: the dominant seventh, the tonic seventh in major mode, and the tonic seventh in minor mode. These are shown in Example 16.<sup>102</sup>

Example 16. Seventh chords.

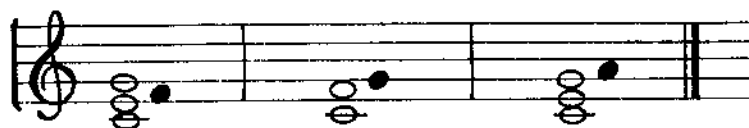


100. Ibid., 62.

101. Ibid., 62-63: "El acorde de 7.<sup>a</sup> es disonante porque no puede ser parte del acorde de 3.<sup>a</sup> 5.<sup>a</sup> y 8.<sup>a</sup>; y toma un diferente caracter segun el signo de la octava sobre que se ejecuta, y segun la naturaleza del modo."

Gómez also illustrates three interesting chords featuring the interval of a second. He calls them "chords of the third and fourth," "of the fourth and fifth," and "of the fifth and sixth," in reference to the two voices of the chord which form the dissonant interval. These three chords are illustrated in Example 17.<sup>103</sup>

Example 17. Chords "of the third and fourth," "of the fourth and fifth," and "of the fifth and sixth."



These three chords--with the possible exception of the second--are basically tertian formations with added dissonances.

Unfortunately, Gómez does not illustrate them in the context of a harmonic progression and therefore their character or their function is unclear. Another interesting chordal formation is suggested in the following statement:

M. ¿Cómo se determinará si un acorde de muchas notas (que no sea de 3.<sup>a</sup> 5.<sup>a</sup> y 8.<sup>a</sup>) es consonante, o disonante?

M. How shall it be determined if a chord composed by many notes (other than the third, fifth, and octave) is consonant or dissonant?

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102. *Ibid.*, Table 6, figure 5.

103. *Ibid.*, Table 6, figure 6.



D. Añadiéndole debajo de la nota mas grave su 3.<sup>a</sup> ó su 5.<sup>a</sup>: si con la union de una de estas notas resulta la armonía de 3.<sup>a</sup> 5.<sup>a</sup> y 8.<sup>a</sup>, el acorde es consonante, pero si con dicha adición no presenta aquella armonía perfecta el acorde es disonante.<sup>104</sup>

D. By adding below the lowest note its third or fifth: if the addition of one of these notes produces the harmony of the third, fifth, and octave, the chord is consonant, but if such addition does not generate a perfect harmony, then the chord is dissonant.

In this statement Gómez seems to be speaking of harmony of the future: one he himself does not seem to know very well. Nowhere in all of his examples of chords is to be found one chord such as the one described above (e.g., "composed by many notes other than the third, the fifth, and the octave"). The examples he provides specifically to illustrate such formations are illustrated in Example 18.<sup>105</sup>

Example 18. Adding a third and a fifth below the lowest member of a chord.



It is very difficult to understand Gómez' intended purpose in this example. In both chords only the procedure--adding a

104. Ibid., 63-64.

105. Ibid., Table 6, figure 9.

third or a fifth below the lowest note--is correct. However, none of the two chords is "composed by many notes," and they are both tertian structures. Although Gómez does not clearly state the above concept, his description of such vertical formations somehow resembles Rameau's theory of chords "by supposition."<sup>106</sup> Their root (C for both chords), although not actually present, is nevertheless "implied" since (according to Rameau) the fundamental sound can never be omitted.

Finally, Gómez complements his theory of chords by means of a Table (reproduced in its entirety in Example 19) in which he illustrates some chords not fully discussed in the main text of his treatise, such as: the augmented sixth chord; other types of seventh chords; ninth chords; one eleventh chord (which he calls "acorde de 7.<sup>a</sup> superflua"); and one thirteenth chord which he identifies as "acorde de 7.<sup>a</sup> superflua y 6.<sup>a</sup> menor."

On Figured Bass. The chapter on figured bass, entitled De la tabladura, presents Gómez' theory of the fundamental bass as the main subject.

- |  |  |
|--|--|
| M. ¿Que se entiende por tabladura?   | M. What is understood by tablature?                                |
| D. El bajo numerado ó cifrado, que se pone como acompañamiento de un canto cualquiera. | D. The figured bass which is written as accompaniment to any song. |
| M. ¿Qué quiere decir bajo en esta acepcion?  | M. What do we understand by bass, under this meaning?              |
| D. La voz ó parte mas  |  |

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106. Rameau, op. cit., 88-91.

Example 19. General Table of Chords

TABLA GENERAL DE TODOS LOS ACORDES RECIBIDOS EN LA ARMONIA.		Lam. 7.
<p>A. C. Acordes de Tercera Mayor</p> <p>de dos Octavas Acorde perfecto Id: de Sesta Id: con cuarta y sexta</p>		
<p>A. C. Acordes de Tercera Menor</p> <p>de dos Octavas Acorde perfecto Id: de Sesta Id: con cuarta y sexta</p>		
<p>A. D. Acorde de 6.<sup>a</sup> Superflua</p>	<p>A. D. Acorde de 5.<sup>a</sup> Superflua</p>	
<p>A. D. Acorde de 7.<sup>a</sup> Superflua</p>	<p>A. D. Acorde de 7.<sup>a</sup> Superflua y 6.<sup>a</sup> menor</p>	
<p>A. D. Acordes Sensibles, ó Tritonos</p> <p>Acorde Sensible Id: de quinta Id: de pequeña sexta Id: de Tritono</p>		
<p>A. D. Acordes de Séptima</p> <p>Acorde de séptima Id: de grande sexta Id: de pequeña 6.<sup>a</sup> menor Id: de Segunda</p>		
<p>A. D. Acordes de Séptima diminuta</p> <p>Acorde de 7.<sup>a</sup> diminuta. Id: de 6.<sup>a</sup> men. y 5.<sup>a</sup> diminuta. Id: de 3.<sup>a</sup> men. y tritono. Id: de 2.<sup>a</sup> Superflua.</p>		
<p>A. D. Acordes de Nona</p> <p>Acorde de Nona Id: de séptima y sexta Id: de 6.<sup>a</sup> 4.<sup>a</sup> y 5.<sup>a</sup> Id: de 7.<sup>a</sup> y 2.<sup>a</sup></p>		

baja de las cuatro que forman la perfecta armonía musical, y se divide en bajo generador ó fundamental, y bajo continuo ó sensible; . . .<sup>107</sup>

D. The lowest of the four voices which make perfect harmony. It is divided into: generator or fundamental bass, and continuous or sensible bass; . . .

Immediately following, Gómez explains and illustrates the two types of basses as follows:

- |  |  |
|--|--|
| <p>M. Esplique V. lo que es bajo fundamental.</p> <p>D. Dase este nombre á la cuerda ó sonido de un acorde, que sea el mas apto para regir la armonía perfecta, y determinar el modo.</p> <p>M. Luego el bajo de una pieza de música cualquiera será siempre bajo fundamental?</p> <p>D. No señor.</p> <p>M. ¿Por qué?</p> <p>D. Porque la cuerda ó sonido que constituye y representa el bajo de un acorde puede estar en las cuerdas medias ó agudas de este, sin ser su bajo fundamental.</p> <p>M. En este caso que nombre se dará al bajo de un acorde que no sea fundamental?</p> <p>D. Bajo continuo, ó sensible.<sup>108</sup></p> | <p>M. Explain what fundamental bass is.</p> <p>D. It is the string or sound of a chord considered the most apt to rule the perfect harmony and to determine the mode.</p> <p>M. Then, the bass of a given piece of music will always be the fundamental bass?</p> <p>D. No Sir.</p> <p>M. Why?</p> <p>D. Because the string or sound placed in the bass of a chord may be one of the chord's middle or upper strings, and therefore is not the fundamental bass.</p> <p>M. In this case, how do you call the bass of a chord which is not its fundamental bass?</p> <p>D. Continuous or sensible bass.</p> |
|--|--|

According to this statement, the fundamental bass must fulfill two requirements: it must be apt to 1) rule the harmony, and

107. Gómez, op. cit., 69.

108. Ibid., 69-70.

2) to determine the mode. With regard to the first requirement, Gómez states that the note most apt to rule the perfect harmony is the root of each chord which he also calls "generator." For instance, in the chord C-E-G, the lowest member of the triad (C) is, according to him, the fundamental bass. He illustrates this concept by means of musical examples as shown in Example 20.<sup>109</sup>

Example 20. Fundamental bass.

The image shows three musical examples, labeled a), b), and c), illustrating the concept of fundamental bass. Each example consists of two staves: a treble clef staff and a bass clef staff. Example a) shows four chords in the treble staff, with their roots (C, G, C, G) written in the bass staff. Example b) shows a sequence of four chords in the treble staff, with a slur over the first two. The bass staff shows the fundamental bass notes (C, G, C, G) with fingerings 6, 4, 7, 3 indicated. Example c) shows a sequence of four chords in the treble staff, with a slur over the first two. The bass staff shows the fundamental bass notes (C, G, C, G) with fingerings 6, 4, 7, 3 indicated.

Bajo fundamental      Bajo fundamental B. fund: B. cont:

In Example 20a the fundamental bass is nothing else than the succession of the roots of each of the four chords. Example 20b, however, suggests that Gómez' concept of the fundamental bass was not necessarily restricted to the mechanical procedure of aligning chord roots. In the first, third, and fourth chords the root of each triad (C, G, and C) is the fundamental bass; in the second chord, however, C is considered as its

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109. *Ibid.*, Table 6, figures 19, 20, and 21.

root. Considered by itself, the second chord may be explained either as a seventh chord built on A ( $vi_5^6$ ), or as an F-A-C ( $IV_4^6$ ) chord with a suspension (G). However, none of these two interpretations makes C the fundamental bass of the chord. Unfortunately, Gómez does not offer any explanation for his interpretation.

During the eighteenth century, several theorists considered chords from different points of view: for Rameau every verticality is a chord; for other theorists (e.g., Kirnberger) verticalities are the result of linear motion. To explain the above chord in question (second chord in Example 20b), the second option seems to be most appropriate, since the root interpretation takes into consideration the harmonic context and not just the chord as an isolated structure. Evidently, this is Gómez' approach also as intended in his example: he did not consider the second verticality as a chord entity but as a "prolongation" of the first chord.

With regard to Example 20c, Gómez explains it as follows:

- |   |   |
|---|---|
| M. ¿Deverá ponerse en la armonía precisamente la cuerda ó sonido que expresa el bajo fundamental?               | M. Is it always necessary to include the fundamental bass as part of the harmony? |
| D. No señor.  | D. No Sir.  |
| M. ¿Por qué?  | M. Why?   |
| D. Porque muchas veces se suprime, del mismo modo que se verifica con los verbos en una oración. <sup>110</sup> | D. Because often it is omitted just as it happens in a sentence.                  |

Example 20c illustrates how the actual notes of the fundamental bass can be omitted in a harmonic progression, and the fundamental bass exists by implication. For instance, in the following progression, illustrated in Example 21, Gómez indicates underneath each chord the fundamental bass as implied in each of the chords written above it.<sup>111</sup>

Example 21. Fundamental bass implied.

The following passage, which implies that the fundamental bass should also determine the mode, deserves consideration:

- |  |   |
|--|---|
| M. ¿A cual de los dos modos pertenece esencialmente, ó privativamente el bajo fundamental? | M. To which of the two modes does the fundamental bass actually belong? |
| D. A ambos indiferentemente.   | D. To both indistinctly.  |
|  | M. Prove it.  |
|  | D. The fundamental bass   |

110. *Ibid.*, 70.

111. *Ibid.*, Table 6, figure 22.

M. Demuestrelo V.  
 D. El bajo fundamental puede determinar el modo, por medio de tres modulaciones, dos primarias y una secundaria: se llaman primarias cuando se pasa desde la 5.<sup>a</sup> ó desde la 4.<sup>a</sup> á la tónica, y secundaria cuando se pasa desde la 7.<sup>a</sup> mayor á la 8.<sup>a</sup> ó tónica. . . . Luego dando los acordes propios de dichas cuerdas ó sonidos, según el modo á que pertenecen resulta: que el bajo fundamental es el que rige la armonía perfecta en ambos modos.<sup>112</sup>

determines the mode by means of three modulations: two primary and one secondary. They are called primary when the bass goes from the fifth or the fourth to the tonic, and secondary when it goes from the major seventh to the octave or tonic. . . . Therefore, if one plays the appropriate chord to such strings--according to the mode to which they belong--then we see that the fundamental bass is the one which rules perfect harmony in both modes.

The three modulations to which he refers are illustrated in Example 22.<sup>113</sup>

Example 22. The three modulations of the Fundamental Bass.

modulaciones primarias    secundaria

112. *Ibid.*, 70.

113. *Ibid.*, Table 6, figure 23.



Based on this example, and in the light of his previous statement, it appears that Gómez again misuses the term "mode." Previously, in his explanation of relative modes (see pages 200-204 above) Gómez employed the term "mode" to denote key. Thus, when he states that the fundamental bass "determines the mode" (determina el modo) by means of the three progressions shown in Example 22, it may be inferred that he is discussing the process of tonicization--that is, that by way of such progressions the fundamental bass is able to "establish the key." However, if one carefully examines the last part of the previous paragraph (cf. p. 218) it is clear that mode (major-minor) instead of key is being referred to. His theory in this regard is simple: the mode is determined by the quality of the chords of each of the three progressions (e.g., major chords reflect major mode; minor chords reflect minor mode). In other words, the quality of the harmony determines the quality of the mode. It is noteworthy that for Gómez, as for Rameau, music, even an unaccompanied melody, has its foundation and origin in harmony. Furthermore, since Gómez considers the fundamental bass to be the source which generates each chord in a harmonic progression, the fundamental bass becomes the main ruler of harmony and therefore, also the determinant of modality.

Finally, Gómez defines bajo continuo and advocates the alternation of this and the fundamental bass as a desirable procedure to embellish all musical compositions.

- M. ¿Qué se entiende por bajo continuo ó sensible?
- D. La cuerda ó sonido mas grave de una composicion armónica, y como el compositor no esta obligado á hacer fundamental el bajo de una pieza de música vocal ó instrumental, resulta esta más artificiosa, cuando el bajo es á veces sensible, y á veces fundamental; por lo que suele llamarse tambien bajo misto.<sup>114</sup>
- M. What is a continuous or sensible bass?
- D. The lowest voice of a harmonic composition. Being that the composer is not always bound to place the fundamental bass in the bass line of a composition, vocal or instrumental, this becomes more artful if its bass is sometimes sensible, sometimes fundamental: in such instances, it is called mixed bass.

Harmonic progressions and cadences. According to Gómez, the term "cadence" has two meanings: one generic and the other specific. He explains the two as follows:

- M. ¿Qué significa cadencia?
- D. Genéricamente se entiende por esta palabra, el descanso que hace un cantante ó un instrumentista en un sonido cualquiera; por lo que no hay un solo compás sin alguna especie de cadencia.
- M. ¿Cuál es la definición exacta de la palabra cadencia?
- D. Debe considerarse la cadencia, para definirla exactamente, bajo dos puntos de vista, y son: 1º como
- M. What does cadence mean?
- D. Generically, this term denotes the pause that a singer or an instrumentalist makes on any note; therefore, there is not a single measure without some kind of cadence.
- M. What is the exact definition of the word cadence?
- D. To define cadence with accuracy, it must be considered from two points of view: first, as a harmonic succession, and second, as the

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114. Ibid., 70-71.

sucesion armónica:  
2º como division de  
una frase, ó periodo  
musical.

M. ¿En qué caso la ca-  
dencia debe conside-  
rarse como sucesion  
armónica?

D. Siempre que se pasa  
de un acorde á otro,  
que no sea su tras-  
trueque; siendo in-  
diferente que el  
primero contenga ó  
no una disonancia . . .

M. ¿En qué caso debe  
considerarse la ca-  
dencia como division  
de una frase ó peri-  
odo musical?

D. Siempre que haga un  
descanso mas ó menos  
completo; que es lo  
que equivale á la  
puntuación ortográ-  
fica. 115

division of a  
musical phrase or  
period.

M. In what instances  
should one consider  
cadences as  
harmonic successions?

D. Whenever one chord  
progresses to  
another, except its  
inversion; and it  
is irrelevant  
whether or not the  
first chord contains  
a dissonance . . .

M. In what instance  
should one consider  
cadences as the  
division of a  
musical phrase or  
period?

D. Whenever the music  
makes a more or less  
definite pause. This  
corresponds to a  
grammatical punctuation.

He offers two musical examples to illustrate each case. These  
are shown in Example 23. 116

Example 23. The two meanings of cadence.

Harmonic succession	Division of a phrase

115. *Ibid.*, 64.

116. *Ibid.*, Table 6, figures 10 and 11.

Gómez' theory of cadences is based, to a great extent, on Rameau. However, Gómez' approach to the subject is considerably more liberal. Rameau maintained that "All cadences, however, are reserved for the fifth alone and for the fourth which represents it."<sup>117</sup> Gómez, on the other hand, is of the opinion that any two-chord progression is a cadence, "whether or not the first chord contains a dissonance." Nevertheless, he later modifies his position on this and states that, in order to make a cadence, it is necessary to have one dissonant chord resolving into a consonant one.

- |   |   |
|---|---|
| M. ¿Cómo se forma la cadencia?  | M. How is a cadence formed?   |
| D. Pasando de un acorde disonante á otro consonante, por medio de dos sonidos fundamentales, de los cuales el primero anuncia la cadencia, y el segundo la termina. | D. Moving from a dissonant chord to a consonant one by means of two fundamental sounds of which, the first announces the cadence and the second concludes it. |
| M. ¿Por qué el primer sonido anuncia la cadencia?   | M. In what sense does the first chord announce the cadence?   |
| D. Porque siendo disonante equivale á una conjunción adversativa que manifiesta no estar concluida la oración.  | D. In that, being dissonant, it is equivalent to an adversative conjunction, which shows that the sentence has not yet been finished.                         |
| M. Demuéstrelo V.   | M. Prove it.  |
| D. Como el objeto de la cadencia es hacer sentir un acorde perfecto, es preciso que á este le preceda otro que suspenda y casi <u>incomode el oído.</u>             | D. Since the purpose of the cadence is to call attention to a perfect chord, then it is necessary that it be preceded by a chord which leaves the music       |

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117. Rameau, op. cit., 60.

Esto solamente puede producirlo la sensación implícita de un acorde disonante; y así es que el primer sonido fundamental, siendo disonante, anuncia el segundo, que puede ser igualmente consonante ó disonante, según el efecto ó puntuación que se desea expresar.<sup>118</sup>

in suspension and almost disturbs the ear. This sensation can only be achieved by a dissonant chord; therefore, the first chord, being dissonant, announces the second which may or may not be consonant, depending on the effect or punctuation that one wishes to convey.

Altogether, Gómez explains five types of cadences: perfect cadence, imperfect cadence, avoided cadence, interrupted cadence, and deceptive or broken cadence. Of these, he considers the first two to be of greater importance because they feature a dominant-tonic and a subdominant-tonic relationship.

- |   |   |
|---|---|
| <p>M. ¿Cuántas clases de cadencias se conocen en la música?</p> <p>D. Dos, y son: cadencia perfecta, y cadencia imperfecta.</p> <p>M. Explíquelas V.</p> <p>D. Se llama cadencia perfecta, cuando los dos sonidos que la componen son la <u>dominante</u> y la <u>tónica</u>, como: <u>sol</u>, <u>do</u>; y es imperfecta, cuando dichos sonidos son la <u>subdominante</u> y la <u>tónica</u> como: <u>fa</u>, <u>do</u>.<sup>119</sup></p> | <p>M. How many types of cadences are known in music?</p> <p>D. Two, and they are: perfect cadence, and imperfect cadence.</p> <p>M. Explain them.</p> <p>D. A cadence is said to be perfect when its two fundamental sounds are the <u>dominant</u> and the <u>tonic</u>, as: <u>G-C</u>. It is imperfect when such two sounds are the <u>subdominant</u> and the <u>tonic</u>, as: <u>F-C</u>.</p> |
|---|---|

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118. Gómez, op. cit., 64-65.

119. Ibid., 65.

Then he explains the perfect cadence as follows:

M. Demuestrelo V.

D. Cuando el bajo fundamental va desde la dominante á la tónica, como queda dicho, es la cadencia perfecta; porque, siendo la dominante uno de los sonidos que pertenecen al acorde perfecto de tónica, el oído está ya dispuesto á recibir dicho acorde de tónica como descanso; y así es que al oírse la tónica no se pierde la sensación del sonido de la dominante: el oído queda satisfecho, y no desea ya otra cosa; en una palabra, produce absolutamente el efecto de un punto final de una frase.<sup>120</sup>

M. Prove it.

D. When the fundamental bass progresses from the dominant to the tonic, as it was previously explained, such progression is a perfect cadence because the dominant is one of the sounds which belong to the tonic chord and this affinity enables the ear to accept the tonic chord as a point of rest. Therefore, when one hears the tonic chord, the effect of the dominant sound is preserved; the ear is satisfied and desires nothing further. In short, it creates the effect of the final period in a sentence.

Example 24 shows Gómez' illustration of a perfect cadence.<sup>121</sup>

Example 24. Perfect cadence.



120. Ibid., 65-66.

121. Ibid., Table 6, figure 13.

We note that Gómez has a rather peculiar way of explaining the perfect cadence. In comparison, for example, Rameau justified the perfection of the V7-I cadence based primarily on the progression of the bass (by fifths), and also in the progression of the two thirds contained in the V7 chord.<sup>122</sup> Elízaga proclaimed the supremacy of the V-I relationship on the basis that: "the fifth degree of the scale is the note most apt, after the first, to determine the mode" (cf. pp. 165-166). Gómez, however, explains the perfect cadence differently; for him a V-I cadence, as in Example 24, is perfect because the root of the dominant chord is also a member of the tonic triad. This affinity, he says, is the perfect link which connects the two chords and strikes the ear with a feeling of perfect repose. Following the same line of reasoning, Gómez explains the imperfect cadence:

D. Por la misma razon, cuando el bajo fundamental va desde la subdominante á la tónica, es cadencia imperfecta; porque no perteneciendo el sonido de la subdominante al acorde perfecto de tónica, no puede producir un descanso agradable al oido; y aunque realmente el acorde de tónica es el objeto final de una canturria, la cadencia

D. For the same reason, when the fundamental bass goes from the subdominant to the tonic, it makes an imperfect cadence. Since the subdominant note does not belong to the perfect tonic chord, this cadence is unable to stimulate the ear with a feeling of absolute repose. Although the tonic chord is always the final goal in any piece of music, the imperfect

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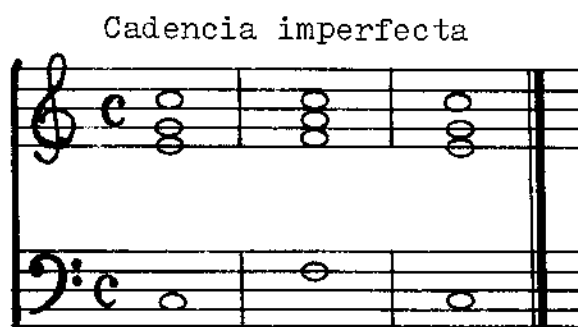
122. Rameau, op. cit., 63-70.

imperfecta nunca  
 produce el efecto  
 de una oración con-  
 cluida.<sup>123</sup>

cadence never conveys  
 the effect of a final  
 sentence.

His example of imperfect cadence is illustrated in Example  
 25.<sup>124</sup>

Example 25. Imperfect cadence.



With regard to the imperfect cadence, Gómez disagrees substantially with Rameau: Rameau calls this cadence (IV-I) "irregular," while Gómez calls it "imperfect." The reason for their disagreement emerges from the fact that, concerning harmonic progressions, each author considers the term "imperfection" from a different point of view. Rameau explains his position as follows:

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123. Gómez, *op. cit.*, 66.

124. *Ibid.*, Table 6, figure 14.



In cadences which should be called imperfect, however, the only imperfection is that the fundamental bass is suppressed, transposed, or inverted. Although the terms imperfect and irregular are almost synonymous, the term "imperfect" seems to be closer to "perfect" than is "irregular," or at least so it appears to us.<sup>125</sup>

Gómez, on the other hand, labels the IV-I cadence as "imperfect" because: 1) the fundamental bass moves from the subdominant (instead of the dominant) to the tonic, 2) in contrast to the perfect cadence, the root of the penultimate chord (IV) is not a member of the tonic triad, and 3) it does not convey the effect of a final sentence.

Gómez' concept of cadence is rather broad. In its generic sense, any two-chord progression is a cadence. Besides the perfect and imperfect cadences, he explains other harmonic progressions under the label of cadences: avoided cadence, interrupted cadence, and false or deceptive cadence. He explains each one of them as follows:

- |   |  |
|---|--|
| <p>M. Esplique V. la <u>cadencia escusada</u>.</p> <p>D. Ya queda dicho, que la cadencia perfecta resulta siempre de la dominante á la tónica; pero si á la segunda de estas dos voces se le añade una disonancia, se le da el nombre de cadencia perfecta escusada; porque lejos de terminar la frase musical, ú</p> | <p>M. Explain the <u>avoided cadence</u>.</p> <p>D. It has been previously established that a perfect cadence always progresses from the dominant chord to the tonic. However, if we add a dissonance to the second chord, then we form an avoided cadence because, far from concluding the musical sentence or the harmonic cadence</p> |
|---|--|

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125. Rameau, op. cit., 77-78.

oracion armónica  
(que es el objeto de  
la cadencia perfecta)  
da principio á otra  
cláusula ó cadencia;  
y por este medio pue-  
de formarse una su-  
cesion de cadencias  
perfectas excusadas.

- M. ¿Hay alguna regla  
para verificar esta  
sucesion de caden-  
cias excusadas?
- D. Si señor: ascendien-  
do por cuartas ó  
descendiendo por  
quintas.
- M. Demuéstrelo V.
- D. Para obtener esta  
sucesion de cadencias  
excusadas es indis-  
pensable: que dos  
voces, que son las  
que sirven de 7.<sup>a</sup>  
y de 5.<sup>a</sup> del primer  
acorde de la caden-  
cia perfecta, bajen  
sobre las que sirven  
de 3.<sup>a</sup> y 8.<sup>a</sup> del  
segundo acorde de  
dicha cadencia; mien-  
tras que las otras  
dos del primero, que  
son la 3.<sup>a</sup> y 8.<sup>a</sup>  
quedan para servir  
de 7.<sup>a</sup> y 5.<sup>a</sup> y bajar  
sobre la 3.<sup>a</sup> y 8.<sup>a</sup>  
del acorde que le  
sigue en dicha suce-  
sion: y así alter-  
nativamente todas  
las demas de los  
acordes sucesivos,  
hasta el descanso  
final que debe pre-  
cisamente verificarse  
por medio de una  
cadencia perfecta.
- M. ¿Cómo se anuncia el  
descanso final?
- D. Deteniéndose en el  
acorde de una

(which is the goal of  
the perfect cadence),  
this second chord  
actually begins another  
cadence. In this  
manner we construct  
a series of avoided  
perfect cadences in  
succession

- M. Is there any rule  
with regard to this  
succession of avoided  
cadences?
- D. Yes, Sir: the progression  
must be by ascending  
fourths or descending  
fifths.
- M. Prove it.
- D. To construct a  
succession of avoided  
cadences it is  
mandatory that two  
voices--the seventh  
and the fifth--of the  
first chord of the  
cadence descend to the  
third and the octave  
of the second chord;  
while the other two  
voices--the third  
and the octave of  
the first chord--are  
maintained and  
become the fifth and  
the seventh in the  
second chord. This two  
voices, in turn, move  
to the third and the  
octave of the next  
chord of the  
progression, and so  
on, until we reach  
the point of final  
repose, which must  
come about by means  
of a perfect  
cadence.
- M. How is the final  
cadence announced?
- D. By making a pause  
on the dominant-  
tonic chord, and

dominante tónica,  
para finalizar la  
frase armónica en el  
de tónica: como queda  
ya dicho.<sup>126</sup>

then ending on the  
tonic chord, as it  
was previously  
explained.

Gómez illustrates a series of avoided cadences as shown in  
Example 26.<sup>127</sup>

Example 26. Gómez' illustration of avoided cadences.

Cadencias perfectas escusadas

This example clearly illustrates the author's concept of avoided cadence: the first three seventh chords proceed, by an interval of an ascending fourth or a descending fifth, to another seventh chord, thus avoiding the cadence. Only the last seventh chord, which he classifies after Rameau, as a "dominant-tonic," executes the perfect cadence and brings the musical phrase to an appropriate conclusion. Although Gómez does not seem willing to admit, his concept of avoided

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126. Gómez, op. cit., 66-67.

127. Ibid., Table 6, figure 16.

cadences is directly related to chapter nine, book II, of Rameau's Treatise on Harmony, entitled: "On how to avoid Cadences while imitating them."<sup>128</sup> In essence, Gómez' concept of avoiding cadences is almost identical with that of Rameau. From Rameau's theory on such cadence Gómez borrows 1) the idea of adding the dissonance of a seventh to the chord of resolution, in order to create a chain of seventh chords; 2) the term "dominant-tonic" applied to a dominant seventh chord containing a tritone; and 3) even the specific instructions on voice leading given in his own description of the avoided cadence (cf. pp. 227-229). A comparison of the musical examples given by these two authors (Example 26 by Gómez; Example 27 by Rameau) adds further support to the belief that Gómez' theory of avoided cadences is firmly rooted in Rameau.<sup>129</sup>

Example 27. Rameau's illustration of avoiding the cadences.

Fundamental bass

Tonic note    7    7    7    Tonic note

128. Rameau, op. cit., 83-88.    129. Ibid., 84.

Gómez' broad concept of cadences leads him to label all chord progressions as cadences. In the following paragraph, he explains progressions in which the bass proceeds by thirds; he calls this kind of progressions, interrupted cadences:

- |   |  |
|---|--|
| <p>M. Explique V. la <u>cadencia interrumpida</u>.</p> <p>D. Se llama <u>cadencia interrumpida</u> cuando el bajo fundamental en vez de bajar de quinta, despues de un acorde de séptima, baja solamente de tercera.</p> <p>M. ¿Puede verificarse una sucesion de cadencias interrumpidas?</p> <p>D. Si señor; y se obtiene descendiendo de tercera ó ascendiendo de séptima, por medio de los acordes de séptima.</p> <p>M. Demuéstrelo V.</p> <p>D. Una sucesion de <u>cadencias interrumpidas escusadas</u>, presenta una armonia descendente, y en ella solo una voz o sonido del primer acorde es la que baja: las otras tres permanecen en su lugar para bajar sucesivamente cuando les toque, segun el número de cadencias interrumpidas que se van a ejecutar; pero esta sucesion no es tan armónica, ni tan perfecta como la anterior.<sup>130</sup></p> | <p>M. Explain the <u>interrupted cadence</u>.</p> <p>D. We call it <u>interrupted cadence</u> when after a seventh chord, the bass descends only by a third instead of by a fifth.</p> <p>M. Can there be a succession of interrupted cadences?</p> <p>D. Yes Sir: it occurs when several seventh chords descend by a third or ascend by a sixth.</p> <p>M. Prove it.</p> <p>D. A succession of interrupted-avoided cadences features a descending harmonic progression in which only one voice of the first chord descends: the other voices remain in their place awaiting their turn to descend according to the number of interrupted cadences placed in the succession. However, this type of succession is not as harmonious nor as perfect as the previous one.</p> |
|---|--|

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130. Gómez, op. cit., 67-68. There is an obvious error in line seventeen of this quotation: the word "séptima" (seventh) should be replaced by "sesta" (sixth).

Example 28 shows Gómez' illustration of a series of interrupted cadences.<sup>131</sup>

Example 28. Interrupted cadences.

Cadencias interrumpidas escusadas

With respect to progressions by thirds, Gómez agrees only in part with Rameau. Although Gómez recognizes that progressions by thirds are not as perfect or as effective as progressions by fifths or fourths, he nevertheless insists in labeling them as a type of cadence (interrupted cadence). As for Rameau, although he tolerates progressions by thirds ("since the fifth is constructed of two thirds"), he makes it clear that the fifth is always preferred and maintains that all cadences "are reserved for the fifth alone and the fourth which represents it."<sup>132</sup>

Finally, Gómez explains progressions in which the bass proceeds by a second, under the label of false or deceptive

131. Ibid., Table 6, figure 17.

132. Rameau, op. cit., 60.

cadence.

- |   |   |
|---|---|
| <p>M. Esplique V. la <u>cadencia falsa, ó cortada.</u></p> <p>D. Dáse el nombre de <u>cadencia falsa ó cortada,</u> cuando el bajo fundamental en vez de subir de cuarta despues de un acorde de séptima, solo sube de grado.</p> <p>M. ¿Puede verificarse una sucesion de <u>cadencias falsas escusadas?</u></p> <p>D. Sí señor; haciendo bajar tres voces ó sonidos del primer acorde, y quedando la que da la 8.<sup>a</sup> para preparar la disonancia del acorde siguiente . . . una sucesion de <u>cadencias falsas escusadas,</u> también produce una armonía descendiente; pero es dura y se practica raras veces.<sup>133</sup></p> | <p>M. Explain the <u>deceptive or broken cadence.</u></p> <p>D. It is called a <u>deceptive or broken cadence</u> when, after a seventh chord, the fundamental bass ascends by the interval of a second instead of ascending by the interval of a fourth.</p> <p>M. Can there be a succession of <u>deceptive avoided cadences?</u></p> <p>D. Yes Sir; by allowing three voices of the first chord to descend, and keeping only that voice which makes the octave, in order to prepare the dissonance for the next chord. . . . A succession of <u>deceptive avoided cadences,</u> also features a descending harmonic progression, but it is hard and rarely used.</p> |
|---|---|

Gómez provides two examples of deceptive cadences (Example 29): one featuring two consonant chords (sin ligadura), and the other, supposedly, a progression showing how to avoid deceptive cadences (con ligadura escusada).<sup>134</sup>

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133. Gómez, op. cit., 68.

134. Ibid., Table 6, figure 18.

Example 29. Deceptive or broken cadence.

The image shows a musical score for Example 29, consisting of two staves: a treble clef staff on top and a bass clef staff on the bottom. The treble staff contains two measures of music, labeled 'A' and 'B' below them. Measure A shows a chord with notes G4, B4, and D5. Measure B shows a chord with notes A4, C5, and E5. The bass staff contains two measures of music. The first measure has a single note G3. The second measure has a single note G3. Below the staves, the text reads 'Sin lig.ª Con lig.ª escusada'. The 'ª' symbol is a superscripted 'a'.

Example 29A illustrates a regular deceptive progression except for the fact that the first chord is not a seventh chord (sin ligadura), as he previously said it should be. Example 29B, however, does not really fulfill the purpose for which it was intended--to illustrate how deceptive cadences may be avoided (con ligadura escusada). The first chord, in Example 29B, features a dissonance; nevertheless, the cadence is not avoided but, on the contrary, fully resolved to a consonant chord. Although Gómez does not provide a clear example on how deceptive cadences may be avoided, one can easily construct one such progression by simply following his instructions on that regard, stated in the previously quoted passage: 1) the progression must feature a series of seventh chords, each proceeding by the interval of an ascending second, or its inversion--a descending seventh--in the bass; 2) in each of the chord-to-chord progressions, the voice making an octave with the bass must be maintained, in order to prepare



the dissonance for the next chord, while the remaining three voices are allowed to descend; 3) as a result of such procedure, the harmonic progression moves in descending direction. Following the author's procedure in previous similar situations (e.g., avoiding perfect cadences in Example 26, and avoiding interrupted cadences in Example 28), the entire progression must conclude with a perfect cadence; that is, a dominant-tonic chord resolving to its tonic. Example 30 shows how one such progression--featuring a series of avoided deceptive cadences--may be constructed. The author, however, remarks that this progression is "hard and rarely used."<sup>135</sup>

Example 30. Avoiding deceptive cadences.

Larios, Método de Armonía: Analytical Study

Larios' Método de armonía teórico-práctica is considerably more practical than theoretical. The author

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135. Ibid., 68: "pero es dura y se practica raras veces."

limits his theoretical explanations to include only the necessary information in order that the reader will understand his musical illustrations. Curiously enough, Larios chose to write his treatise on music manuscript paper. This fact may indicate that Larios intended to deal with the subject of harmony principally in a practical manner--by means of musical illustrations instead of lengthy theoretical explanations. Therefore, the organization of its content is not a major issue in this treatise. The author does not formally divide the book into sections and chapters; he simply points out major divisions by way of subtitles in the text. Perhaps because this treatise was never published, the author never felt the need to organize its material in a more finished form. Therefore, any serious attempt to study the Método in a systematic manner would require a careful rearrangement of its content. For the sake of expedience, this study of the Método will be divided into three major areas: basic elements of harmony; a study of harmony in practice and theory; and counterpoint.

#### Basic Elements of Harmony

In his introductory section, entitled Principios de armonía teórico-práctica, Larios defines several terms (tone, semitone, diatonic and chromatic scales), and explains a few basic concepts (major-minor mode, and intervals), which he considered necessary to be understood before commencing a serious study of harmony.

He begins his treatise with a definition of tone and semitone.

El tono es la distancia que hay de un sonido á otro como de Do á Re, de Re á Mi, &ª. &ª. este (teórica y aritmeticamente). Se compone de nueve grados que llamamos comas, y se divide en dos mitades resultando dos medios tonos que se llaman semitonos. de estas nueve comas cinco pertenecen al Semitono mayor y cuatro al Semitono menor. El Semitono mayor se conoce cuando ecsiste entre dos sonidos de diferente nombre, como de Mi á Fa de Sí a Do. el menor, cuando esta en un mismo sonido natural, y alterado, es decir: de Do natural á Do sostenido, de Fa natural a Fa sostenido, de Si natural á Si bemol.<sup>136</sup>

Tone is the distance between one sound and the next as from C to D, D to E, etc. (theoretically and arithmetically). It consists of nine commas and is divided into two halves called semitones. Of the nine commas, five belong to the major semitone and four to the minor semitone. The major semitone is that which exists between two sounds of different name, as from E to F, and B to C. The minor semitone is when one sound is altered, for instance: from C natural to C sharp, from F natural to F sharp, from B natural to B flat.

These definitions do not require any further explanation. It was, however, necessary for Larios to define these two basic terms at the beginning because he considered them to be the basis for a proper understanding of the next two concepts: the diatonic and the chromatic scales. He defines these as follows:

La Escala Diatónica  
es la sucesion de ocho

The Diatonic scale  
is a succession of

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136. Felipe Larios, Método de armonía teórico-práctica (México, 1866), 3.

notas que asciende de grado como: Do, Re, Mi, Fa, Sol, La, Si, Do. esta escala contiene cinco tonos, y dos semitonos. . . .

Los nombres con que se distinguen los tonos y semitonos en toda la octava de la escala son los siguientes: El Do, se llama Tónica ó primera del tono. el Re, segunda del tono. el Mi tercera Mediante del tono, el Fa, cuarta Subdominante del tono. el Sol, quinta Dominante del tono. el La, sexta del tono. el Si, septima Sensible del tono. el Do, octava del tono. La Escala Cromática es la que se forma por semitonos mayores y menores.<sup>137</sup>.

eight notes which ascend by step as: C, D, E, F, G, A, B, c. This scale contains five tones and two semitones. . . .

The names of each of the tones and semitones of the octave are: C, Tonic or first degree; D, second degree; E, Mediant or third degree; F, Subdominant, or fourth degree; G, Dominant, or fifth degree; A, sixth degree; B, leading tone; C, octave. The chromatic scale is that which is formed by major and minor semitones.

Major and minor modes. In contrast to the three previous theorists (Vargas y Guzmán, Elízaga, and Gómez), Larios does not really develop a theory of mode; he simply limits himself to define the term, and to explain how the major and the minor modes are constructed upon each degree of the chromatic scale. By the time Larios wrote his Método (1866), the legitimacy of the major and the minor modes did not require proof. The vast majority of the music composed in Mexico at this time was based on the major-minor system. The composition of secular music had become the most

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137. Ibid., 3-4.

attractive channel of musical expression in Mexico and the demand for ecclesiastical music was in decline. In previous eras, as in the first half of the nineteenth century, some of the most eminent musicians in Mexico, such as Elízaga and Gómez, served as chapelmasters and were best recognized as composers of sacred music. Larios, however, lived in a different era, one in which the cultivated musical life was dominated by opera, songs, and piano music. Therefore, any conscientious effort on the part of an author to justify the supremacy of the major-minor system--in the writing of a musical treatise--would perhaps have been judged as being old fashioned. Larios' discussion of the major-minor system occupies only three pages in his 121-page treatise. In discussing major and minor modes, Larios reflects a decided influence from Gómez, his friend and also his teacher. Larios explains "mode" as follows:

El Modo es el que modifica los grados de la Escala, y determina el de sus semitonos. El modo es formado sobre la ygualdad de las tres terceras, es decir: sobre aquella de la nota fundamental, y sobre de la Dominante, y Subdominante cuando estas tres terceras son mayores, el modo será mayor. cuando son menores el modo es menor. Si se añade (por ejemplo) á la tercera de la nota Do que se supone ser la nota fundamental del Modo

Mode is that which modifies the degrees of the scale and determines its semitones. The mode is formed on the similitude of the three thirds, that is: the third over the fundamental note, and the ones over the Dominant and the Subdominant. When these three thirds are major, the mode will be major. When they are minor, the mode is minor. If we add (for instance), to the third of C, which is supposed to be the fundamental note of the

mayor las 3.<sup>as</sup> de su Dominante, y de la subdominante es decir: Do, mi, sol. Sol, si, re. Fa, la, do. entonces se tendrá todos los sonidos que en este Modo pueden melódicamente, y armónicamente ser reunidos, resultará de esto la Escala Diatónica donde se reconocerá el carácter melódico en los dos semitonos que se encuentran en ella. el uno entre la 3<sup>a</sup> y la 4<sup>a</sup> y el otro entre la 7<sup>a</sup> y la 8<sup>a</sup> y esta escala ascenderá y descenderá pasando por la 3<sup>a</sup> la 6<sup>a</sup> y la 7<sup>a</sup> mayores.<sup>138</sup>

major mode, the thirds of its dominant and its subdominant, which are: C-e-g, G-b-d, and F-a-c; then we will have all the sounds which can be combined, melodically and harmonically, in this mode. From this, results the Diatonic scale with its two melodic semitones: one between the third and the fourth degrees, and the other between the seventh and the octave. This scale ascends and descends over the major intervals of the third, sixth, and seventh.

This brief statement of mode may be summarized as follows:

1) the mode governs the diatonic scale; it determines the location of the two semitones in the scalar pattern, and 2) both modes (major and minor) have their origin in harmony and the three fundamental chords--tonic, dominant, and subdominant--contain all the necessary notes to form the proper diatonic scale. These, as should be noted, were also the basic premises of Gómez in his discussion of modes (cf. pp. 195-198). One important aspect of Larios' modal theory, however, is that he seems to be the first Mexican theorist to enunciate the difference between a melodic minor and a harmonic minor scale pattern, as noted in the following passage:

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138. *Ibid.*, 4-5.

El Modo menor se forma de la misma manera, es decir: uniendo a la 3<sup>a</sup> del sonido (La) tónica menor las terceras menores de la Dominante, y de la Subdominante por ejemplo: La, do, mi. Mi, sol, si. Re, fa, la. de esta manera resulta la escala menor de La, si, do, re, mi, fa, sol, La. la cual está sin embargo en la música moderna sujeta á algunas modificaciones, es decir: que al ascender dicha escala se alteran la sexta y la sétima convirtiéndose en mayores estos dos intervalos, los que dejan esta alteración cuando desciende dicha escala menor. antiguamente solo se alteraba la sétima, pero los autores modernos creyeron indispensable la alteración de la sexta; pues dejándola en su estado natural formaría con la 7<sup>a</sup> alterada un intervalo de 2<sup>a</sup> aumentada que sería muy desagradable al oído. Las notas características del modo mayor son la 3<sup>a</sup> y la 6<sup>a</sup> mayores. las del modo menor son: la 3<sup>a</sup> y la 6<sup>a</sup> menores. 139

The minor mode is built in the same manner, that is: combining the third of the tonic key (A) with the minor thirds of the dominant and the subdominant, as for instance: A-c-e; E-g-b; D-f-a. From this procedure results the minor scale of A, B, C, D, E, F, G, a. However, in modern music, the minor scale is subject to some modifications: when the scale ascends, the sixth and the seventh are altered and become major, but when the scale descends, such two intervals remain unaltered. Formerly, only the seventh degree was altered but modern authors have considered that it is also indispensable to alter the sixth because, being natural, it creates, with the seventh, the interval of an augmented second which is very unpleasant to the ear. The characteristic notes of the major mode are the major third and the major sixth. Those of the minor mode are the minor third and the minor sixth.

Larios does not call these two minor-scale patterns by any names. However, he stresses the importance of raising the sixth and the seventh degrees when ascending, in order to

avoid the unpleasant interval of an augmented second. In other words, this procedure is necessary for "melodic" reasons. Larios concludes his discussion of mode by mentioning the particular relationship which exists between any minor mode and the major mode a minor third above its tonic.

El modo menor es relativo del mayor porque los dos son de yqual numero de accidentes. La tonica del modo menor se encuentra una tercera mas baja de la del mayor.<sup>140</sup>

A minor mode is relative with a major mode when both have the same number of accidentals. The tonic of the minor mode is located one third below that of the major mode.

Such rather brief explanation is all that Larios felt necessary to say about the modes.

Intervals. Larios devotes a rather generous amount of space (sixteen pages of his Método) to the study of intervals. Such notable distinction is justified by the fact that Larios viewed the intervals as the building stones of harmony.<sup>141</sup> However, of the sixteen pages, only about four are of written text; the remaining are all musical examples. In fact, Larios discusses intervals only as an introduction to the more important subject which follows--the subject of harmony.

Interval is presented in the traditional manner, and does not warrant further attention. Perhaps the only

140. Ibid., 6.

141. Ibid., 7: "se forman los intervalos para hacerse los acordes."



significant part of Larios' discussion of intervals has to do with the interval of the octave. According to him, the octave has two attributes: 1) it acts as the beginning and the end of one same sound--hence the term equisono--and 2) it serves as a complement to all intervals. This last attribute has to do with the concept of the invertibility of intervals. Larios explains it as follows:

[La] octava sirbe de complemento a todos los intervalos consonantes y disonantes que se hallan en sus límites. Se entiende por complemento el trastrueque o transmutacion de los sonidos que lo forman. por ejemplo: la 3ª menor Do-Mi<sup>b</sup> transmutandolas daran una 6ª mayor Mi<sup>b</sup>-Do, y este será su complemento . . . se cambia tambien su denominacion de mayor, menor, aumentado, y diminuto. para esto hay una regla fija y general y es esta: todos los intervalos Mayores en sus complementos se vuelven menores, y viceversa los menores mayores. Los intervalos aumentados en sus complementos se vuelven diminutos; y viceversa los diminutos, aumentados.<sup>142</sup>

The octave serves as a complement to all intervals, consonant or dissonant, which are found within its limits. We understand by complement, the inversion or transmutation of the sounds which make the intervals. For instance, the minor third C-E<sup>b</sup> when inverted becomes a major sixth, E<sup>b</sup>-C, and this is its complement . . . the quality of the interval--major, minor, augmented, and diminished--also changes. For this there is a fixed rule which states that all major intervals become minor in their complements and vice versa--the minor become major. All augmented intervals become diminished in their complements, and vice versa--the diminished become augmented.

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142. Ibid., 15-16.

### Theory of Harmony

Harmony is the most important subject in the Método.

Larios defines harmony as follows:

La Armonia es la reunion de varias notas que se tocan juntas estas se llaman acorde. es necesario observar que la armonia se forma sobre el bajo; es decir sobre la parte mas baja de la música, y que es sobre de ella donde se forman los intervalos para hacerse los acordes.

Harmony is the reunion of several notes played together and called chord. It is necessary to observe that the lowest note, the bass, is the foundation of harmony upon which all intervals and chords are constructed.

Los acordes se forman de consonancias, y Disonancias.<sup>143</sup>

All chords are formed with consonances and dissonances.

In essence, harmony is defined as consisting of three main ingredients: a bass note, intervals, and chords. The bass note is the foundation upon which all intervals are constructed; intervals, in turn, are combined to make the chords.

On chords. With regard to chord structure, Larios is more liberal than the three previous theorists. For him, consonant and dissonant intervals are equally useful for the construction of chords. In the section entitled: De los Acordes de la armonía, consonantes y disonantes,<sup>144</sup> he lists, with illustrations, a group of chords, representing his entire

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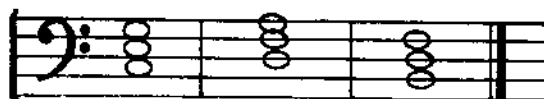
143. Ibid., 7.

144. Ibid., 23.

harmonic vocabulary. They are: the major and minor triads, the diminished triad, several types of seventh chords, the fully diminished seventh chord, and the augmented sixth chord.

All chords are defined according to their intervallic content. For instance, the major, minor, and diminished triads (Example 31) are described as "the union of two thirds":  $M3+m3$ =major triad,  $m3+M3$ =minor triad, and  $m3+m3$ =diminished triad.<sup>145</sup>

Example 31. Major, minor, and diminished triads.



With respect to seventh chords he states:

Hay otros acordes  
de setima porque este  
intervalo es el que  
sobrepasa en disonan-  
cia.<sup>146</sup>

There are several  
types of seventh chords  
because the seventh is the  
interval which surpasses  
all others in dissonance.

The following seventh chords (Example 32) are illustrated:<sup>147</sup>

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145. *Ibid.*, 23-24.

146. *Ibid.*, 24.

147. *Ibid.*, 24.

Example 32. Seventh chords built on different degrees of the scale.



It is to be noted that Larios constructs diatonic seventh chords on the first, second, third, fifth, and seventh degrees of the scale but not on the fourth or the sixth degrees, for which no explanation is given. Four different types of seventh chords are thereby formed: 1) a major triad plus a major third (e.g., I7); 2) a minor triad plus a minor third (e.g., ii7 and iii7); 3) a major triad plus a minor third (e.g., V7); and 4) a diminished triad plus a major third (e.g., vii<sup>♭</sup>7). The fully-diminished seventh chord is dealt with in a separate paragraph, but is not discussed along with the other types of seventh chords:

El acorde de tres terceras menores como: sol<sup>#</sup>, si, re, fa. se llama de setima diminuta, y tiene esta disonancia cuatro resoluciones como se manifestará a su tiempo.<sup>148</sup>

The chord featuring three minor thirds as: g<sup>#</sup>-b-d-f, is called diminished seventh chord. This dissonance has four different resolutions, as it will be explained later.

148. Ibid., 24.

Finally, the augmented sixth chord is taken up in the discussion.

El acorde de una 3<sup>a</sup> mayor, 4<sup>a</sup> mayor, y 6<sup>a</sup> aumentada, es el de la misma 6<sup>a</sup> disonante, y tiene naturalmente dos resoluciones, . . .<sup>149</sup>

The chord consisting of a major third, an augmented fourth, and an augmented sixth, features the dissonance of a sixth and has two natural resolutions, . . .

Example 33 shows only one of his twenty four examples--two for each key--illustrating the two different resolutions of the augmented sixth chord.<sup>150</sup>

Example 33. The augmented sixth chord.

enarmonía

A6 Resolves in B maj. A6 Resolves in F maj.

Since Larios later deals with chord-to-chord progressions, including the use of the augmented sixth chord, his two resolutions shall be considered later in a greater detail.

The two genera of harmony. Larios classifies harmony as being of two kinds: tonal or natural, and modulative.

149. Ibid., 25.

150. Ibid., 25-26.

Hay dos generos de armonia: el uno se llama armonia Tonal ó natural, y el otro armonia modulativa. Se entiende por armonia tonal ó natural aquella donde los acordes que se emplean pertenecen al tono real de donde ella procede. La armonia modulativa es aquella que sobre una base ó un canto del tono establecido obran pequeñas modulaciones parciales por la manera de considerar cada nota ó cada miembro de frase en particular.<sup>151</sup>

There are two genera of harmony: one is called tonal or natural harmony, and the other, modulative harmony. Tonal or natural harmony is that in which all the chords belong to one key only. Modulative harmony is that which features brief modulations above a diatonic bass line. This partial modulations are the result of giving several different interpretations to each note of a given bass.

Larios' "tonal" or "natural harmony" is synonymous with diatonic chords. Any chromatic alteration on one or more notes in a chord makes one such chord fall outside the category of "tonal" or diatonic harmony. In minor scales, however, Larios accepts the "necessary" alterations of the sixth and seventh degrees as diatonic. As a way of illustrating "tonal" or diatonic harmony, Larios devotes fifteen pages to show his version of the "rule of the octave," featuring the harmonization of major and minor scalar motions in the bass voice. Example 34 illustrates his harmonization of the C major and the A minor scales.<sup>152</sup> While these two harmonizations serve as good illustrations of diatonic harmony, both examples, however, feature one non-diatonic chord. In

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151. Ibid., 104.

152. Ibid., 36, 37.

Example 34a. Harmonization of a major scale.

Example 34b. Harmonization of a minor scale.

Example 34a, the eleventh chord, built on A (the descending sixth degree), has a non-diatonic tone, F sharp. This chord belongs properly to the "modulative harmony" (i.e., to G major). Larios does not offer any explanation for changing F natural to F sharp but, evidently, he did it in order to create a stronger progression from the descending sixth degree to the dominant. It may be observed that Larios' version of the "rule of the octave" is basically the same as that of Rameau, illustrated in Book III, chapt. 11 of his Treatise on

Harmony. With regard to the harmonization of the minor scale (Example 34b), it will be observed that, again, Larios alters the harmony of the chord built on the descending sixth degree: here an augmented sixth chord is placed before the dominant chord. Once more, this shows that Larios felt it necessary to intensify the progression from the previous chord to the dominant.

The term modulative harmony is not necessarily synonymous with chromatic harmony. For Larios, modulative harmony emerges as the result of giving several different interpretations to each note of a given bass. This is illustrated in Example 35.<sup>153</sup>

Example 35. Different interpretations of the same note.

The image shows a musical staff with two systems of staves (treble and bass clefs). The bass clef contains a single note, D, in each of the five measures. The treble clef shows five different chordal interpretations of this D note, labeled a) through e).  
 a) D major triad (D, F#, A)  
 b) B-flat major triad (Bb, D, F)  
 c) D major triad (D, F#, A)  
 d) D major triad (D, F#, A)  
 e) D major triad (D, F#, A) with a Bb note added, forming a D major chord with a lowered 9th.

In this Example, Larios explains, the note D may be considered in several ways: as the first note of the D major scale (Example 35a); as the third note of the B-flat major scale

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153. Ibid., 105.



(Example 35b); as the third note of the B minor scale (Example 35c); as the fifth note of the G major scale (Example 35d); as the seventh note of the E-flat major scale (Example 35e); and so on. Modulative harmony, therefore, denotes changes of diatonic functions by which each diatonic step of a scale may be interpreted as belonging to several different keys. Having such ample spectrum of choices, the possibilities for changes of harmonic colour or function become almost unlimited. Example 36 illustrates only one of the many different ways in which, according to Larios, the C major scale may be harmonized with the use of modulative harmonies.<sup>154</sup>

Example 36. Modulative harmony in the C major scale.

The image shows a musical score for Example 36. It consists of two staves: a treble clef staff on top and a bass clef staff on the bottom. The bass clef staff contains a C major scale starting on middle C (C4) and moving up stepwise to C5. The treble clef staff contains a series of chords that are harmonized with the notes of the C major scale. The chords are: C major (C4, E4, G4), D minor (D4, F4, A4), E minor (E4, G4, B4), F major (F4, A4, C5), G major (G4, B4, D5), A minor (A4, C5, E5), B minor (B4, D5, F5), and C major (C5, E5, G5). The chords are written in a way that shows their constituent notes and how they relate to the scale notes in the bass staff.

The second, third, fifth, sixth, tenth, and fourteenth chords in the above progression, feature modulative harmony.

In addition to the two types of harmony discussed so far, Larios also recognizes chromatic harmony and proposes a

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154. Ibid., 105.

way of harmonizing the chromatic scale.

Las notas de la escala por semitonos pueden ser consideradas cuando ascienden, la primera como 7<sup>a</sup> y la segunda como tónica ó primera del tono. cuando descenden la primera como acorde de 6<sup>a</sup> aumentada, y la segunda como 5<sup>a</sup> dominante del tono que corresponda.<sup>155</sup>

When the notes of a scale ascend by semitones, the first note of each two-chord progression may be harmonized with a seventh chord, and the second note with the tonic. When the scale descends, the first chord may be an augmented sixth chord, and the second, its corresponding tonic.

Example 37 illustrates Larios' harmonization of the chromatic scale as described in the above paragraph.<sup>156</sup>

Example 37. Harmonization of the chromatic scale.

The musical score for Example 37 consists of two systems, each with a treble and bass clef. The first system shows the ascending chromatic scale. The treble clef contains chords for each note, and the bass clef contains the notes of the scale. The chords are labeled as 7<sup>a</sup> and 1<sup>a</sup> in pairs: 7<sup>a</sup> 1<sup>a</sup> 7<sup>a</sup> 1<sup>a</sup> 7<sup>a</sup> 1<sup>a</sup> 7<sup>a</sup> 1<sup>a</sup> 7<sup>a</sup> 1<sup>a</sup> 7<sup>a</sup> 1<sup>a</sup>. The second system shows the descending chromatic scale. The treble clef contains chords for each note, and the bass clef contains the notes of the scale. The chords are labeled as 6<sup>a</sup> and 5<sup>a</sup> in pairs: 6<sup>a</sup> 5<sup>a</sup> 6<sup>a</sup> 5<sup>a</sup> 6<sup>a</sup> 5<sup>a</sup> 6<sup>a</sup> 5<sup>a</sup> 6<sup>a</sup> 5<sup>a</sup> 5<sup>a</sup> 5<sup>a</sup>.

155. *Ibid.*, 95.

156. *Ibid.*, 95.

This example is constructed carefully, according to Larios' instructions--V<sub>7</sub>-I progressions for the ascending scale and A<sub>6</sub>-V progressions for the descending scale. Only in the last three chords does he depart from the procedure. That is, in the descending scale, the numbers 6<sup>a</sup>, 5<sup>a</sup> (equal to A<sub>6</sub>-V) indicate chord structure and function for each chord; however, the two chords of the penultimate measure, different from the preceding sequence, are indicated as dominant chords (5<sup>a</sup>, 5<sup>a</sup>), despite the fact that neither one is a true V<sub>7</sub> chord. This fact, far from being a mistake on his part, shows that Larios possessed a rather advance knowledge of harmony. In his analysis of such two chords, Larios takes into consideration not only their specific structure, but, remarkably, their harmonic function. True, none of the two chords is a V chord in the key of C--one is a vii<sup>0</sup><sub>7</sub> and the other an A<sub>6</sub> built on the lowered second degree of the scale.<sup>157</sup> However, both are dominant-function chords and, therefore, Larios analyzed these as dominant chords. This may signify Larios as a practical exponent of the doctrine of functional harmony.

Specific chord progressions. Larios devotes special attention to the progressions of three chords: the dominant seventh; the fully diminished seventh; and the augmented sixth chords. Following the pattern, he deals with these progressions almost exclusively by means of musical examples.

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157. This particular chord has been called, rather properly, "Dominant Augmented Sixth Chord." See Paul Cooper, Perspectives in Music Theory (New York: Dodd, Mead & Co., 1973), 208.

With regard to the dominant seventh chord, Larios shows that it naturally resolves to the tonic. Example 38 illustrates the V<sub>7</sub>-I progressions.<sup>158</sup>

Example 38. Progressions of the dominant seventh chord.

1a transmutación    2a T.            3a T.

It was noted previously that Larios mentioned two different progressions using the augmented sixth chord. The first progression (Example 39a) shows the most common use of this chord: an A<sub>6</sub> chord built on the sixth degree of a minor scale, resolving to the dominant.<sup>159</sup> The second progression (Example 39b) features the enharmonic re-spellings of the chord whereby it becomes a dominant seventh chord, resolving to its proper tonic.<sup>160</sup>

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158. Ibid., 68.

159. Ibid., 69: "Este acorde se previene en la 6<sup>a</sup> del tono y se resuelve en la 5<sup>a</sup> dominante."

160. Ibid., 69.

Example 39. The two progressions of the augmented sixth chord.

The musical notation consists of two systems, a) and b), each with a treble and bass staff. System a) shows a progression from A minor (A-C-E-G) to A6 (A-C-E-G#). System b) shows a progression from A6 (A-C-E-G#) to V7/B-flat (B-flat-D-E-G#) to B-flat (B-flat-D-F-A). An enarmonía bracket spans the A6 and V7/B-flat chords in system b).

Larios considers the fully-diminished seventh chord as a very special chord, particularly because of its usefulness in modulation. He explains its particular nature as follows:

Este acorde de 7<sup>a</sup> diminuta tiene naturalmente cuatro resoluciones, y muy propio para las transiciones de tonos. con el movimiento de un sonido de dicho acorde cambia de carácter la armonía, e indica desde luego su resolución. Manifestaremos la fecundidad de esta prodigiosa disonancia para que se vea cuantas transiciones se pueden hacer por medio de ella comenzando por las cuatro resoluciones que hemos dicho.<sup>161</sup>

The diminished seventh chord has four natural resolutions and it is very useful for modulation. The movement of one of the sounds of this chord changes the character of the harmony and determines its resolution. We shall demonstrate the flexibility of this marvelous dissonance and the several modulations it generates by means of its four resolutions.

161. Ibid., 70-71.

The following example (Example 40) illustrates such modulatory possibilities.<sup>162</sup>

Example 40. The four resolutions of the diminished seventh chord.

C minor      E<sup>b</sup> minor      G<sup>b</sup> minor      B<sup>bb</sup> min. or A min.

1a  
transmutación

2a

3a

Finally, Larios illustrates another way of dealing with both the dominant-seventh and the diminished-seventh chords: to treat them as appoggiatura chords. In the two progressions illustrated in Example 41, Larios does not consider the first chord of each progression to be a dominant-function chord (V7-I or vii<sup>o</sup><sub>7</sub>-I). Rather, he regards them as tonic chords: the first a tonic chord containing a dissonant seventh (I<sub>7</sub>-I), and the second with a major seventh and a flat sixth (I<sub>6</sub><sup>b</sup>-I).<sup>163</sup>

162. *Ibid.*, 72.

163. *Ibid.*, 67-68: "Acorde disonante de 7<sup>a</sup> mayor resuelto en la 8<sup>va</sup>," and "El mismo acorde con la 6<sup>a</sup> alterada con bemol o desalterada con becuadro segun el tono donde se haga."

## Example 41. Appoggiatura chords.

Modulations. For Larios, modulations play a very important role in the harmonic system. At the beginning of his discussion on this subject, he devotes an unusual amount of space to define the term and to explain the effect of modulation, not only on the music itself but also on the performer and the listener.

Modulacion quiere decir: pasar de un tono a otro. esto es introduciendo nuevos sostenidos o nuevos bemoles al tono cualquiera donde se quieran hacer estas modulaciones. . . .

Por modulacion ó transicion se entiende una variación de tono ordenada al advitrio del ejecutor, y de esta resulta el que produzca en el alma unas sensaciones agradables en que ella misma se deleita por la razón de que la variacion del tono

Modulation means to go from one key to another. This is achieved by introducing new sharps or flats to the key that one intends to modulate to. . . .

By modulation or transition it is understood to be a change of key, executed at the freewill of the performer. Modulations produce a series of pleasing sensations in which the soul takes great delight, because the change, from one key to another,

á otra melodía distinta  
la sorprenda y la ena-  
jene porque no creía  
posible que se hiciera  
una transición tan  
bien ordenada.<sup>164</sup>

surprises the soul and  
alienates her, since  
she did not believe it  
possible that such a  
smooth transition could  
be executed.

Larios' concept of modulation may be summarized under two basic statements: 1) modulation requires a change of tonal center; and 2) the transition from the original key to the new key must be executed smoothly, artfully, and with good taste, so that the soul may rejoice in it. With regard to the first statement, Larios requires that the new key be established by way of a dominant-seventh chord.

Por otra parte:  
una modulación no es  
verdaderamente bien es-  
tablecida si no cuando  
se ha oído la nota sen-  
cible del nuevo tono.  
por medio de una 2ª de  
una 5ª ó de una 7ª del  
tono á donde se quiera  
pasar . . . advirtiéndolo  
que, sobre estos tres  
grados se percibe la  
nota sensible; aunque  
esta 2ª esta 5ª y esta  
7ª no es otra cosa sino  
el acorde de la Domi-  
nante con su 7ª y las  
transmutaciones de este  
mismo acorde.<sup>165</sup>

Furthermore, a  
modulation is not truly  
established until one  
has heard the leading-  
tone of the new key.  
This is achieved by  
means of the second, the  
fifth, or the seventh  
degrees of the key one  
wants to modulate to . . .  
It will be observed that,  
above these three degrees  
of the scale one perceives  
the leading tone. In fact,  
such second, fifth, and  
seventh degrees are  
nothing else than the  
dominant seventh chord  
and its inversions.

Although this statement may appear rather confusing, it is noteworthy that Larios considers the dominant-seventh chord

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164. Ibid., 75.

165. Ibid., 76-77.



to be eminently implied in the second, fifth, and seventh degrees of the new key. He does not mean "triads built on the second, the fifth, and the seventh degrees," but the the dominant-seventh chord (of the new key) and its inversions ( $V_5^6$  and  $V_3^4$ ), in which the bass rest on the fifth, the seventh, and the second note of the scale respectively. His musical examples on this subject--some of which are reproduced in Example 42--further clarify this point.<sup>166</sup>

Example 42. Modulations confirmed by a  $V_7$  chord.

Example 42 consists of three musical examples, labeled a), b), and c), each showing a modulation confirmed by a  $V_7$  chord. The notation is presented on a grand staff (treble and bass clefs).

- a) 7<sup>a</sup> de  $Re^b$** : Shows a modulation to  $Re^b$ . The bass line contains notes  $C$ ,  $V_5^6/D^b$ , and  $D^b$ .
- b) 5<sup>a</sup> de  $Fa$** : Shows a modulation to  $Fa$ . The bass line contains notes  $C$ ,  $V_7/F$ , and  $F$ .
- c) 2<sup>a</sup> de  $La$** : Shows a modulation to  $La$ . The bass line contains notes  $C$ ,  $V_3^4/A$ , and  $A$ .

This example shows that Larios' degree numbers refer to the scale degree of the new key which serves as bass note for the new dominant seventh chord (the labelings between the two staves are Larios' own; the analysis beneath the staves is mine). It is very important for Larios that the new scale (or new key) be confirmed by a  $V_7$  chord. He mentions some

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166. Ibid., 77-79.

cases in which the music seems to modulate but does not do it convincingly because the V7 is absent.

Hay una especie de Modulación que se obra en ella sin mudar nada en apariencia a los sostenidos ni á los bemoles del tono primitivo. ella es producida solamente por la llegada de un nuevo acorde perfecto o sus transmutaciones. . . . estas modulaciones son demasiado débiles.<sup>167</sup>

There is a kind of modulation which seems to take place without changing any sharps or flats to the original key. This effect is created by the presence of a new perfect chord or one of its inversions. . . . These modulations are extremely weak.

Example 43 illustrates one such "false modulation."<sup>168</sup>

Example 43. A false kind of modulation.

The image shows a musical score for Example 43, consisting of two staves: a treble clef staff and a bass clef staff. The treble staff contains seven chords, each represented by a circle with dots for notes. The bass staff contains seven single notes, each represented by a circle with a dot. Below the notes, the chords are labeled: C maj., G maj., D min., A min., F maj., G maj., and C maj. The progression starts with C major, moves to G major, then D minor, A minor, F major, G major, and finally returns to C major.

According to Larios' own written analysis of this example, the entire progression belongs to the key of C major. None of the other perfect chords have the power to establish a

167. Ibid., 75.

168. Ibid., 76.

new key, even momentarily, because none is preceded by its own V7. Furthermore, Larios requires that the transition between the two keys be executed smoothly and with good taste. He clarifies this point in the following paragraph:

Todas las veces que hay una ó mas notas del tono que se deja á aquel donde se va, no hay [necesidad] de prevención pues con esta regla se puede ir á cualquiera tono de los once que estan en el ejemplo porque en cada uno de ellos ecsiste una nota del tono primitivo, y con esta es suficiente para que al hacer las transiciones, el oido quede satisfecho.<sup>169</sup>

Every time that one or more notes of the original key also belong to the new key, there is no further need to prepare the modulation. Under the authority of this rule one can modulate to any of the eleven keys shown in the example, since each one of them contains at least one note of the original key. This affinity of notes is enough to satisfy the ear when the transition is executed.

In all examples illustrating modulation, Larios is quite careful to have at least one common tone between each of the two chords in the transition. At the same time, he recognizes and accepts enharmonic equivalences as a natural phenomenon. Example 44 shows his diagram--to which he makes reference in the previous paragraph--of the eleven keys connected by such common-tone relationship.<sup>170</sup>

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169. Ibid., 79. The word in brackets is mine. Larios' handwriting at that point is completely illegible. The word I have substituted for the original--which appears to be like "perencion" (not a word)--fits in the context of the passage.

170. Ibid., 80.

Example 44. Larios' eleven keys related by common tone.

The diagram illustrates eleven keys related by a common tone (Do mayor). The keys are arranged in two columns around a central Do mayor chord. Lines connect the common tone (Do) of each key to the central Do mayor chord.

Key	Common Tone
Mi menor	Do
Mi <sup>b</sup> mayor	Do
Mi mayor	Do
Fa mayor	Do
Fa menor	Do
La menor	Do
La <sup>b</sup> mayor	Do
La mayor	Do
Sol mayor	Do
Sol menor	Do

The last example of common-tone modulation to be considered is Larios' illustration on how to modulate from the key of the flat-sixth (bVI) to the tonic. According to Larios, the most practical way of achieving it is by means of an augmented sixth chord. This progression is illustrated in Example 45.<sup>171</sup>

171. *Ibid.*, 82.

Example 45. Modulation from the key of the bVI to the tonic.

Do a Mi mayor

A6

On Cadences. Larios begins his discussion on cadences by defining the term.

El nombre de la cadencia viene de la palabra caer, en efecto las cadencias no son otra cosa mas que caidas reposos de frases musicales. . . . Las cadencias sirven para darle puntuacion al discurso musical de manera que con el concurso de las diversas clases de cadencias se pueden formar las frases, miembros de las frases y periodos musicales.<sup>172</sup>

The name cadence comes from the word "to fall." In effect, a cadence is nothing else than the fall or repose of a musical phrase. . . . Cadences are the punctuation marks in a musical speech. So, in music, different types of cadences are used to delineate phrases and musical periods.

Larios enumerates four types of cadences: imperfect, perfect, deceptive, and plagal. His explanation of imperfect cadence is brief:

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172. Ibid., 96.

La cadencia imperfecta es el pasaje del tónico ó del subdominante a una dominante ella anuncia un medio reposo musical.<sup>173</sup>

The imperfect cadence is the progression from the tonic or the subdominant to the dominant. It announces a partial repose in music.

Unfortunately, Larios' illustration of imperfect cadence does not correspond with the above statement. Example 46a is Larios' example; Examples 46b and 46c are my own reconstruction of the two kinds of imperfect cadences described by Larios in the above paragraph.

Example 46. Examples of imperfect cadences.

The musical notation consists of three examples, a), b), and c), each shown on a grand staff with a treble and bass clef. Example a) shows a progression from Tonic (I) to Subdominant (IV). Example b) shows a progression from Tonic (I) to Dominant (V). Example c) shows a progression from Tonic (I) to Subdominant (IV) to Dominant (V). The notes are as follows:

Example	Measure 1	Measure 2	Measure 3	Measure 4	Measure 5	Measure 6	Measure 7
a)	Tonica (I)		Subdominante (IV)				
b)	I		V			or	
c)	I		IV		V		

There seems to be no explanation to justify Larios' above example of an imperfect cadence. His definition is accurate but his example does not correspond with it. Considering Larios' rather advanced knowledge of harmony--evident throughout his entire treatise--this must be considered a

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173. Ibid., 96.

copying error, either his or of his assistant.<sup>174</sup> Larios defines the perfect cadence as follows:

La cadencia perfecta es el pasaje de una tónica á una Dominante; ó vice versa. ella anuncia un reposo mas ó menos completo.<sup>175</sup>

A perfect cadence is the progression from the tonic to the dominant; or vice versa. It announces a rather complete repose.

It should be noted that Larios does not regard this cadence as achieving a perfect repose. In other words, for him the dominant-tonic (V-I) progression by itself is not enough to make this cadence perfect. Larios recognizes several degrees of repose with regard to the perfect cadence. That is, to become totally perfect, a cadence must fulfill three conditions. The three conditions are: 1) the progression must express a dominant-tonic (V-I) relationship;<sup>176</sup> 2) the tonic note must be placed not only in the bass but also in the highest note of the final tonic chord;<sup>177</sup> and 3) the final

174. Two very distinct styles of handwriting can be observed in the Método: one is small, meticulous, and highly ornamented; the other is much larger and, by far, not as carefully written as the first. Either Larios had two very different handwritings, or a second person assisted him in copying the manuscript.

175. Larios, op. cit., 96. 176. See previous quotation.

177. Larios, op. cit., 98: "para que una cadencia ó reposo sea enteramente perfecto, es necesario que no solamente el bajo obre su movimiento de dominante á la tónica, sino que la parte mas alta de la armonia termine tambien por la misma tónica, porque si dicha parte acabase por la 3ª resultaria de esto una inconsistencia y debilitaria mucho la fuerza de la cadencia; si la parte superior acabase por la 5ª la inconsistencia seria aun mas grande, de consiguiente el reposo se encontraria ecsesivamente debil."

tonic chord must be preceded by its two dominant chords (dominant and subdominant) and not by the "upper" dominant only (e.g., a cadence formula).<sup>178</sup> Condition one makes the cadence perfect; conditions one and two make it more perfect, and all three make it most perfect. Example 47 illustrates these varying degrees of cadential perfection.<sup>179</sup>

Example 47. Perfect cadences.

a) Perfect      b) More perfect      c) Most perfect

complete repose

Larios illustrates still another way to add weight to the cadential formula: to place before the final cadence several chords in succession, all of which anticipate the dominant. This further indicates Larios' advanced harmonic thinking. From a strictly classical point of view such a harmonic progression may make little sense. However, in music of the (later) romantic era, there can be a chain of

178. *Ibid.*, 97: "Esta cadencia puede ser aun mas perfecta si se hace proceder de la subdominante y para esto es menester la reunion de tres acordes."

179. *Ibid.*, 97, 98. The examples are Larios' own.



chords which may reveal little purpose in each harmonic conjugation (i.e., two-chord succession) but each chord has a definite harmonic gravitation to a common chord. Larios explains such cadential formula as follows:

Para llegar á la  
Dominante de una caden-  
cia perfecta, se puede  
tomar un camino mas ó  
menos largo . . .<sup>180</sup>

To reach the  
dominant chord in a  
perfect cadence, one  
may also take a longer  
route . . .

Example 48 shows one of his many illustrations on such procedure.<sup>181</sup>

Example 48. Chain of chords gravitating to a common chord of resolution--the dominant.

The musical notation shows a chain of chords in a single system with two staves (treble and bass clefs). The chords are labeled with Roman numerals: I, I<sup>6</sup>, IV<sup>6</sup>/<sub>5</sub>, vii<sup>7</sup>°/V, I<sup>6</sup>/<sub>4</sub>, V, and I. An arrow points from the I<sup>6</sup>/<sub>4</sub> chord to the V chord, indicating harmonic gravitation. Another arrow points from the vii<sup>7</sup>°/V chord to the V chord, also indicating gravitation. The final chord is I.

Larios explains the deceptive cadence as follows:

La cadencia rota  
es una cadencia perfec-  
ta que en lugar de

The deceptive  
cadence is a perfect  
cadence which, instead

180. Ibid., 97.

181. Ibid., 97. The Roman-numerals analysis and the arrows showing harmonic gravitation to a common chord are mine.

terminar sobre la tónica se detiene sobre otro grado de la escala.

of ending on the tonic, makes a pause on another scale degree.

Las cadencias rotas sirven á cortar el reposo de las frases de música, y a dar á estas mismas frases un nuevo desarrollo con una fuerza nueva. Las cadencias rotas son siempre el prelude de las cadencias perfectas.<sup>182</sup>

The purpose of the deceptive cadence is to break the repose at the end of a musical phrase, and to provide this phrase with a new beginning. Deceptive cadences are always the prelude of perfect cadences.

For Larios, the characteristic feature of a deceptive cadence is the element of surprise. Just at the time when the musical phrase is about to come to a perfect conclusion, a deceptive cadence negates the expected progression. This unexpected rupture in the flow of the musical idea, he states, makes the listeners appreciate even more the effect of the perfect cadence which always ensues and provides the musical phrase with an appropriate conclusion. According to Larios, there are many formulas to execute a deceptive cadence. Example 49 illustrates only three of his several examples of deceptive cadences.<sup>183</sup>

The last type of cadence Larios discusses is the plagal cadence.

Las cadencias plagales consisten en el pasaje de una subdominante a una tónica.<sup>184</sup>

Plagal cadences consist of the progression from subdominant to tonic.

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182. Ibid., 98, 100.      183. Ibid., 99.      184. Ibid., 101.

## Example 49. Deceptive cadences.



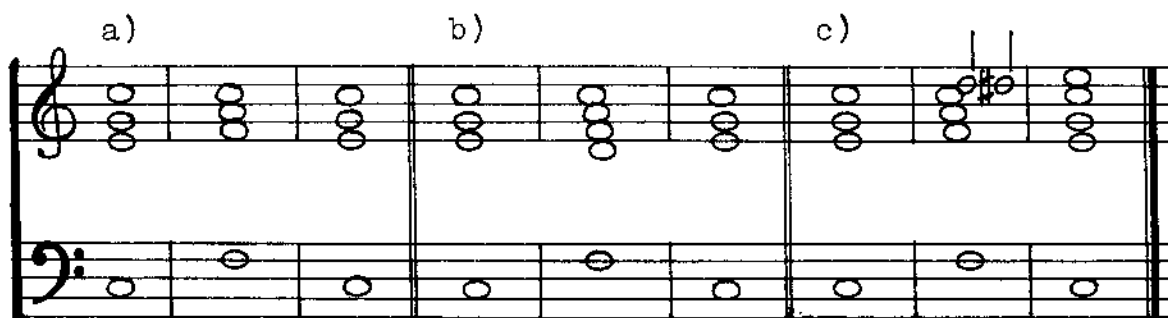
Larios recognizes two types of subdominant chords: the perfect subdominant triad, and the subdominant triad with an added sixth (e.g., F-A-C-D in the key of C major). It is quite possible that Larios was acquainted with Rameau's theory of the "chord of the added sixth." According to Rameau, in a IV-I cadence (which he calls irregular) the subdominant chord should be altered by adding the sixth to create a cadential effect with the tonic.<sup>185</sup> Thereby, IV-I would not sound like I-V. Consequently, Larios illustrates two types of plagal cadences: one from the subdominant triad to its tonic (as the one shown in Example 50a), and the other from the subdominant with an added sixth to its tonic (Example 50b). The latter type, he explains, may be further embellished in several different ways; one of them is illustrated in Example 50c.<sup>186</sup>

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185. Rameau, op. cit., 73-81.

186. Larios, op. cit., 101.

Example 50. Different types of plagal cadences.



Finally, Larios considers the plagal cadence to be perhaps the most expressive of all cadences. For him, they are especially effective in slow movements or in church music.<sup>187</sup>

Non-harmonic tones. Larios' discussion of non-harmonic tones is scattered throughout his entire treatise. He considers them as basically of two kinds: 1) those which serve as "fillers" between two harmonic tones (non-accented), and 2) those which create dissonance (accented). Of the first kind, he mentions the passing tone (nota de pasaje), and the anticipation (anticipación). The passing tone, according to him, exists entirely for melodic reasons.

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187. Ibid., 101: "El movimiento lento ó figuras de grandes valores combiene especialmente á esta clase de música."  
Ibid., 103: "Las cadencias plagales se usan muy raramente; pues ellas son propias para la música de yglesia, porque la inconsistencia que ellas dejan á la terminación de un periodo, las ha hecho adoptar para la música eclesiástica y en este género si son muy comenientes."

Se llaman notas de pasage los sonidos que no lleban armonia. estos sonidos son enteramente extraños al acorde que se hace oír. ellos sirven á adornar el canto y el Bajo, y sirven tambien á llenar los bacíos que puedan encontrarse entre dos armonias, y la melodia. La Melodia está compuesta de notas de pasage, y de notas de armonia, y este conjunto es el que forma la Música.<sup>188</sup>

Passing tones are those sounds which do not carry harmony. These sounds are entirely foreign to the chords. They serve as ornaments, in the melodic and the bass lines, and they are also useful to fill empty spaces in between two harmonies, and in the melody. All melodies are made of passing tones and harmonic tones; in fact, Music is created by the combination of these two types of tones.

Example 51 shows one of Larios' many examples of passing tones.<sup>189</sup>

Example 51. Passing tones.

and nine of the Método, explaining the anticipation. His definition of anticipation is very brief.

La anticipacion  
es hacer oír nota de  
un acorde que va a  
existir y que no  
llega aun.<sup>190</sup>

The anticipation is  
when one hears a note of  
a chord that will exist,  
but which has not yet  
been played.

Example 52 shows one of his two examples of anticipation.<sup>191</sup>

Example 52. Anticipations.



Larios discusses two types of accented passing tones: the appoggiatura (which he calls retardo), and the suspension. He defines the appoggiatura as follows:

Retardo: Emplean los  
autores de musica esta  
palabra para indicar  
que toda disonancia es  
un retardo de la  
consonancia.<sup>192</sup>

Ritardation: music  
authors use this word  
to express that  
every dissonance is  
a ritardation of a  
consonance.

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190. Ibid., supplement between pages 8 and 9.

191. Ibid.      192. Ibid.

Larios illustrates two types of appoggiaturas: the first is the ritardation itself (see Example 53a) in which the dissonant note resolves alone, to the consonance which it delays. The second is the prolongation (prolongación), which differs from the ritardation only in that the dissonant note resolves, together with the other notes of the chord, to the following consonant formation (see Example 53b). Larios considers the difference between the two types as naive and insignificant.<sup>193</sup>

Example 53. The two kinds of appoggiaturas.

a) Ritardation      b) Prolongation

The musical notation consists of two staves, treble and bass clef. Part (a) shows a dissonant note (G) resolving alone to a consonance (F). Part (b) shows a dissonant note (G) resolving together with the other notes of the chord to a consonant formation (F). The notes are labeled with numbers 9 and 8 in (a), and 9 and 3 in (b).

Larios devotes fifteen pages of his treatise to discuss the suspension. It is apparent that he regards this as the most important of all non-harmonic tones. He refers to suspensions as ligaduras (ligatures), a term generally preferred by Mexican theorists. He explains the suspension as follows:

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193. Ibid.

Ligadura es la union de un sonido con otro que siendo consonante el primero se vuelve disonante el segundo en el movimiento que hace el bajo. Para que la disonancia de la Ligadura sea perfecta ha de tener tres circunstancias: prevencion, ligar, y desligar en consonancia perfecta . . . Prevencion es el intervalo consonante que por movimiento del bajo se convierte en ligadura. Ligadura es el intervalo disonante, Resolucion es el intervalo consonante en que resuelve la disonancia de la Ligadura la cual se hace bajando un tono ó un semitono.<sup>194</sup>

Ligature is the union of one sound with another by which the first sound, a consonance, becomes a dissonance by the movement of the bass. To be perfect, a ligature ought to have three circumstances: prevention, ligature, and resolution to a perfect consonance . . . Prevention is the consonant interval which by the movement of the bass becomes a ligature. Ligature is the dissonant interval. Resolution is the consonant interval to which the ligature resolves; this is done by descending a tone or a semitone.

According to Larios, there are three kinds of ligatures or suspensions, all of which are identified by the interval between the said non-harmonic tone and the bass line: the 9-8, the 7-6, and the 4-3 suspensions. It should suffice to include here only one of each kind of the many examples of suspensions Larios illustrates in his Método. This are shown in Example 54.<sup>195</sup>

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194. Ibid., 52-53.

195. Ibid., 53, 63, 56.



## Example 54. Suspensions.

a)                      b)                      c)

P   L   R                      P   L R Final                      P   L R   Final

Larios also illustrates another type of suspension which he calls Ligadura de 7<sup>a</sup> continuada (Example 55).<sup>196</sup>

Example 55. Ligadura de 7<sup>a</sup> continuada.

This, in fact, is nothing more than a chain of seventh chords progressing by intervals of fifths in the bass, and of which the last one is a  $V_7$  (dominant-tonic) resolving to the tonic.

196. Ibid., 66.

This same progression, which Rameau termed "the imitation of cadences," was also discussed by Gómez under the name of "avoided perfect cadences" (cf. pp. 227-230). Larios, a student of Gómez, was certainly well acquainted with the latter's theories stated in Gramática razonada musical. Though retaining the basic progression, Larios sees it differently: he does not explain each pair of chord conjugation as a type of cadence but simply regards it as a series of suspensions. This again illustrates Larios' more advanced concept of harmony, as compared with Gómez and Elízaga; for him the function is always more important than the agent.

Fundamental Bass. Towards the end of his treatise Larios briefly discusses the concept of Fundamental Bass. He describes three kinds of basses and explains them by way of the C major triad as point of reference.

El Bajo fundamental es el que tiene 3ª y 5ª en consecuencia es el Do. el Bajo sensible es el que tiene 3ª y 6ª y es el Mi: hay otro bajo sensible y es el que tiene 4ª y 6ª y es el sol. El Bajo continuo esta compuesto del fundamental y del sensible, y de muchas notas de pasage; . . .

El Bajo fundamental es el que establece tres acordes esenciales en la armonia, es decir: el de la tonica, el de

The fundamental bass is that which has a third and a fifth, therefore C. The sensible bass is the one which has a third and a sixth, and it is E. There is also another sensible bass and it is the one which has a fourth and a sixth, and it is G. The continuous bass is made of the fundamental and the sensible, and of many passing notes; . . .

The fundamental bass is the one which establishes the three essential chords of harmony, that is:

la cuarta, y el de la  
quinta. estos reinan  
sobre todos los otros  
sonidos, y constituyen  
el caracter del tono.<sup>197</sup>

the tonic, the fourth,  
and the fifth. These  
rule over all other sounds  
and constitute the charac-  
ter of the key.

Though brief in narrative, Larios identifies three main attributions of the fundamental bass: 1) it is the root of the chord; 2) it combines with the Sensible bass and other passing tones to conform the bass line of any piece of music; and 3) it is the foundation of the three pillars of harmony--the tonic, dominant, and subdominant chords--which establish the key and determine its character. Larios' only example of a fundamental bass is here reproduced in Example 56.<sup>198</sup>

Example 56. The Fundamental Bass.

Bajo sensible

Bajo fundamental

197. Ibid., 111-112.

198. Ibid., 113.

## Counterpoint

Having concluded his study about harmony, Larios devotes only three and one half pages at the end of his treatise to the subject of counterpoint. First, he states his purpose and sets the limits of the discussion.

Aunque en esta obra solo me he propuesto tratar el sistema de Armonía Teórico-Práctica, me parece conveniente dar una pequeña idea del Contrapunto que los discípulos deben saber mas adelante en toda su extension.<sup>199</sup>

Although my only intention in this work is to deal with the system of theoretical-practical harmony, it seems now convenient to me to give a little idea to my disciples about Counterpoint, a subject which they will need to know later in all of its extension.

Larios limits his discussion to briefly explaining two terms: counterpoint and fugue. With regard to counterpoint, he states:

En la época donde la música á muchas voces recibió su primera perfeccion, se observaba sobre las líneas puntos en lugar de notas. cuando se quería juntar a una melodía una o muchas voces se añadía á los puntos que existían ya, otros puntos el uno sobre el otro ó el uno contra del otro, y por esto se llamaba Contrapunto. Esta espresion ha sido

At the time before the art of polyphony became perfected, music was written with points on the lines, instead of notes. When they wanted to combine a melody with one or several other voices, they added more points to the already existing ones, one above the other, or one against the other; hence the name Counterpoint. This term has been kept as

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199. Ibid., 118.

conservada como una palabra tecnica; de suerte que en la presente la palabra contrapunto en el sentido mas extenso designa todo lo que pertenece á la parte armonica de la composici3n musical, y la expresi3n estudiar el contrapunto quiere decir: lo mismo que estudiar la armonia, y es una misma cosa.<sup>200</sup>

a technical word. In our present time the word counterpoint denotes, in its most extensive meaning, all that belongs to the field of harmonic composition. Furthermore, the expression to study counterpoint actually means "to study harmony," which is the same thing.

This statement, especially the last portion, could be easily misinterpreted. Larios does not really mean that the terms "counterpoint" and "harmony" are synonymous, nor does he imply that the study of harmony necessarily includes or replaces that of counterpoint. If he did, he would not have discussed counterpoint as another subject, as he indeed has. Rather, Larios reflects a typical nineteenth-century approach to the study of counterpoint. What the above statement connotes is that at his time the study of counterpoint required, besides a skilful handling of the individual melodic lines, also a careful consideration of the harmonic and vertical relationships between the voices. In short, he advocates the art of harmonic counterpoint.

In the last part of his treatise, Larios discusses "fugue" and defines it as follows:

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200. Ibid., 118.

Fuga: la fuga es una composicion musical de una especie particular que consiste en un tema o motivo, ejecutado o imitado por todas las otras voces principales segun las reglas que le son propias . . . ella, toma su nombre de la palabra latina Fuga huida, por que una parte pinta huye delante de la otra.<sup>201</sup>

Fugue: a fugue is a special kind of musical composition which consists of one theme or motive, stated or imitated by all the voices according to established rules . . . the fugue takes its name from the Latin word Fuga--flight-- because one voice flies ahead of the other.

Larios describes fugue as consisting of four basic elements: 1) the subject or motive (called guia in Italian and dux in Latin) which becomes the dominant figure of the composition and the subject of imitation for the other voices; 2) the answer (called comes in Latin) which is the statement of the subject in the key of the dominant; 3) the counter subject, which is the counterpoint that accompanies the subject; and 4) the "repercussion" (repercusion) which he defines as "the order in which the subject and the answer made themselves appear, alternatively, in the different keys, according to the division of the octave."<sup>202</sup> Larios illustrates how to write correctly the answer for a subject. Example 57 shows his subject (example a) and three different answers (examples b, c, and d), of which only one is

201. Ibid., 119.

202. Ibid., 122: "es el orden en el cual el motivo y la respuesta se hace oir alternativamente en las diferentes partes, esto es: que depende casi siempre de la division de la octava."

correct.<sup>203</sup>

Example 57. Exercise on writing answers to a given subject.

Larios analyses this example as follows: answer b is incorrect because scale degree five (g) is correctly answered by scale degree one (c), not by scale degree two (d);<sup>204</sup> answer c is also incorrect because it is written in the wrong key (the subdominant instead of the dominant) and therefore it represents a false modulation;<sup>205</sup> answer d is the only correct one.

203. Ibid., 120.

204. Ibid., 120: "La respuesta no debe ser . . . atendiendo que la segunda nota del tono está aquí en el lugar de la tónica."

205. Ibid., 120: "por que esta respuesta falta con respecto a el lugar . . . y pasa consecuentemente en una falsa modulación."

## Chapter V

### CONCLUSION AND FINAL EVALUATION OF WORKS

The period of ninety years, between 1776 and 1866, represents an era of special importance in the development of music theory in Mexico. It was during this period that the old modal system was finally abandoned in favor of the new tonal system. It was also during that period that Mexican authors began to pen music treatises which could be favorably compared with the imported European treatises which had been regarded as the only authoritative source of instruction for serious musicians. Therefore, the four main treatises examined in this study--Vargas y Guzmán's Explicación, Elízaga's Elementos, Gómez' Gramática, and Larios' Método--should be considered as of paramount importance in the history of Mexican theory. These are the major Mexican theoretical works of their time and, as such, they comprise the necessary data to establish a direct lineage of theoretical development in Mexico.

The first theorist, Vargas y Guzmán, must be regarded as the point of transition between the old modal system and the current system of tonality. While he retains traditional concepts, he also gives sufficient evidence of progressive thinking. Some of the bonds that adhered him to the past are:

- 1) his continuous references to medieval authorities such as



Boethius, Guido, and other conservative seventeenth- and eighteenth-century Spanish theorists; 2) his obsessive use of the term mode as synonymous with tone; 3) his use of the solmization system; 4) his arrangement of the scales in a scheme closely resembling the ancient Greater Perfect System; 5) his apparent ignorance of the concept of chord inversions; 6) his basically modal description of cadences; 7) his lack of a clear recognition of the special dominant-tonic harmonic relationship; and 8) his basic concept of chord successions rather than of chord progressions.

On the other hand, the Explicación contains numerous evidences which point clearly towards the new system of tonality. For example, Vargas y Guzmán regards the bass as the ruling voice in music, and lays down several principles of harmonization (e.g., harmonization of the bass with thirds, fifths, and occasionally with sixths). Although he never uses the term "triad" or "chord," he shows a clear recognition of major-minor sonorities (though he does not use these terms), with the quality of the interval of a third above the bass as the determinant. Or, while he does not acknowledge any relationship (function) between chords, he somehow observes something special about the V-I progression. With regard to cadences, he states that the principal cadence belongs to the bass and that it is executed by descending a fifth or ascending a fourth. Finally, and most important, Vargas y Guzmán's theory of mode denotes a definite transition

towards the major-minor system. He judges the modes essentially by the quality of their tonic triads and their cadences; he assigns a specific key signature to each mode. He also proposes and illustrates a way to harmonize the major scale. However, perhaps the strongest evidence of his bimodal thinking is the fact that his entire system of natural and transposed modes is reducible to the major and the minor scales.

If Vargas y Guzmán is regarded as a transitional theorist, Elízaga enjoys the distinction of being the first Mexican author to give full discourse on the tonal system in Mexico. Elízaga's harmonic approach to music is particularly noteworthy: he writes his treatise not only to update music theory in Mexico to correspond with current practices, but also as a reaction against medieval and contrapuntal theory.

Elízaga is the first Mexican theorist to explain the current system of modes and to fully discuss the structure of the major and the minor scales. For Elízaga, all harmonic formations--but particularly the major and the minor triads--have their origin in these two scales. He recognizes the special function of the chords built on the first, fourth, and fifth degrees of the scale, although he does not assign any names to them (e.g., tonic, dominant, subdominant). He is the first Mexican exponent of triadic harmony and the concept of the invertibility of chords. Elízaga is also the first Mexican theorist to champion the doctrine of the

Fundamental Bass and to recognize--though failing to explain--the principle of chord-to-chord progression. For Elízaga it was important to give proper consideration to the movement of each voice when moving from one chord to the next.

Finally, Elízaga is also the first Mexican theorist to discuss harmonic cadences (perfect, imperfect, plagal, etc.), to discuss non-harmonic tones from a harmonic point of view, and to explain modulation. It goes without saying that Elízaga occupies a very important position in the entire history of music theory in Mexico. The significance of Elízaga's work may only be diminished by the fact that he borrows extensively from Eximeno, the Spanish theorist to whom Elízaga owes many of his theoretical ideas. This fact, however, does not in any way diminish the supreme position his work occupies.

After Elízaga's monumental contribution, the task of his successor was one of confirmation and development. This, indeed, is the role played by Gómez in the history of Mexican theory. Although the treatises of these two theorists are separated only by nine years, their similarities are scarce and only accidental. In fact, the two treatises reflect very different sources of information. While Elízaga follows the teachings of Eximeno, Gómez seems to draw his concepts from the theories of Rameau, although he appears reluctant to admit it. For instance, Gómez regards harmony as the origin of all melodic arrangements, including the major and the minor scales, while Elízaga maintains quite the opposite

position--i.e., that all chords have their origin in the two scales. Gómez deals with the concepts of harmony and tonality as something well established. He does not feel obligated to discuss past theories or to defend the supremacy of the new system. For this, he simply acknowledges what Elízaga had accomplished.

Gómez explains the major and the minor modes from a harmonic point of view. For him the two scales are nothing else than a melodic arrangement of the three essential chords of harmony: the tonic, the dominant, and the subdominant. It should also be noted that Gómez was perhaps the first Mexican theorist to use scale-degree terms--tonic, mediant, subdominant, dominant, and leading tone. This observation must not be regarded just as a matter of technicality. Our study of Gómez' harmonic theory clearly indicates that Gómez had a substantially more advanced understanding of functional harmony than any previous Mexican theorists. Gómez considers not only chord relationships but also key relationships. He discusses the subjects of related keys and modulation--the two concepts almost completely ignored by Elízaga.

Another noteworthy contribution of Gómez is that he expands the harmonic vocabulary to include several non-diatonic chords such as the fully-diminished seventh chord, the augmented sixth chord, and other chromatic formations. Gómez also surpasses Elízaga in the use of musical examples. His Gramática enjoys the distinction of being perhaps the first

theoretical book printed in Mexico which contains engraved musical examples. Gómez further expands the Fundamental Bass theory, first discussed in Mexico by Elízaga. Some of his musical examples of Fundamental Bass analysis give evidence to the fact that Gómez considered chords not only as individual entities but also in proper harmonic context, as members in a musical environment.

Finally, Gómez is more illustrative on harmonic progressions. However, Rameauian influence on him is to such an extent that he explains all chord progressions--whether by fifths, by fourths, by thirds, or by seconds--as a type of cadences. Throughout his treatise, Gómez manifests himself as an intelligent theorist who endeavours to be original. He deserves to be considered as one of the most important Mexican theorists of all periods.

It was the role taken up by Larios to complete the work initiated by Elízaga and continued by Gómez, his teacher. Larios develops harmonic theory in accordance with the more advanced Romantic musical idiom of his time. Larios' approach to the study of harmony is highly practical; his discourse is essentially by means of musical examples. He proposes specific harmonizations of the major and the minor scales in what seems to be the first illustration of the "rule of the octave" given by a Mexican theorist. Larios also seems to be the first to explain the two patterns of minor scale: the harmonic, and the melodic.

Larios' concept of harmony is more liberal, in accordance to the current practice; for him, consonances and dissonances are equally useful in harmony. He is much more specific on matters of chord-to-chord progressions. For instance, he gives very detailed explanations of several chords such as the dominant-seventh, the fully-diminished seventh, and the augmented-sixth chords. Clearly, his knowledge of functional harmony is much more advanced. He analyzes chords more specifically, according to their function, and illustrates several examples of appoggiatura chords. He divides the study of harmony into three areas: diatonic harmony, modulative harmony, and chromatic harmony. Thus, his harmonic vocabulary is greatly enlarged to include chromatically altered chords, borrowed chords, and chords with enharmonic spellings. Larios' work also features the first detailed explanation of modulation, a subject highly neglected by his Mexican predecessors.

APPENDIX A

POEM BY SOR JUANA INES DE LA CRUZ

Qué escribe a la Excelentísima Señora Condesa de Paredes,  
excusándose de enviar un Libro de Música; y muestra cuán  
eminente era en esta Arte, como lo prueba en las demás.

Después de estimar mi amor,  
excelsa, bella María,  
el que en la divina vuestra  
conservéis memorias mías;  
después de haber admirado  
que, en vuestra soberanía,  
no borrada, de mi amor,  
se mantenga la noticia;  
10       paso a daros la razón  
que a no obedecer me obliga  
vuestro precepto, si es que hay  
para esto disculpa digna.  
De la Música un Cuaderno  
pedís, y es cosa precisa  
que me haga a mí disonancia  
que me pidáis armonías.  
¿A mí, Señora, conciertos,  
cuando yo en toda mi vida  
no he hecho cosa que merezca  
20       sonarme bien a mí misma?  
¿Yo, arte de composiciones,  
reglas, caracteres, cifras,  
proporciones, cantidades,  
intervalos, puntos, líneas,  
quebrándome la cabeza  
sobre cómo son las sismas,  
si son cabales las comas,  
en qué el tono se divide?  
30       Si el semitono incantable  
en número impar estriba,  
a Pitágoras sobre esto  
revolviendo las cenizas;  
si el diatesarón ser debe  
por consonancia tenida,  
citando una Extravagante  
en que el Papa Juan lo afirma;  
si el temple en un instrumento,  
al hacerlo, necesita

40 de hacer participación  
 de una coma que hay perdida;  
 si el punto de alteración  
 a la segunda se inclina,  
 más porque ayude a la letra  
 que porque a las notas sirva;  
 si el modo mayor perfecto  
 en la máxima consista,  
 y si el menor toca al longo;  
 cuál es áltera y cuál tripla;  
 50 si la imperfección que causa  
 a una nota, otra más chica,  
 es total, o si es parcial,  
 esencial o advenediza;  
 si la voz que, como vemos,  
 es cantidad sucesiva,  
 valga sólo aquel respecto  
 con que una voz de otra dista;  
 si el diapasón y el diapente  
 el ser perfectas, consista  
 en que ni menos ni más  
 60 su composición admita;  
 si la tinta es a las notas  
 quien todo el valor les quita,  
 siendo así que muchas hay  
 que les da valor la tinta;  
 lo que el Armónico medio  
 de sus dos extremos dista,  
 y del Geométrico en qué,  
 y Aritmético, distinga;  
 si a dos mensuras es toda  
 70 la Música reducida,  
 la una que mide la voz  
 y la otra que el tiempo mida;  
 si la que toca a la voz,  
 o ya intensa, o ya remisa,  
 subiendo o bajando, el Canto  
 Llano sólo la ejercita,  
 mas la exterior, que le toca  
 al tiempo en que es proferida,  
 mide el compás y a las notas  
 80 varios valores asigna;  
 si la proporción que hay  
 del Ut al Re no es la misma  
 que del Re al Mi, ni el Fa Sol  
 lo mismo que el Sol La dista:  
 que aunque es cantidad tan tenue  
 que apenas es percibida,  
sesquioctava o sesquinona  
 son proporciones distintas;  
 si la Enarmónica ser



90 a práctica reducida  
 puede, o si se queda en ser  
 cognición intelectual;  
 si lo Cromático el nombre  
 de los colores reciba  
 de las teclas, o lo vario  
 de las voces añadidas;  
 y en fin, andar recogiendo  
 las inmensas baratijas  
 de calderones, guiones,  
 100 claves, reglas, puntos, cifras,  
 pide otra capacidad  
 mucho mayor que la mía,  
 que aspire en las Catedrales  
 a gobernar las Capillas.  
 Y más, si es porque en él la  
 bella Doña Petronila  
 a la Música, en su voz,  
 nueva añade melodía.  
 ¿Enseñar Música a un Angel?  
 110 ¿Quién habrá que no se ría  
 de que la rudeza humana  
 las Inteligencias rija?  
 Mas si he de hablar la verdad,  
 es lo que yo, algunos días,  
 por divertir mis tristezas  
 di en tener esa manía,  
 y empecé a hacer un Tratado  
 para ver si reducía  
 a mayor facilidad  
 120 las reglas que andan escritas.  
 En él, si mal no me acuerdo,  
 me parece que decía  
 que es una línea espiral,  
 no un círculo, la Armonía;  
 y por razón de su forma  
 revuelta sobre sí misma,  
 lo intitulé Caracol,  
 porque esa revuelta hacía.  
 Pero éste está tan informe,  
 130 que no sólo es cosa indigna  
 de vuestras manos, mas juzgo  
 que aun le desechan las mías.  
 Por esto no os le remito;  
 mas como el Cielo permita  
 a mi salud más alientos  
 y algún espacio a mi vida,  
 yo procuraré enmendarle,  
 porque teniendo la dicha  
 de ponerse a vuestros pies,  
 140 me cause gloriosa envidia.

De Don Martín y Don Pedro  
no podéis culpar de omisas  
las diligencias, que juzgo  
que aun excedieron de activas.

Y mandadme; que no siempre  
ha de ser tal mi desdicha,  
que queriendo obedeceros,  
con querer no lo consiga.

150 Y al gran Marqués, mi Señor,  
le diréis, de parte mía,  
que aun en tan muertas distancias  
conservo memorias vivas;

que no olvido de su mano  
sus mercedes recibidas:  
que no son ingratos todos  
los que, al parecer, se olvidan;

160 que si no se lo repito,  
es por la razón ya dicha  
de excusar que lo molesta  
ostente lo agradecida;

que no le escribo porqué,  
siendo alhaja tan baldía  
la de mis letras, no intento  
que de embarazo le sirva;

170 que el carácter de crecer  
el número a su Familia,  
le tengo impreso en el alma  
si no sale a las mejillas;

y que ya que mi desgracia  
de estar a sus pies me priva,  
le serviré en pedir sólo  
a Dios la vuestra y su vida.

## APPENDIX B

### ELIZAGA, ELEMENTOS DE MUSICA

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