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The Lute Society of America was organized in 1966 to cultivate, promote, foster, sponsor, and develop understanding, taste, and love of the musical arts, and especially to promote interest in the lute and related stringed instruments: to increase and stimulate public interest in the playing of the lute and its music: to coordinate groups of lutenists and to render assistance by furnishing a central place where such groups may apply for information.

Membership in the Society is open to anyone interested in the lute and its music. Such persons shall become members in good standing upon payment of dues for the current year. Annual dues are $8.50. The Society is a non-profit organization, and all contributions in excess of dues are tax-deductible.

The Lute Society of America publishes this Journal annually. The Society also publishes a Newsletter which is sent to members irregularly, at least four times per year. Editions of lute music are also published by the Society; at least one copy per year is issued free to members, and other copies are available to members at a reduction of 25%. A list of members is published in the Spring, containing a list of lute makers, repairmen, suppliers of lutes, strings and accessories, teachers of the lute, and other pertinent information. Meetings for playing the lute, and discussion of its history, technique, etc. are held at irregular intervals wherever there are enough members to make it desirable, and notices of these meetings are printed in the Newsletter. The Society also operates a microfilm library of lute and guitar sources for the benefit of the membership.

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This issue of the Journal brings together the work of leading scholars and performers of the lute and guitar. Thomas F. Heck, archivist of the Guitar Foundation of America, recently chaired an American Musicological Society seminar on lute and guitar transcriptions. In his article, he summarizes the views of the participants and offers new insights into this most difficult and important subject. Joscelyn Godwin, professor of music at Colgate University, New York, continues his organological research with an article on the theorboed guitar. Robert Lundberg makes lutes and other historical instruments in Portland, Oregon. His article details his observations and measurements of antique lutes seen during a recent trip to Europe. Peter Danner, well known to Lute Society members for his many services to the Society, is presently writing a history of the guitar, as well as teaching lute and guitar in the Stanford area. Eugen M. Dombois, noted lutenist and teacher from Basle, Switzerland, again pursues the problems of tuning and temperament on the lute. Finally, Robert Strizich is studying lute with Mr. Dombois and is himself a noted performer on the baroque guitar. In addition to his research on Ruiz de Ribayaz, he currently is preparing an edition of the complete works of Gaspar Sanz.

The past year has seen important advances for the LSA. Our new president, first lady of the lute, Suzanne Bloch has achieved a new degree of unity and optimism among the Board and membership. Hopefully, this next year will see the completion of many inaugurated projects dealing with chapters, dues, and by-laws. Officers and Board members welcome the advice and opinions of all members on matters concerning the future of the Society.
Sometime shortly after 1629, the exact date is not known, a composer using the extraordinary nom de plume “L’Academico Caliginoso detto il Furioso” published his third book of guitar music. The fact that the book incorporates material from two earlier volumes is indicated by the title, *Il primo, secondo, e terzo libro della chitarra spagnola*. As was common at the time, the title continues by giving the reader a summary of the contents of the book. After mentioning “sonate ordinarie,” “Il Furioso” goes on to refer to “una nuova inventione” and to mention “alcune sonate piccate al modo di lueto” (some pieces plucked in the manner of the lute). In the preface, he warns that the “nuova inventione” must be played exactly as notated and he seems to go out of his way to justify (and even excuse) the lute-like pieces:

About the pieces called *pizziccate*, I do not want to speak much, having placed them more as an ornament of the work than for other reasons, as I know very well that they are more proper to the lute than to the guitar, with which instrument I actually make my living.

The history of the five-course baroque guitar is far from completely written, but from what we know today, “Il Furioso,” whose actual name is now known to have been Giovanni Paolo Foscarini, emerges as a significant pioneer in the art of guitar

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1 The complete title is as follows: *IL PRIMO, SECONDO, E TERZO LIBRO DELLA CHITARRA SPAGNOLA* Nelli quali si contengono tutte le sonate ordinarie semplici & passaggi, Con una nuova inventione dipas- sacali Spagnoli variati Ciacone/ Follie, Zarabande Arie diverse/ Toccate musicali, Balletti, Correnti/ Volte, Gagliarde, Alemande con/ alcune sonate piccate al modo di/ luteo con le sue regole per imparar/ re à sonarle facilissimamente.

2 Delle Sonate, dette Pizziccate, non ne parlo più che tanto, hauendole poste più per abbellimento dell’opera, che per altro rispetto; porche sò benissimo esser più proprie del Leuto, che della Chitara; del qual Instrumento veramente facio professione.
composition. The Terzo libro and Foscarini's "nuova inventione" mark a turning point in guitar history. Before Foscarini, Italian guitarists had been accustomed to music involving only the simple strumming of more-or-less stock chord progressions. By combining this well established Italian guitar technique with the traditional techniques of the lute, Foscarini was instrumental in establishing a new and far-reaching guitar style. Whether or not Foscarini was actually the first guitarist to bring together these two traditions of plucked instruments, the lute and the guitar, we may never know. Nor can we say for certain how far reaching his influence was. Nevertheless, Foscarini is the first baroque guitarist who can clearly be associated with the lutenistic tradition and who claimed to have been influenced by it. Furthermore, Foscarini is one of only a handful of guitarists to be mentioned later in the century by fellow guitarists. His pieces to be "plucked in the manner of the lute" were probably the first guitar pieces since the days of the Spanish vihuelistas to be so performed.  

It is extremely difficult to evaluate the true significance of either lute or guitar composition within the larger framework of Italian baroque music. Surely the first decades of the seventeenth century in Italy comprise one of the most fascinating periods in the history of music. The establishment of monody, the rise of opera, and the development of an idiomatic violin style were all Italian developments that were to have repercussions from one end of Europe to the other.

By 1600, when monody was developed and a musical revolution initiated, the solo lute appears to have lost favor in Italy, even though monody's first eloquent spokesman, Vincenzo Galilei, had himself been an important lutenist. Except for a few significant exceptions such as the two books by Alexandri Piccinini, little solo lute music was published in Italy after 1600. Even Piccinini's allegiance was divided between the lute and the new chitarrone. Such new archlutes as the chitarrone and the theorbo became favored instruments for accompanying the new monodic songs of the seconda pratica. Caccini himself, acknowledged today as the master of the monodic song, stated that the theorbo was the instrument best suited to accompany the voice.  

Although the solo lute was shoved to one side by the monodic revolution, the baroque guitar—the chitarra spagnola—became

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3 Other than Foscarini, the first Italian guitar pieces to be totally in punteato technique are those of Carlo Calvi (Intavolatura di chitarra e chitariglia, Bologna, 1646).

4 Giulio Caccini, "To the Readers," Le nuove musiche (Venice, 1602).
established in Italy with remarkable vigor. This acceptance can partly be explained by one of the primary features of the new musical style. One aspect of monody was the concept of the chord as a self-contained entity rather than as the sum of several moving parts. No clearer example of this new concept of harmony can be found than in the flood of battente music books written for guitar, not using fret tablature, but employing a series of newly devised alfabeto chord symbols. This notational innovation, whereby each chord, major and minor, is associated with a corresponding letter of the alphabet, is a graphic illustration of a new harmonic method of thinking. These chords were meant to be strummed, not plucked, and most early Italian guitarists felt this was the only appropriate manner in which to play the instrument. Benedetto Sanseverino wrote in 1622:

Finally it seems to me that one should play the Spanish Guitar with full strokes, and not otherwise, because playing with diminutions, slurs, or dissonances is more suited to the playing of the Lute than the Spanish Guitar and in softening such an instrument, not only does one take away its own natural and ancient style, but also the harmony is entirely removed.

Just how old the guitar’s “ancient style” might have been when Sanseverino published these words may perhaps never be established. In 1606, Girolamo Montesardo, who described himself as a composer of “madrigals and other serious compositions,” published in Florence the first Italian guitar book to be written in the new alfabeto notation and he called attention to the fact in the title. Nuova inventione d'intavolature. Whether Montesardo actually “invented” alfabeto notation as he claims is open to serious doubt. There is evidence that this notation, like many elements of baroque guitar music, originated in Spain. In a study of the zarabanda Daniel Devoto cites a late sixteenth-century Spanish manuscript now in the Bibliothèque Nationale, Paris, the so-called Palumbi Manuscript.


6Benedetto Sanseverino, Il primo libro d'intavolatura... (Milan, 1622). Finalmente—mi pare, che la Chitarra alla Spagnuola, si debba suonare con le botte piene, e non altrimente, perché suonandola con diminuzioni, legature, o dissonante, sarebbe piu tosto suonar di Liuto, che di Chitarra all' Spagnuola, & diminuendo tal'istrometo non solo si lì viene a levare il proprio, naturale & antico stile, mà anco se lì toglie affatto l'armonia. . . .

7Daniel Devoto, “¿Que es la Zarabanda?,” Boletin Interamericano de Música, número 51 (January 1969), pp. 3-16.

8Bibliothèque Nationale, Ms. 390. Libro di Villanella/ Spagnuol'et Italiane/ et sonate spaguole. . . .
Devoto dates this manuscript circa 1595 and claims that not only did Montesardo copy its alfabeto notation almost literally, but that he included zarabandas remarkably similar to Palumbi’s.\(^9\) Given the simplicity of many of these early “chord formula” pieces, similarity between various examples is not surprising. Still this connection with the Spaniard Palumbi, as well as the very name the instrument was almost always given in Italy, “La Chitarra Spagnola,” clearly shows that the five-course guitar entered Italy from Spain.\(^10\) Furthermore, the Italian alfabeto books are laden with folias, zarabandas, and ciaconas—all forms with an Iberian origin. Nevertheless, it was from its simple beginnings in Italy that an interest in the guitar was to spread northward to France, England, and Central Europe as the century progressed.

The early battente guitar music today seems extremely naive and aesthetically uninteresting. However, we should remember how novel the sound of these simple strummed chord patterns must have been to ears more accustomed than ours to the complexities of sixteenth-century counterpoint. The alfabeto was clearly intended for amateurs; Montesardo states on his title page that with his new tablature “everyone will be able to learn by himself, without a teacher.” With Foscarini comes a reinstatement of more complex techniques, and by 1650 Domenico Pellegrini could warn readers that his book could not be used without the help of a teacher.\(^11\)

Foscarini’s third book, circa 1630, can be viewed as an ambitious step. Perhaps the reason he took such pains to explain his “pieces plucked in the manner of the lute” was that he was fearful of arousing the anger of guitarists such as Sanseverino who felt the guitar ought only to be played with “full strokes.” It is probable that these fears were fully realized. In 1659, the eminent Bolognese guitarist Giovanni Battista Granata took to task “certain professore” who saw fit to “despoil the prints of Bartolotti, Piccinini, Gottieri, Monsù de Fò, Foscarini, and others.” These professore, Granata tells us, disparage the idea of “adapting lute music to the guitar, adapting French styles to the Italian, or transposing music from one key to

\(^9\) Devoto, p. 6. Palumbi utilizes a vocabulary of twenty-two acordes to which Montesardo adds five further chords.

\(^10\) The Italian interest in the guitar probably originated in Naples, capital of the Spanish-ruled Kingdom of the Two Sicilies. A number of Neapolitan guitarists, likely associated with the theater, are mentioned by Scipione Cerreto in his Della Pratica Musica vocale e strumentale (Naples, 1601).

\(^11\) Domenico Pellegrini, Armoniosi concerti sopra la chitarra spaguola. . . . (Bologna, 1650).
another." Granata's mention of Piccinini is of interest, for it suggests that Alexandri Piccinini might have published a now lost guitar book and may share the honor with Foscarini of reintroducing punteado technique to the guitar. Of the other guitarists mentioned by Granata, the only one remembered today is Angiolo Michele Bartolotti, whose Libro primo was published in 1640.

As a subject, Foscarini presents us with considerable biographical and bibliographical difficulties. What little we know of his life is largely gleaned from evidence in his own guitar books. Perhaps sensitive to the sort of criticism Granata later referred to, Foscarini appears to have taken pains for most of his career to cloak himself in the anonymity of his remarkable pseudonym, "L'Academico Caliginoso detto il Furioso." According to the dictionary, caliginoso means "brooding, mysterious, introverted." The name was used by an academy of "caliginosi" (to which Foscarini probably belonged) founded in 1624 in Ancona, a city on the Adriatic Sea.

No copy of Foscarini's Libro primo is known to exist. However, as the following guitar books are known to be cumulative—that is, to repeat all the previous books with consecutive pagination—it can be assumed that this edition included only the sonate ordinarie written in alfabeto tablature similar to the ones that commence each succeeding edition.

In 1629, Giovanni Battista Bonono published in Macerata the composer's second book under the following title:

Intavolatura di chitarra spagnola, libro secondo nel quale si contiene Passacalli semplici e Passaggiati, Folie, Pass'e mezzi, Gagliarde e altre sonate concertate a due e tre chitarre differenti.

Giovanni Battista Granata, Soavi Concerti de Sonate Musicali (Bologna, 1659). The passage cited above reads: "E' ben vero che mi riuncrese, ch'io abbia a dire di havere conosciuto, che questi medesimi habbino (come pur troppo si vede) spolpate le Stampe dei Bertolotti [sic], dei Piccinini da Bologna, dei Gottieri, dei Monsù de Fò, dei Foscarini, & altri, e le mie ancora, e trasportando dal Leuto alla Chitarra, dal Francese all'Italiano, e da un tuono in un'altro..."

In La Guitarre Royalle (Paris, 1671), Francesco Corbetta makes similar accusations and mentions Granata (whom he claims was his student) by name.

The most detailed account of Foscarini and his music is Richard Hudson's "The Development of Italian Keyboard Variations on the Passacaglio and Ciaccona from Guitar Music in the 17th Century." Unpublished dissertation, University of California at Los Angeles, 1967, pp. 151-246. Hudson did not have a copy of Foscarini's Li cinque libri as his disposal.


No film of this edition, a copy of which is owned by the Bibliothèque du
The mention of guitar duets and trios is intriguing because only one short guitar duet is to be found in any later edition.16 This is the earliest guitar ensemble music known to the present writer. On the final page of Libro secondo, Foscarini is described as “Del Accademico Caliginoso detto il Furioso, Musico, e Sonatore, de Liuto, e Tiorba, della Venerabile Compagnia del Santissimo Sacramento d’Ancona.”17 Although we are not given “Il Furioso’s” real identity, we thus at least discover that Foscarini, as he was later to tell us in the preface to book three, was a lutenist and theorbo player. The association with Ancona makes his association with the Accademia dei Caliginosi extremely likely.

Trying to sort out the later editions of Foscarini’s books get a trifle complicated. In the third book, and again in the fourth, our composer not only conceals his name, but the date and place of publication as well.18 However, in the preface to the third book, to which we have referred before, Foscarini tells us that he was a lutenist:

...as is known to those who have known me to be with various princes both inside and outside Italy, and particularly in Flanders with his highness Archduke Albert.19

The Archduke Albert, who had been instrumental in bringing a temporary peace in Flanders between the Protestant South and the Catholic North, died in 1621. Before this date, one can picture the young Foscarini as a journeyman lutenist traveling from court to court, as did many of his contemporaries, in search of employment. It is likely that he moved to Ancona soon after the death of his patron and he may have been a founding member of the Accademia dei Caliginosi, publishing his second book in the neighboring city of Conservatoire (Paris), was available for the present study. The title is quoted from a not-always-reliable source. Cedar Viglietti, Origen e Historia de la Guitarra (Buenos Aires, Editorial Albatros, 1973), p. 57.

16 However, in his introduction to Il Primo, Secondo, e Terzo Libro, Foscarini gives instructions for tuning guitars of three different sizes. Carlo Calvi (1646) also includes similar instructions.


18 The most widely known edition of Foscarini’s music (in the British Museum) bears the title page of the third book, but it contains the music from the fourth book as well. The title page of the British Museum copy was evidently switched with the edition in the Bologna Civico Museo.

19...si come è noto à quelli, che m’hanno conosciuto appresso diversi Prencipi, e dentro è fuori d’Italia, ed in particolare in Fiandra appresso il Serenissimo Arciduca Alberto.
Macerata within the decade. He may also have traveled in France, because the preface mentions French musical practice and Foscarini refers to "French gentlemen who nowadays use the new method of tuning the lute." The third book also includes a portrait of Foscarini that shows him with a dapper goatee and dressed in a coat featuring an elaborate lace collar.

Until recently, no copy of any edition later than I Quattro Libri was known to exist. Now there have come to light at least two further editions that not only give us additional music, but show that Foscarini continued to explore in new directions. Furthermore, one of these editions furnishes positive proof as to Foscarini's name.

A copy of one of these editions survives in the Biblioteca Nazionale Marciana in Venice. The complete title is as follows:

LI CINQUE/ LIBRI DELLA CHITARRA/ ALLA SPAGNOIA [sic] / Nelle quali si contengono tutte le sonate/ ordinarie semplici e Passeggiate/ Con una nuova inventione de Passacalli/ spagnoli variati. Ciaccone folie, Zarabande/ Arte diverse, Toccate Musicali, Balletti cor-/renti, Volte, Gagliarde, Alemande con alcune/ sonate pizzicate, con il modo per sonare so-/pra la parte; & nel fine del libro alcune/ sonate in cordatura differenti con le/ sue regole, per imparar le a sonare facilmente.

The title has been given in full because it offers a good summary of the contents of Foscarini's "collected works." Notice that when "sonate pizzicate" are mentioned, it was not felt necessary, as it had been in earlier editions, to explain them as being "al modo di leuto." Although the film copy available for this study contains no further bibliographical information, the author has been informed in a letter from the Biblioteca Nazionale Marciana that another edition of Li cinque libri, dated "Roma, 25 settembre 1640," carries the name of the composer, Giovanni Paolo Foscarini.

A further edition now in the Biblioteca Comunale Liciniana in Palermo lacks a title page, but in a dedication gives the title "Inventione de toccate sopra la chitarra spagnuola." In fact, there are two dedications, one dated "Roma li 4°Novembre 1640," and the other "Venetia gli 20 Ottob 1649." The first dedication is clearly signed "Gion Paolo Foscarini." The musical content is identical with Li cinque libri, although the page numbers have been rather sloppily altered. This suggests that between 1640 and 1649 as

20 I am grateful to Robert Strizich for making available a film of this edition.
21 The 1649 edition was dedicated to Detio Roncalli who may have been the father of the guitarist Conte Lodovico Roncalli. Lodovico's opus one, Capricci Armonici, was published in Bergamo in 1692.
Del M. Ill. s'Oratio Abbaco Gentil Venonese
in Lode dell' Autore.
Non struoge, Invidia le Beate Menti ch' impassibili fece il gran Motore.
Ma cangiar veggi a si soavi Accenti l' azurro il cielo in livido colore.
many as four separate editions of Foscarini's "complete works" might have been published in Rome and Venice. It also suggests that by 1640, L'Academico Caliginoso felt confident enough to shed his anonymity.

The fifth book adds thirty-two pages of music to Foscarini's known guitar music and includes two "Sinfonia" for guitar and figured bass as well as the earliest known method for realizing figured bass on the guitar.

Foscarini is mentioned by name by an eminent seventeenth-century guitarist other than Granata. Gaspar Sanz refers to him in the celebrated *Instrucción de Música Sobre la Guitarra Española* (1674). Although a Spaniard, Sanz is reported to have studied the guitar in Italy, and he mentions several Italian guitarists in his method including Domenico Pellegrini, Giovanni Battista Granata, Francisco Corbetta (whom he singles out as the greatest guitarist of his day), and "Foscarini (que en sus Obras se intitula el Academico Caliginoso). . .".

Given the association of Foscarini with Rome, it is intriguing to speculate on the following comment by Sanz, who at least knew the composer by name:

> There are many ways of stringing, for those Masters in Rome only string the guitar with thin strings, without putting any bourdon on the fourth or fifth [course]. In Spain it is different, because some use two bourdons on the fourth, the others on the fifth, and at least, ordinarily, one on each course.

Who were these "Masters in Rome"? As Foscarini's name is mentioned by Sanz, might he not have been one of them? In the *Instrucción*, Sanz specifically advises his readers to follow the rules of Lelio Colista, a Roman who was born in the Eternal City in 1629 and died there in 1680. Like Foscarini, Colista was a performer on the lute and theorbo as well as the guitar. Sanz' comments are worth considering because of the important insights they offer on


23 For many years, this reference, which was noted by Eitner, was the standard documented association between the names Foscarini and "L'Academico Caliginoso."

24 *En el encordar ay variedad, porque en Roma aquellos Maestros solo encuerdan la Guitarra con cuerdas delgadas, sin poner ningún bordón, ni en quarta, ni en quinta. En España es al contrario; pues algunos usan de dos bordones en la quarta, y otros dos en la quinta, y a los menos, como de ordinario, uno en cada orden.*

performance practice and the basic tuning of the guitar.\textsuperscript{26} Evidently, Sanz learned in Italy a manner of tuning the guitar that had been mentioned by Mersenne in 1636:\textsuperscript{27}

\begin{center}
\includegraphics[width=0.5\textwidth]{tuning.png}
\end{center}

Sanz remarks that this tuning is best for playing in “el modo moderno,” presumably meaning \textit{punteado}, a style of playing that in Italy can be traced back to Foscarini. Nevertheless, Foscarini’s impassioned musical style does not seem to sound its best using the “Sanz” tuning. Furthermore, in the guitar instructions written for \textit{Il primo, secondo, e terzo libro} (and reprinted in \textit{Li cinque libri}), Foscarini gives no indication of such a tuning, remarking only:

And playing on the fifth fret, the pitch that is made on that string at that fret, ought to be the same pitch as the fourth string open.
Similarly, the pitch on the fourth string at the fifth fret, ought to be the third open.\textsuperscript{28}

Foscarini was probably the first baroque guitar composer to write for more than a dilettante audience. Beginning with the introduction of his “nuova inventione,” individual plucked notes stand side by side with the previous \textit{alfabeto} chords. However, even Foscarini’s alphabet was rather more developed than that of his predecessors. Through the use of \textit{barres}, each basic chord was adapted so that it could be played up and down the neck in any key.\textsuperscript{29} Furthermore, Foscarini established an \textit{alfabeto dissonante} in which one note of the chord was left unresolved from the previous chord in the nature of a suspension. In the lute-like pieces, the entire composition was to be played \textit{punteato}; there are no strummed chords at all. With Foscarini, Sanseverino’s admonition to play only


\textsuperscript{28}E \textit{toccandola poi al quinto tasto, la voce, che farà la detta quinta corda nel detto tasto, la medesima voce dovrà fare la quarta corda vacante. Similmente la voce, che farà la quarta corda al quinto tasto, dovrà fare la terza vacante. . . .

\textsuperscript{29}Foscarini did not, in fact, “invent” the idea of “shifted” chords. Both Giovanni Colonna’s \textit{Il terzo libro} (Milan, 1623) and Pietro Millioni’s \textit{Primo, secondo et terzo libro} (Rome, 1627) include seven chords on which the position can be shifted.
with “full strokes” clearly had fallen on deaf ears!

Deciphering Foscarini’s music is often frustrating to the modern musician anxious to explore his compositions. The prints are filled with errors, most of which were not corrected in later editions. Some of the rhythms are extremely ambiguous and many of the pieces contain no bar lines. Part of the difficulty also lies in the fact that, worthy of a composer whose pen name was “Il Furioso,” much of Foscarini’s music is in a highly rhetorical toccata-like style. Use of rubato is often required, and the performer always needs to play with expression.

The music written in mixed tablature often displays one of the baroque guitar’s most interesting musical effects. By contrasting sections using the full chordal rasgueado sound with sections written in a more delicate punteado texture, it is possible to treat the guitar like a miniature concerto. Something of this effect can be seen in this short section from a short piece (left untitled by Foscarini) with its slurred melody and punctuated chords:

Ex. 1.

In the tablature, the large letters stand for the chords that are explained in an alfabeto chart at the beginning of the book. “C” stands for a D major chord and “P” for an F minor chord. No distinction is made between inversions. The number “3” above the first “P” means that that chord is to be transposed up to the third fret making it a G minor chord. The first four numbers indicate individual notes to be plucked separately by the index finger of the right hand in the direction of the following stroke line. The stroke lines below the alfabeto symbols tell the performer the direction in which the chord is to be strummed. The curved lines, of course, indicate slurs. The arrows in Example II indicate the direction of the strokes.
In the fifth book, the majority of the pieces are written in *punteado* style and there is less use of mixed tablature than in the earlier books. The majority of the pieces are dances, including several examples of the allemande and the corrente. Often the dances are coupled together by a common key or theme. Preceded by a prelude or a toccata, they form miniature suites of three or four movements; for example, the “Tocatta, allemanda e sarabanda sopra l’D” on page 124.

Foscarini makes effective use of free counterpoint as in the attractive three-part texture found in the lovely unmeasured prelude on page 119.

This same prelude demonstrates Foscarini’s love for strings of suspensions.

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30 The “D” refers to the * alfabeto* letter D; that is, A Minor.
Foscarini adapts all of the contrapuntal trappings of the lute in some of his music, but nowhere with such sophistication as in the fantasia on page 112. Although generally in C Minor, the tonal centers are often obscure. The fact that the music contains several obvious misprints makes the piece difficult to transcribe. The opening, however, is clear.

Another lutenistic technique that Foscarini adapts to the guitar is the art of division seen in Example VI from “Redopio della Corente” on page 121. This is an elaboration of a corente found on page 60.
After cadencing the previous section on an F Major chord, Foscarini immediately contrasts the texture with a *rasgueado* passage, contrasting the sections still further by an abrupt shift of tonal center.

Ex. 7.

![Musical notation](image1)

Such harmonic surprises are not unusual in Foscarini's music. The "Allemanda" on page 106 contains a third relationship worthy of Schubert.

Ex. 8.

![Musical notation](image2)

The use of modulation, as with many of the elements in the composer's style, may be regarded as a variation technique. From his earliest music, Foscarini demonstrates a deep interest in all aspects of variation. Never does he repeat a phrase, but rings the changes by all means available to him: rhythmic variation, texture contrast, sequence, harmonic contrast, and shift of register.

Throughout his music, Foscarini displays a cosmopolitan mind willing to draw on several traditions to expand the musical vocabulary of his instrument. From Italian guitarists before him, he adopts the *rasgueado* tradition, adding to the flexibility of the *alfabeto* notation by devising a new *alfabeto dissonante*. He also utilizes all the standard guitar forms of his contemporaries, including
the *ciacona*, *folia*, *zarabanda*, and *passacaglia*. From lute practice, he adopts the *punteado* technique with its use of counterpoint and diminution.

Foscarini's dramatic and emotional style shows him to have been deeply influenced by Italian *stile concitato*. He also appears to have been influenced by French musical tastes. In the preface to book three, he remarks that slurs (*strascini*) were at that time used by French lutenists. He further states that the dances, including *correnti*, *balletti*, and *gagliarde*, must be played quietly in the French style.

It is not my purpose here to undertake an analysis of "Il Furioso's" rather enigmatic musical style—far better for the interested reader to investigate the music for himself. Instead, I have attempted only to place one composer among many in a kind of historical context. There is no doubt that the musical practices traceable to Foscarini became accepted practice to later composers including Giovanni Battista Granada and Francesco Corbetta. By the 1640's, Corbetta moved from Italy, taking with him the Italian guitar tradition. In France these traditions continued to develop, reaching a climax in the music of another guitarist and theorboist, Robert de Visée.

Foscarini was a pioneer; his musical style was idiomatically suited to the unique tonal possibilities of a now obsolete instrument. Although some of the composer's music has been successfully transcribed for the modern guitar, it is unlikely that we shall witness a Foscarini "revival." Yet, equipped with a baroque guitar, the inquisitive modern performer has the opportunity of opening the doors into an unusual and once-flourishing musical world—that of the *chitara spagnola*.

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32 Foscarini's association with France is heightened by the publication of a theoretical treatise, *Dell'armonia del mondo*, in Paris in 1647. This discourse, Foscarini's only publication to carry the composer's true name on its title page, appears to be an Italian version of Johannes Kepler's *Harmonices mundi*. It is doubtful, however, that a study of this work would add to our knowledge of the composer.

LUTE MUSIC: TABLATURES, TEXTURES AND TRANSCRIPTIONS

By Thomas F. Heck

Editors of recently published transcriptions of lute music and reviewers of the same met face to face in Chicago on November 10, 1973, for a Study Session sponsored by the American Musicological Society. As organizer and chairman of that encounter, I have prepared this summary of what transpired, together with my personal reflections on the proceedings.

The encounter began to take shape in May 1973, when a questionnaire containing three "editorial policy" questions and three examples of untranscribed Italian lute tablature (a saltarello, a fantasia, and an intabulation) was sent to the participants. These persons, whose names appear below, responded in writing to the questionnaire. Their responses formed the basis of the discussion at the symposium.

Ruggero CHIESA (in absentia), Milan, Italy, editor of the complete works of Francesco da Milano (single-staff transcription) and many other transcriptions

Peter DANNER, Palo Alto, California, archivist of the Lute Society of America, music editor, and reviewer

Thomas F. HECK, Cleveland, Ohio, archivist of the Guitar Foundation of America, music editor, and reviewer

Charles G. JACOBS, North Bergen, New Jersey, editor of El Maestro by Luis Milan

Masakata KANAZAWA (in absentia), Tokyo, Japan, editor of the complete works of Anthony Holborne

Carol MacCLINTOCK, Bloomington, Indiana, editor of the Bottegari Lutebook

Arthur J. NESS, Los Angeles, California, editor of the complete works of Francesco da Milano (double-staff transcription)

Robert STRIZICH (in absentia), San Francisco, California, editor of the complete works of Robert de Visée
The most interesting responses resulted from the first two questions. These are cited verbatim below. The third question dealt with a particular problem in fingering. Since it did not provoke significant discussion, it has been deleted from this report. The considered response of the participants have been arranged by the chair so as to describe the spectrum of scholarly viewpoints that existed at the time of the meeting. This spectrum would not necessarily result today, were the same questions asked of the same participants.

QUESTION I

Subsequent to the “Luth et sa musique” colloquium of 1958 (v. Podolski article), the scholarly community has been in general agreement that lute transcriptions should be “interpretive” (not literal, as Schrade had recommended earlier) and appear in keyboard notation with parallel tablature. Yet a persistent and respectable minority still transcribe for classic guitar. What is your position today, in brief, with respect to scholarly editions? Can transcriptions on one staff (for guitar) be satisfactory? Are two-staff (keyboard) transcriptions always preferable?

ANSWERS

Jacobs—It seems to me that, unless the music is simple in character, single-staff transcriptions cannot be satisfactory. In my opinion, bi-stave transcription is preferable. The latter does not necessarily always imply keyboard music, as a bi-stave score is used for harp music. (I am, by the way, opposed to the inclusion of “parallel” or any tablature in the body of music of an edition.)

MacClintock—Scholarly editions should present an interpretive transcription by all means, with parallel tablature if possible. By “interpretive” I mean a transcription that reconstructs the original insofar as possible without adding anything not in the tablature. Two-staff transcriptions are preferable; one-staff transcriptions are not satisfactory unless the piece consists of a single line for the most part, for example, a tastar de corde or ricercar.

Kanazawa—My position is that lute transcriptions should be “interpretive.” I personally prefer transcribing lute tablature into keyboard notation, because it is easier to show the polyphonic texture, but I would not eliminate other possibilities. For example, if a guitarist accustomed to play only on guitar notation wants to try some lute music, I will not hesitate in preparing the transcription one staff. Even in that case, however, I will try to indicate the polyphonic texture as clearly as possible if the music requires it.

Heck—Both are acceptable in principle. I favor single-staff (guitar) transcriptions for the purely instrumental idiom (dances, etc.) when one is dealing with a 6-course instrument, as in Example 1, below. Double-staff transcriptions are appropriate for intabulations, as in Example 3. Improvisatory pieces (like Example 2) may go either way; however, I would regard an attempt at consistent
3- or 4-part voice leading in free improvisatory textures like this is inappropriate, since lute fantasias were not often cast in the strict polyphonic style. Parallel tablature is a desirable luxury; associated tablature (in an appendix) is indispensable.

Ness—Most dance music (and some of the intabulations and ricercars published by Petrucci) may be placed easily on a single staff; other lute music usually requires two staves and becomes almost impossible to decipher when crammed onto a single staff. Since many players now read from tablature and since it may be considered part of the editor's critical apparatus, an ideal edition of lute music will include the tablature.

Danner—"Transcription" here has two meanings: from one notational system to another and from one instrument to another. Editions must never be divorced from music's purpose: performance. The guitar is closer to the spirit of the Renaissance lute than keyboard. Unless the texture is very thick, a single staff can express the linear meaning of the music. Insistence on keyboard transcriptions is based more on fashion than necessity. Two-staff notation usually implies two separate tactile functions as in piano music where each hand is notated separately. On the lute, two hands are normally required to perform a single musical sound. Thus, a two-staff transcription may actually give a misleading impression of the performing procedure. In any event, tablature should always be provided.

Strizich—A scholarly edition should reach as many people as possible. A guitar transcription plus tablature is perhaps the best way to reach all three groups of people interested in lute music: lutenists, guitarists, and musicologists. A keyboard transcription is of use only to the musicologist, whereas an accurate guitar transcription serves both guitarist and scholar. Tablature must be included, since this is what the lutenist will use; however, it should be in a separate section. Parallel tablature only provides more page-turns for the performer and does not facilitate comparison to an appreciably greater extent.

Chiesa—I think that transcription on one staff (for guitar) is preferable for two principal reasons: to favor the great majority of lute players who, at least in Europe, come from the study of the guitar (thus interesting at the same time all the guitarists) and to maintain the musical notation only on one system (as the tablature).

QUESTION II

Should a modern editor transcribe lute tablature at the level of notation, as a theoretical exercise, or should he try to project through his transcription the sound that would be heard if an expert lutenist played the tablature? In other words, should the peculiarities of the lute and its playing technique be reflected in the scholarly transcription?

ANSWERS

Chiesa—The transcription ought to be effected as a theoretical exercise, realizing
the musical notation in absolute. Then the player is allowed to modify it, considering his interpretative analysis and his instrumental abilities.

*Jacobs*—In my opinion the logic (that is, sense) of the music supersedes all considerations, including those of limitations of the instrument and its technique. The composer's imagination is not necessarily limited by the limitations of his instrument (or an instrument). In a work, however, which obviously is intended to exploit lutenistic peculiarities, one would express them in a transcription.

*MacClintock*—I do not think it generally advisable to attempt to project the sound that would be heard through the transcription; it would be extremely difficult to do and also make for an untidy transcription because of so many rests needed. Also, such a transcription would not be particularly meaningful to the non-lutenist user. . . . I think Podolski's proposal for musical-technical transcription goes too far in suggesting rests at each change of position. . . . It seems to me that it is better just to omit rests when voice leading is clear and hold to allowable note lengths (even though it may appear a voice is temporarily dropping out), and to use rests only when (1) they are indicated in the tablature and (2) when they are absolutely needed to clarify voice leadings.

*Kanazawa*—To me, a modern transcription as a theoretical exercise is of little use. I think a modern editor should project his interpretation of the music through his transcription. If you want to show the original exactly, the only way is to reproduce the tablature. The best solution, of course, is to present both the tablature and the transcription.

*Ness*—If the tablature is provided, it might be preferable to show the contrapuntal basis for the intabulation—to the extent that the transcription does not thereby misrepresent completely the sounds produced on the lute. A compromise is possible and advisable.

*Strizich*—Even if an editor is not a lutenist, he should learn about the capabilities of the instrument and try to take them into account. A transcription must be "interpretive," but should reflect the way the music would sound if played by an expert performer; it should *not* be a theoretical exercise. Modern keyboard transcriptions often "overdo" voice-leading and thereby actually present a distorted picture of the music.

*Danner*—The transcription should reflect the peculiarities of the lute (not add anything), but not to the point of obstructing legibility. Staff notation is not a description of the music, but a prescription of a procedure from which comes the music.

*Heck*—In principle I would recommend transcribing the sound. The editor must use his judgment in the matter of voice-leading and the duration of undamped strings. But notes that would be dampened in the course of performance on the lute should be reflected in the transcription by a skillful and tasteful use of rests. The page need not be unduly cluttered with rests.
Group Transcription Exercises

The accompanying transcriptions are arranged according to overall similarity. Thus in Example 1, versions A through D are for two staves, the rest for one staff. The tablature excerpts were deliberately chosen to present different musical textures, ranging from the purely instrumental *saltarello* by Balletti to the corrupt (unedited) four-part chanson intabulation by Borrono. Each participant received a transcription of the Willaert vocal model (edited by Albert Seay) to influence them, to the extent that they wished to be influenced, in matters of rhythm, rests, barring, voice-leading, and *musica ficta*. Since no participant was given an entire piece, but only the tablature excerpt, we must assume that all transcriptions reproduced here are tentative. It would be inappropriate to criticize them as one might a definitive edition.

Commentary on the Transcriptions

In proposing a title for this symposium, the words “Tablatures, Textures, and Transcriptions” were carefully selected to call attention to what I believe is, consciously or unconsciously, an unavoidable step in the dynamic of transcription: textural analysis. One cannot avoid using texture-defining notational symbols (note stems and their directions, beams, rests) in transcribing tablature. The accompanying examples show that the possibilities of representing a given sequence of simultaneous and successive tones on a musical staff are almost limitless. As an illustration of how textural analysis works and how certain transcriptions carry with them implicit views on texture, let me offer the following commentary on each musical example.

Textural analysis. (See Example 1.) This saltarello by Balletti is based on a well-known chord formula—the *passemezzo moderno* (I-IV-I-V-I-IV-I-V-I), alternately called the mode *per B quadro*. The chords are strung together by a melodic line in the middle range that could be interpreted as an embellishment of one of the notes of each chord. This modest “inner voice” is the only horizontal element in a passage that otherwise is dominated by regularly recurring vertical, or chordal, elements.

1 The following commentary is my own; my opinions are certainly subject to challenge in subsequent issues of this *Journal*.

Ex. 1. From the "saltarello primo" (No. 2) of the Intabolatura de lauto di Barnardino/Balletti di varie sorte de Balli . . . Libro primo. Venice, Antonio Gardane, 1554.
Observations. (1) All transcribers indicate, by placing at least some of the notes together on the same stem, that a chordal texture is present. All versions except C group the bottom two notes together as a musical “part” (not a “voice”) in this instrumental texture. (2) Versions A, D-E-F, H, and I indicate that a single melodic line begins in the “alto” range with the e (c# in guitar transcriptions) at the beginning of measure 1. (3) As a rhetorical question, one might ask: Why do versions B, G, and K notationally link the high g (e in guitar transcription) with the horizontal “event”—the melody in the “alto” register? And why does version C render a whole triad as part of the horizontal event?

Textural analysis. (See Example 2.) While some scholars view this fantasia as having a purely contrapuntal texture, I view it as being in a free instrumental idiom, quasi-chordal at times, quasi-contrapuntal at other times. Some chords have four notes, some have three. There are snippets of melody discernible at various places, mostly through audible suspensions. The ascending motive in measures 3-5, which Professor Ness labeled polyphony in the fauxbourdon style (at the Study Session), could also be viewed as merely idiomatic chordal play on the instrument. It sounds to my ear, and feels to my fingers, more chordal than contrapuntal. While I respect the fauxbourdon interpretation on historical grounds, I am not prepared to accept the notion that sixteenth-century lutenists thought only in terms of counterpoint. The lute fantasia was often a texturally mixed genre, not unlike the keyboard toccata or the tastar de corde.3

Observations. (1) All versions except B and C place certain simultaneities of the first measure together on common stems, thereby implying some chordal texture in that passage. (2) Versions E, F, G, and H indicate a chord stream in measures 3 to 5 by the fact that they arrange more than one note on a single stem. (3) Versions A, B, C, and D imply a homophonic (“fauxbourdon”) texture for the same passage. (4) Only versions A and E propose a sustained Bb in the middle of the penultimate measure (bass range); yet a lutenist might well sustain that bass note in performance. (5) On the other hand, all versions except E and H tie over or suspend the “soprano” note (Bb) at the end of the penultimate measure. Yet a lutenist would not normally be able to make that note sound as a suspension. (6) As a rhetorical question: Why is there a discrepancy in barring

3See my review of the Jacobs edition of El Maestro in The Journal of the American Musicological Society, Vol. XXV (1972), pp. 487-90, for further remarks on the subject of texture in the lute fantasia. This review provided the initial impetus that led to the convening of the Chicago Study Session.
Ex. 2. From the “fantasia” on folio C 4 of Intabolatura de lauto di Francesco da Milano ... libri secondo... Venice, Antonio Gardane, 1546.
Ex. 3. "Canzon francese Ala venture," from La intabolatura de lauto dell' eccellente P. Paulo Borrono da Milano... Venice, G. Scotto, 1563.

* A♭ in place of F in the source.
- Kanasev

* Source error: A♭ provided, in addition to notes above.
- Jacob

* Bitter: reopondant originally inserted in nere.
- MacCintock

* Source gives A♭ in bass.
- Heck, #1

* Measure corrected.
- Chiessa

* All respondents editorially inserted A♭ here, correcting the faulty source.
this fantasia (compare versions A and B with the others)?

**Textual analysis.** (See Example 3.) A given intabulation may be approached in several ways. These approaches might be viewed as responses, in so many words, to the following questions: (1) Is the intabulation an instrumental piece, pure and simple? (2) Is it essentially an instrumental piece, although based on a vocal model? (3) Is it a *free instrumental transcription* of a vocal piece? Or (4) is it an intabulated and ornamented lute *reduction* of a vocal model? As the accompanying transcriptions reveal, the participants were quite divided on how they viewed the excerpt.

**Observations.** (1) By correcting the tablature excerpt in the light of the vocal model (at the point indicated by the star), all participants imply that the intabulation is *not* merely an instrumental piece on its own terms. It is accountable in some way to its vocal model. Hence the answer to Question 1 (above) is unanimously a negative. (2) Versions A, B, C, and K preserve the crossing of parts in Measure 3 of the original chanson, thereby implying that the lute excerpt is essentially an intabulated *reduction* of the chanson (See Question 4). Version A goes a step further by delaying the alto entrance in conformity with the vocal model. (3) Versions D, E, and F preserve four parts, but neglect the voice crossing in Measure 3 of the chanson. This would imply that the editors of D, E, and F view the intabulation, consciously or unconsciously, as a *free* instrumental transcription of the chanson (*à la* Question 3). (4) Versions G, H, I, and K, by not preserving four separate voices visually, project the intabulation as an idiomatic instrumental version of the chanson (*à la* Question 2). (5) A close look at the tablature convinces this writer that the intabulation is *not* a transcription or a reduction in a strict sense, since it begins with a three-note chord (the vocal version begins with two notes) and it causes the alto voice to enter too early. Nor is it merely an instrumentally-conceived piece, because of its obvious attempt to parallel the vocal model. This intabulation situates itself somewhere between the anti-poles of strict reduction and loose paraphrase.

If the Chicago Symposium is any indication, it appears that scholars of lute music are progressively making explicit the implicit step that an editor takes in selecting a certain musical calligraphy, with its inevitable textural implications, for a given transcription. The critical transcriber of lute music henceforth may well add to the preface of his editions a detailed textural analysis of each genre represented, in addition to the usual source study, *corrigenda,*

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concordances, and so forth. To paraphrase Charles Reich in *The Greening of America*, lute transcriptions increasingly will be done (and redone) by editors in Consciousness III:

Consciousness I—Pitch. This kind of transcription, exemplified by Schrade's *El Maestro* (Leipzig, 1927), is obsolete now. All editors today go beyond the mere notation of pitch equivalents.

Consciousness II—Duration. Interpretive transcriptions with respect to duration are very much in vogue. There seems to be a consensus, however, to make duration indications as sparse and simple as possible. Many scholars now caution against overdoing durations and resultant voice-leadings.

Consciousness III—Texture. Now more than ever, editors are revealing their awareness of the nuances available to them as far as staff notation is concerned. Many of today's best thinkers seem reluctant to mold their transcriptions automatically into the likeness of three- or four-voice counterpoint exercises. Free voicing increasingly is becoming the norm for transcriptions of idiomatic lute music.

The participants at this Symposium deserve great credit and sincere thanks for their willingness to come together and dialogue publicly on issues directly related to their past and future scholarship. It would be appropriate, in concluding, to quote some of their finest thoughts on the subject of transcription—thoughts not specifically related to the foregoing questions, but rather to the general problem of transcription. I thank them for their permission to cite passages of private correspondence. These parting shots will be followed by Albert Seay's final word on the *musica ficta* problem in Example 3.

MacClintock—In regard to "interpretive" transcriptions, I would say there is a very great danger that the transcriber will go too far in reconstructing a piece (as Gombosi did in the Capirola lutebook). It is so tempting to work out a nice neat 3- or 4-part piece by assuming that certain notes should be interpreted as being a unison in two voices, by lengthening values overly much, and by making voices lead where the transcriber wants them to.

Kanazawa—To me a transcription is merely one possible interpretation of the original tablature... Sometimes I even come up with two different interpretations by myself of the same music.

[Addendum from letter of 11 May 1974:] I might mention one thing... I do not object to a guitar transcription to some of the pieces. The reason I transcribed all the examples you gave me with two staves is that I felt I should be consistent within a given edition. I see my friend Ness has made guitar transcriptions to some of the examples, and I am perfectly in agreement with him.
Danner—[Letter of 4 June 1974:] I would also second Kanazawa’s observation that a transcription is only one possible interpretation of the original tablature.

Chiesa—The idea of submitting the same series of questions to the various participants seems to me excellent... I think, however, that it will be difficult to conform all the judgments to a unique direction, and that several solutions will be necessarily accepted also in future editions.

The Musica Ficta Problem in Example 3

Professor Albert Seay, whose transcription of Willaert’s “A l'aventure” was sent to the participants in the initial questionnaire, was present at the Study Session but was unable for lack of time to formulate fully his reaction to the discrepancy that exists between his version of the ficta in the Willaert and that intabulated by Borrono. He sends the following communication:

The problem for the singer versus the instrumentalist in the performance of a work is essentially one of training. The singer has been taught to work within the hexachord system, to add musica ficta in terms of certain rules of solmization which, while not always positive enough to give the same result, do have a certain coherence. The instrumentalist on the other hand is more concerned with the translation of symbols into sounds; he has little or no choice in the results and ficta is written out for him. The area of ficta for the singer is divided into two parts, the first that of necessity: the avoidance of the tritone, “fa sopra la,” and so on, the second of beauty, where no prescriptions seem to have been of moment. The accidentals given in my transcription come from application of the rules of solmization and mutation, with the basic understanding that the underlying mode is transposed Dorian. Here the normal presumption for the singer would seem to be to require emphasis on the flat side, that is, on the introduction of Eb as one of the primary added elements of ficta.

I have never been certain that transcriptions of vocal works show what went on in those vocal works in regard to unwritten accidentals. This comes in the main from my experience with the keyboard chansons of Attaingnant, where the transcriptions are often at variance with their vocal originals, not only in accidentals, but also in rhythmic relationships. The situation seems quite analogous to me with that of the swing bands of the '30s and '40s in our own century, where the basic material was that and nothing more. All sorts of changes were possible and most of them went rather far from the original. A comparison of arrangements of “Sleepy Time Gal” by Ellington, Lunceford, Dorsey and Goodman would all give the same degree of difference as one sees in transcriptions made in the sixteenth century. The original was a blueprint, to be handled as the performer saw fit.

30 June 1974
SIXTEENTH AND SEVENTEENTH CENTURY LUTE-MAKING

By Robert Lundberg

In the summer of 1971, my wife, Ellen, and I traveled to Europe with a case of specially-constructed tools to study extant sixteenth and seventeenth-century lutes. We took tracings, photographs and complete measurements of the lutes from this period in the collections of the Germanisches Nationalmuseum, Nuremberg, West Germany; the Kunsthistorisches Museum in Vienna, Austria; and at the Royal Conservatory of Music in Brussels, Belgium. At the Victoria and Albert Museum and the Royal College of Music in London, England, we measured those sixteenth- and seventeenth-century lutes that the curators were willing to make available to us. We also examined instruments at Fenton House in London, the Gemeente Museum in The Hague, and in various private collections. In addition, we made careful study, sometimes without complete measurements, of as many eighteenth-century lutes as time permitted. All told, we studied over seventy early instruments. On forty-six of these, our measurements are complete enough to make exact copies of the instruments.

The precise number of extant sixteenth- and seventeenth-century lutes is unknown, but from various published references, and from our own knowledge, there are at least 200. We suspect that local museums, individuals, and eastern European collections may hold half that number again. Thus, our sample might be fairly small. However, we have confidence in the validity of our conclusions for the following reasons: Our choice of instruments was not made to prove a thesis; we examined every lute we encountered from our chosen period, excluding only those few obvious forgeries that were betrayed by their use of anachronistic materials; most important, at the Kunsthistorisches Museum, we found lutes from several very fine and old collections, including the Catajo, which was founded in the sixteenth century. This article summarizes our four months of research and includes some discussion of the application of historical principles to modern lute-making.

It is important for the reader to understand that extant lutes
Today are not necessarily in their original condition. Many lutes were re-necked to enlarge their compass; some were even converted into theorbos and chitarrones. Those that were re-necked have new pegs, pegboxes, necks, fingerboards, nuts, and bridges. The sound-producing parts—belly, barring and bowl—are original, with occasional modifications of the barring to help the belly withstand the greater tensions.

Thus we find two primary aspects of lute construction: the sound-producing parts that determine tone quality will be discussed first; a summary of the mechanical parts that relate to playability will follow.

As the single most important component for the production of sound, the belly will be considered first. Most of the bellies we saw were two-piece, with the fine grain in the center. Occasionally we saw a three-piece and even a four-piece top. Many of the two-piece bellies had "wings," pieces added on at the points of greatest width. Although it is difficult to be certain, we think that most of these are originals rather than repairs, because of the condition of the edge and binding. Luthiers have been adding wings for centuries to prevent the waste of fine woods.

The thickness of lute bellies is a subject of much interest that has not been detailed before. For simplicity here, the thickness measurements of each belly have been combined to give an average for that belly. Therefore, our measurements of belly thickness are to be understood as means that do not include the areas near the top and bottom and around the rosette. These averages should be considered "working" dimensions, that is, measurements toward which one works, but which may in reality vary to a greater or lesser degree.

The thicknesses of the bellies themselves varied from 1.0 mm. to 1.9 mm. It was interesting to note that the overall size of the belly did not affect the thickness very much. For instance, the Wendelin Tieffenbrucker descant lute No. C39 in Vienna, belly size 218 mm. by 325.5 mm., is 1.18 mm. thick, while the huge Buechenberg chitarrone, No. 1510 in Brussels, belly size 450 mm. by 705 mm., was 1.70 mm. thick. This is a difference of only half a millimeter.

Since it is difficult to give an average belly thickness for many lutes, we will list those of a few that we thought to have original bellies (see Figure 1). Again, we must point out that these measurements are an average. The bellies were 0.3 mm. to 0.5 mm. thinner near the rosette for ease in cutting and approximately 0.3 mm. thicker near the top block and from around the bridge to the bottom of the instrument—areas prone to cracking.

Spruce and fir have both been used for lute bellies. However,
Figure 1.

<table>
<thead>
<tr>
<th>Authors' Number</th>
<th>Maker</th>
<th>Date</th>
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<tr>
<td>67</td>
<td>Giovanne Hieber</td>
<td>17th C.</td>
</tr>
<tr>
<td>37</td>
<td>Hans Frei</td>
<td>ca. 1500</td>
</tr>
<tr>
<td>27</td>
<td>Martin Hoffmann</td>
<td>1692</td>
</tr>
<tr>
<td>36</td>
<td>Laux Maller</td>
<td>ca. 1520</td>
</tr>
<tr>
<td>62</td>
<td>Vendelio Venere</td>
<td>1619</td>
</tr>
<tr>
<td>52</td>
<td>Vendelinus Tieffenbrucker</td>
<td>ca. 1600</td>
</tr>
<tr>
<td>80</td>
<td>Magno Graill</td>
<td>1626</td>
</tr>
<tr>
<td>Museum Location</td>
<td>Museum Number</td>
<td>Belly width &amp; Length in mm's.</td>
</tr>
<tr>
<td>-----------------</td>
<td>---------------</td>
<td>-------------------------------</td>
</tr>
<tr>
<td>Brussels</td>
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</tr>
<tr>
<td>Vienna</td>
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</tr>
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<td>Nuremberg</td>
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<td>authors' possession</td>
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positive identification of the species is impossible by field examination. A recent paper by Scott O'Dell gives several examples of woods long thought by many authorities to be particular species but which he found, upon laboratory examination, to be completely different.¹

Size and placement of the rosettes varied considerably. In many cases, it appeared that the rosette was positioned lower on the belly to balance a fuller shape. In these cases, the geometrical layout of barring would be in divisions above and below the rose. The rosette position would be predetermined when a maker used a barring layout based on the division of the belly into equal parts.²

The sizes of most rosettes seemed independent of belly design. We measured rosettes of the same diameter on instruments that were much different in shape and size. Occasionally, a border of cut-out notches or other decoration enlarged the rosette for use on a larger instrument.³ This use of a border might indicate a reluctance to make a new pattern or to enlarge a current design, thereby creating larger open spaces and perhaps weakening the belly overmuch. The following rosette sizes include the decorative border and correspond to the authors’ catalogue numbers in Figure 1: #27 — 75 mm., #36 — 87 mm., #62 — 116 mm., #67 — 91 mm.

Many sixteenth- and seventeenth-century lutes did not use bindings. Those that we found were of two types. Lutes made in Italy or in the Italian style generally had what we call half-bindings: These are 2 mm. to 3 mm. wide strips of binding running around the perimeter of the lute belly, set into the belly one-half their thickness (see Figure 2). On some lutes, an external strip continued where the end-clasp ended; this extended around the belly to the neck. In these cases, the half-binding covered the top of this strip also (see Figure 3). In none of the seventy-odd lutes examined did we encounter a large, guitar-type binding.

The second type of binding we found was a “lace”; that is, a piece of parchment, paper, lace, or the like that was glued around the edge of the belly. The lace generally covered the outside 5 mm. of the belly and 5 mm. of the bowl (see Figure 4).

¹Scott O'Dell, “Identification of Wood Used in the Construction of 17th and 18th Century Keyboard Instruments,” a typescript kindly lent us by the author. An interesting identification made by Mr. O'Dell was that the sound boards of seventeenth-century Italian harpsichords, spinets, and virginals were of fir (Abies). Mr. O'Dell was able to obtain a modern sample of this species under the trade name "Yugoslavian pine."


³An example of this practice can be found in the gross octave bass lute, made in 1602 by Michael Harton, which is now No. MI 44 in the Germanisches Nationalmuseum, Nuremberg.
Barring layouts have been described adequately for the present in Friedemann Hellwig’s article. Some construction points, however, should be made. Most important, the bars were split from slab-grain wood—that is, with the grain parallel to the surface of the belly, rather than perpendicular to it as in modern stringed-instrument construction. This significantly reduces the modulus of elasticity of the bars. Another important detail is that the bars end exactly at the ribs. Most bars we measured were between 5 mm. and 7 mm. tall at the ribs and were firmly glued to them.

Bridge locations were somewhat difficult to determine because many old lutes have been re-bridged. Of the bridges that seemed original, or looked to be in the original positions, very few were located at 1/6th the belly length. More commonly, the bridge was in a position of about 1/5.5 the belly length, with some bridges as high as 1/5th and others, Harton’s for example, nearer 1/7th.

In all of the lute bellies we examined, the bars were laid out more or less in a geometrical pattern, but with slight irregularities. For instance, on the belly of a chitarraone by Pietro Railich, the distance between the first major bar and the second was about 8 mm. greater than from the second to the third, which in turn was 5 mm. more than any of the spacings of the other bars. A similar

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4 Hellwig, pp. 29-45.

5 The modulus of elasticity of wood is a measure of its rigidity. The modulus of elasticity in compression parallel to grain is 10 percent higher than perpendicular to it. A detailed study on wood strength values and related information may be found in the Agricultural Handbook No. 72, Wood Handbook, prepared by the Forest Products Laboratory for the U.S. Department of Agriculture, 1955.


7 Brussels, Royal Conservatory of Music, No.1569.
variation was observed in bellies by Buechenberg\textsuperscript{8} and Graill.\textsuperscript{9} Kurt Rottman’s recent article has pointed out a fact that we learned through experience: A perfectly equal spacing of bars tends to kill the fundamental tone of most notes and emphasize those of others, leaving much to be desired in the balance of tonal volume.\textsuperscript{10}

On none of the lutes we examined was the barring carefully placed or replaced (as it might have been), nor was extreme care taken to ensure uniform thickness or height of the bars.

The bridge design was as well-developed as that of the belly and barring. The most sophisticated detail was the slight taper to the treble, both in height and width, that appeared on extant lutes from the late sixteenth century on. Dr. Michael Kasha, who has conducted extensive experiments into the sound production of classical guitars, has recommended the use of a bridge that tapers to the treble. The total effect of tapering the bridge in modern lute construction is something that will have to be determined empirically. However, Dr. Kasha’s experimental data indicate that would favor the fundamental tone.\textsuperscript{11} The pleasing quality of a lute’s tone is due to the quantity and variety of the upper partials, but a strong fundamental is essential to a controlled decay of the tone.

That bridges of old lutes did not use a “bone” or “saddle” as modern guitar bridges do is common knowledge. It is therefore inexcusable that Edward Kottick or any other contemporary lute-maker with any intention of historical accuracy would recommend a bridge with a “bone.”\textsuperscript{12} Instead, early makers used three minor features that effectively stopped the string while allowing the characteristic tone quality that was desired. The first feature was the angle of the string holes which was downward 4 to 12°. In some cases, the top edge of the bridge rose slightly to the rear, increasing this downward effect. Next, the leading edge of the bridge was a “lip” made by cutting away the front surface, so that the upper edge protruded (see Figure 5). The third feature was the method of tying the strings to the bridge by looping each string under and over itself. This provided a stop, the hole’s angle

\textsuperscript{8}Brussels, Royal Conservatory of Music, No.1570.

\textsuperscript{9}Authors’ property, labeled “Magno Graill in Roma/1626.”


\textsuperscript{11}Dr. Michael Kasha, Director of the Institute of Molecular Biophysics, Florida State University, from a lecture given before the Portland Classical Guitar Society, 1972, in Portland, Oregon.

downward increased this stopping, and the slight lip on the front edge secured the string height.

The usual bridge was quite small, measuring 10 mm. to 16 mm. wide by 6.5 mm. to 10 mm. tall. We saw a variety of woods used. The most common were maple (sycamore), pear, and walnut. Very few of the lute bridges we examined were of ebony or palisander, which are now quite commonly used.

The bowls of the lutes we examined were generally of three basic shapes. The simple 9-, 11-, or 13-rib bowls were built in the early sixteenth, late seventeenth, and early eighteenth centuries. These were generally somewhat longish with the widest part of the shape near the bottom. These shells were constructed with a depth equal to one-half their width. There were some slight differences in this depth measurement on some bowls that made it either greater or less than one-half the width. These we attribute to age and repairs.

Second were the very sophisticated multi-rib shells built in the late sixteenth and early seventeenth centuries. These usually had 31 or 33 ribs, but the number varied from 23 up to as many as 41. These bellies were of a fuller shape, with the widest part further up the belly, somewhat above the bridge. With a few exceptions by Michael Harton, all were flattened on the back and somewhat shallow.

The third group includes the nearly-round lutes of 11 to 15 ribs that were mainly built in the early seventeenth century. This is the

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13 Perhaps some of the bridges identified as pearwood were actually mountain ash of the "sorbi" genera.
14 Lutes of this type were made by Laux Maller, Hans Frei, Joachim Tielke, Sebastian Schelle.
15 These lutes were made by the Tieffenbruckers, Vendello Venere, Michael Harton.
16 We have heard of lutes with up to 50 ribs, but 41 are the most we have seen.
17 Nuremberg, Germanisches Nationalmuseum, No. M144, a bass lute, and M156, a theorbo.
18 These lutes were made by Pietro Railich, Cristoffolo Hoch, Matteo Sellas.
least common of the three types.\textsuperscript{19}

The earliest sixteenth-century bowls were of the simple 9- or 11-rib variety. These bowls generally did not have a spacer between each rib, even when they were built of yew.\textsuperscript{20} The thickness of these wider ribs was around 1.5 mm. and did not vary much with the material used. Some materials were curly sycamore, curly maple, curly ash, birdseye maple, yew, ebony, black-dyed pearwood, and ivory. The typical thickness of the ribs in a curly-ash bowl by Laux Maller\textsuperscript{21} was 1.49 mm., tapering to 1.28 mm. at the front block. The joint-reinforcing strips of paper for this lute type were 10 mm. to 12 mm. wide.

The later seventeenth-century 9- and 11-rib bowls usually had spacers between the ribs, and the ribs were slightly thicker,\textsuperscript{22} being 2.0 mm. to 2.5 mm. Maple was commonly used for these bowls.

The multi-rib bowls that were wooden were of yew, with a few exceptions.\textsuperscript{23} The finest of the multi-rib lutes used shaded yew wood. The shaded yew is obtained by cutting ribs from yew logs so that they are one-half sap wood, which is creamy white, and one-half heart wood, which is red-brown and darkens considerably with age. It is very difficult to cut the narrow strips and keep the single grain separating the two colors exactly in the center of the rib. Success requires a tree of exceptionally straight growth\textsuperscript{24} and a skilled and patient luthier.

The multi-rib lutes we examined were built in three areas: Padua, Rome, and Venice. The lutes made in Venice and Rome can be distinguished from those of Paduan manufacture by the use of

\textsuperscript{19}The following percentages of extant lute shapes are based on our research. No conclusions as to the original distribution of the bowl shapes should be made. It is important to be aware, however, that the preserved instruments generally were those that were most highly valued. Of the lutes we examined, 60 percent were of the multi-rib type, 35 percent were the 9- or 11-rib type, and 5 percent were of the round type. Three-fourths of the extant lutes we examined were clearly made to be played; the remainder were heavily decorated and of ivory or ebony. Some of the wood shells that we noted as ebony may in fact be dyed pearwood. Of the players' instruments, 60 percent were of yew and 30 percent were maple.

\textsuperscript{20}Vienna, Kunsthistorisches Museum, No. C 32, lute by Laux Maller.

\textsuperscript{21}Nuremberg, Germanisches Nationalmuseum, no number available.

\textsuperscript{22}Nuremberg, Germanisches Nationalmuseum, MI 245, theorbo by Martin Hoffmann, 1692; Brussels, Royal Conservatory of Music, No. 1559, lute by J. C. Hoffmann, 1716.

\textsuperscript{23}The two exceptions we noted were a chitarrone by Wendelin Tiefenbrucker, 1611, Kunsthistorisches Museum in Vienna, No. C 47, and a chitarrone by Vendelio Venere, 1619, in Brussels, Royal Conservatory of Music, No. 1563.

\textsuperscript{24}Yew wood of the same fineness sought for lutes was also used in the making of long bows. Bowyers who cut their own wood have said that only one tree in a hundred will make a good bow. Because variances in straightness are not a prime factor in bow-making, it would take a considerably larger number of trees to find one straight enough for shaded lute ribs. The figure of 1 tree in 1,000 seems a reasonable one.
spacers, small strips of wood separating the ribs. Paduan instruments did not have spacers, whereas those from Venice and Rome used 1.5 mm.-wide black ones. The exceptions were bowls of non-shaded yew (the dark wood only); these had 1.5 mm.-wide white (maple) spacers. On all multi-rib lutes, the ribs were 1.0 mm. thick, usually thinning to 0.8 mm. near the neck. The reinforcing paper strips were 6 mm. to 10 mm. wide, depending on the width of the ribs.

The bowls of the round type—the third category—were constructed very much like those of 9 and 11 ribs. Materials used were curly maple, palisander, yew, and ivory. The main difference between these lutes and those of the first category is that in some cases we found slightly thinner ribs.

Capping strips were of the same material and construction as the bowls. The Paduan multi-rib bowls usually had caps of two strips, while those of Venetian or Roman make were usually of many (six to ten) strips, with a spacer at each joint. The capping strips were slightly thinner than the ribs at the top-bowl joint and tapered across their widths, decreasing to .7 mm. for multi-rib bowls and to 1 mm. to 1.5 mm. for the other lute types.

No original linings were seen on the lutes examined, although, in some cases, a very small (less than 5 mm. high) lining could have been present. On the instruments seen apart, there were no original linings, nor any traces thereof.

Old lutes used a “tail strip” (see photo), which was bent to shape and glued in place after the bowl was removed from the mold. These strips were 5 mm. to 6 mm. thick by 15 mm. to 25 mm. wide by 250 mm. to 300 mm. long. The tail strips were of vertical-grain spruce or fir. They were thickest near the center and tapered out to the ends, to a thickness of about 1 mm. Thus, the tail blocks used by some modern lute-makers are not historically accurate.

Because of the manner in which sixteenth- and seventeenth-century lutes were re-necked, most measurements for the front blocks must be considered carefully. The usual procedure in modifying a lute was to cut the front block down until it was of sufficient width for the intended neck. In some cases where the front block had been drastically cut down, a piece was added on behind.

25 None of the thirteen Paduan yew wood bowls that we examined had spacers between the ribs. The eleven shaded yew lutes made in Rome or Venice used black spacers. There were five non-shaded yew bowls; all of these, including the one built in Padua, had 1.5 mm. wide spacers.

26 The light and mirror arrangement used to check for linings would permit inspection only to within 5 mm. of the belly.
Front block of a chitarrone showing the nail used to fasten the neck to the block. #69 chitarrone, Matteo Buechenberg, Rome, 1610. Brussels, Conservatoire Royal de Musique de Bruxelles, Musée Instrumental, 1570.

Inside bottom view of a lute bowl showing the tail strip. Lute #68, Pietro Railich, Venice/Padua, circa 1650. Brussels, Conservatoire Royal de Musique de Bruxelles, Musée Instrumental, 1569.

Limewood or poplar were generally used for front blocks. We have never seen a spruce or coniferous wood so used. In the extant lutes examined, the grain ran perpendicular to the grain in the neck, with the belly gluing to the flat grain of the block. Figure 6 gives measurements for an extant 11-course (converted 10-course) front block.27 The width and height depended entirely on the lute’s shape, as did the amount the block extended beyond the neck-body joint. The angle of the joint between neck and block varied from 10° to 55°, measured from a perpendicular to the fingerboard. The joint between the neck and the front block was always a butt joint (exactly as shown in Figure 6) and was reinforced with at least one large, square nail (see photo).

Following the precedent of historical evidence, we will now

27 Vienna, Kunsthistorisches Museum, No. NE48, by Hanns Burkoltzer, 1596.
summarize the mechanical parts relating to playability. These parts are: the action—which includes the frets, string heights, and spacings—and the neck, fingerboard, nut, pegbox, and pegs.

The original frets on old lutes were of gut or silk tied around the neck and of hardwood glued to the belly, when there were belly frets.

The value of string-height measurements on extant lutes is a moot point for several reasons. String heights were generally adjusted at the nut to suit the touch of each player. The necks of most lutes we saw were somewhat warped, so measurements at the body might not be original. (Of those with fairly straight necks, the typical string height at the body was 5 mm.) The string height at the bridge is of importance, though, because of conjecture concerning the placement of the little finger of the right hand while playing. We noted at least two instances where an actual groove had been worn in the belly behind the bridge where the little finger rubbed up and down.28

The following list of string heights at the bridge may be of interest. All measurements are on the treble side and to the bottom of the string hole. The identifying numbers are the authors’ and correspond to those given in Figure 1: #27 - 8.5 mm. (13-course theorbo), #86 - 4 mm. (11-course), #67 - 6 mm. (7-course).

String spacings were easily varied to suit individual needs. Even so, the sampling of measurements at the bridge given in Figure 7 may be of interest. Spacings at the nut were all much closer than usually required by players today.

The only indication of original string sizes that we found was in the diameter of the string holes in the bridges. These tended to be quite large, the basses often exceeding 2 mm. Some consideration

Figure 7. String spacing at the bridge.
The slashes represent strings, with spaces between given in millimeters.

<table>
<thead>
<tr>
<th>Authors' Number</th>
<th>Treble side</th>
</tr>
</thead>
<tbody>
<tr>
<td>67 - 7-course lute</td>
<td>10 / 5 / 10 / 5 / 10 / 5 / 10 / 5 / 9 / 6 / 9 / 6 / 9 / 6 / 9 / 6 / 9 / 6</td>
</tr>
</tbody>
</table>

should be given, however, to the manner of drilling holes in the sixteenth and seventeenth centuries before any conclusions are drawn from such large holes.

The string lengths of most of the lutes we measured were considerably longer than on their modern counterparts. The 11-course instruments (most were 10-course conversions) had string lengths ranging from 67 cm. to 76 cm. The thirteen-course string lengths went up to 81.5 cm. Using the standard of eight frets to the body, with the bridge at approximately 1/6th the belly length, only three lutes of the seventy-eight examined would work with a mensur of exactly 63 cm. This indicates to us that the standard "choir" lute was not a 63 cm. mensur, but rather, shorter.

Sixteenth- and early seventeenth-century lute necks were generally made of a light wood, usually limewood or poplar, veneered with mahogany, ebony, or the like, although we occasionally saw necks of maple, sycamore, or beech. These latter were veneered or sometimes simply dyed black. A few were just varnished.

The veneers were applied in two ways. One method was in strips approximately 6 mm. wide and tapered that were fitted and glued singly to the neck. The other method used one piece, bent to fit the neck. In either case, the veneer was usually 1.0 mm. to 1.5 mm. thick.

Since the width and length of the neck depended on the string length, number of courses, and spacing of these strings, neck measurements are not really relevant alone and will therefore be
given with the thickness. One comment on neck widths must be made: Necks were generally narrower at the nut than most players find comfortable today. This could have been caused by the addition of courses to a narrow neck, or it could be that placing the courses closer together made playing on a longer string length easier.

Necks found on extant lutes were relatively thin. That of an 11-course lute by Vendelinus Venere, 1626, was 26 mm. at the body and 20 mm. at the nut. This thickness corresponded with widths of 102 mm. at the body and 76 mm. at the nut.

The thinnest neck at the nut was 11 mm., and the thickest 26 mm. At the body, the necks sometimes were quite thick, the thickest being 37 mm. Typical measurements for lutes re-necked in Baroque style were 17 mm. at the nut and 27 mm. at the body, including the fingerboard and a 1 mm. ebony neck veneer. The backs of those necks that were thick at the body generally sloped up quickly just before the joint. This allowed most of the neck to remain thinner than if a straight slope had been maintained.

Fingerboards were mainly of ebony with an occasional one of palisander, walnut, pear, or simply paint. The fingerboards were quite thin, 1.5 mm. at the belly, rising slightly to the nut where most were about 2 mm. to 2.5 mm. thick. A few were 1 mm. to 1.5 mm. at the nut, but looked as if someone had planed them down. This is the necessary adjustment to lower the string height at the body. The curved fingerboards on Baroque lutes were a constant 1.5 mm. thick, glued to a neck shaped to the required curvature. In no case did we find a fingerboard thicker than the 4 mm. thick Burkholtzer.

The nuts were generally of ivory. The widths of these nuts varied from 5 mm. to 11 mm.; most were 8 mm. to 10 mm. wide. Heights varied with the widths, so that the cross-section of the nut was as near to quarter-round as was practical. Sometimes this required the nut to be let into the upper end of the pegbox to a depth greater than the thickness of the fingerboard. Most nuts were not notched with deep grooves, but rather had slight scratches to direct the strings.

29 We should mention that all of the 11-course lutes looked as if they were 10-course instruments with the eleventh course added on as a raised treble peg rider. Workmanship and finish of these later additions frequently varied considerably from that of the main pegbox.
30 Vienna, Kunsthistorisches Museum, No. 616.
31 Vienna, Kunsthistorisches Museum, No. 616; string length 761 mm.
32 As the peg is turned to raise the pitch on a lute with a poorly shaped nut, the friction caused by the near right-angle bend that the string makes in passing over the nut causes a stretching in the string between nut and peg. When this tension increases enough to overcome the friction, the string between nut and bridge jumps suddenly, usually too far, in pitch. The shaping of the nut on old lutes greatly reduced this problem.
Pegboxes followed fairly standard layouts. On the nine 11-course (10-course converted) lutes we examined, the thickness of the cheeks always tapered to the end of the box. Typical measurements were 8 mm. tapering to 6 mm. A common cheek height measurement was 27 mm. at the nut, tapering to 14 mm. at the end of the pegbox. Most of the pegbox cheeks were angled together at the end with a typical total width measurement of 20 mm., the widest being 30 mm. and the narrowest 16 mm.

The pegs on all of the lutes measured were 12 mm. to 12.5 mm. apart, center to center. The exact measurement was 12.5 mm. for seven of the nine 11-course instruments previously mentioned. The overall length from the outside of the nut to the end of the pegbox varied, depending on how the end of the pegbox was finished. The range was 237 mm. to 270 mm.

With only six exceptions, on all of the fifty-two lutes examined that had turned-back pegboxes, the backs of the boxes were covered. This covering was either fretwork or veneer; it was generally 1.0 mm. to 1.5 mm. thick. On the veneered boxes, the decoration corresponded with the decoration on the back of the neck. The increased strength and the stability of the pegbox that was backed with a veneer made thin cheeks possible.

The most common angle that the pegboxes were turned back was 80°. The smallest angle was 75° and the greatest 86°. The use of this range of angles helps to balance the instrument. It also adds a nearly perpendicular stabilizer that helps to reduce vibration that would otherwise be absorbed by the neck. This then has the effect of increasing the vibrations at the bridge, thereby augmenting and sustaining the volume of the instrument.33

Even to the small detail of pegs, the old lute masters exhibited a finesse that is only now being recognized. The shafts on lute pegs were quite small in diameter, which made tuning easier. A smaller-diameter shaft draws less string with each turn, allowing more precision in tuning. Today's lutenists often complain that they cannot tune their lutes well, because of the small heads on the pegs, and must resort to a "helper" of some sort. This was unnecessary on old lutes because the peghead matched the size of the shaft; that is, the pegs were graduated in descending size, with the largest nearest the nut. A reduction from 18 mm. to 14 mm. in peghead width and from 8 mm. to 4.5 mm. in shaft diameter near the bulb is typical.

The woods chosen for pegs were carefully considered, with pear, mountain ash, and boxwood the favorites. The only ebony pegs

we saw were on eighteenth-century lutes or were modern replacements. As a pegwood, ebony has many faults, the major one being that it has within its structure abrasive substances that wear pegholes out quickly. The other important fault is that, because ebony does not shrink or swell much with changes in humidity, the pegs alternately fit too loosely or crack the pegbox.

In applying this information from old lutes to modern lute-making, we must observe very carefully the historical evidence. It is clear that the mechanical parts relating to playability were considered changeable and adaptable to current modes and taste. It is also clear that the sound-producing parts were highly valued, and much care was taken to preserve their original tone qualities. For these reasons the belly, barring, and bowl must be carefully considered and imitated. On the other hand, the mechanical parts may be redesigned to satisfy personal taste and current developments in playing techniques.

It is not enough to simply follow exact measurements, for this might lead to lutes of such improbable historical design as the fifteenth-century lute described by Edward Kottick. Rather, we would suggest a design that is consistent with historical evidence in the model, materials, and dimensions. The main body of this article has summarized the materials and dimensions; only the model is left for brief comment. Iconographical evidence is so prolific and diverse that it could sustain any argument as to period, shape, and preferred model. We therefore find it more profitable to consult written evidence.

In 1727, E. G. Baron wrote his noted book Unterschung des Instruments der Lauten. It has recently been translated by Douglas A. Smith. The following are excerpts from a typescript kindly lent to us by the translator.

Thus the lutes that are too deep in the lower part of the body, like a sack, as it were, and have small rosettes or resonance holes are worth little or nothing, but when the lutes are made shallow and have large rosettes, the tone is stout and strong and projects well into the distance.

Since the only extant lutes with intentional shallowness or flattening of the backs are the instruments of multi-rib construction, we can assume from what Baron said that the multi-rib model was

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34 Edward Kottick, pp. 72-83.
35 Douglas A. Smith's translation of Unterschung des Instruments der Lauten will soon be published by Instrumenta Antiqua Publications, Manhattan Beach, California.
#67. 7-course lute, Giovanne Hieber, Venice, early 17th century. Brussels, Conservatoire Royal de Musique de Bruxelles, Musée Instrumental, 1561.
preferred. Baron continues:

Magnus and Vendelino Tieffenbrucker and Vendelino Venere, who are old and very good, showed appropriate proportion in their work, and worked in the newest and most highly esteemed fashion, namely oblong or somewhat shallow. The lutes of the Tieffenbruckers are valued far more than the Füssen lutes and are seldom found for sale.

All of the extant lutes by the Tieffenbruckers and Vendelio Venere that are wooden are made of yew, with the few exceptions noted earlier. On the basis of Baron’s writing, we can conclude that the yew wood multi-rib models were highly esteemed and had tonal possibilities that exceeded those of their predecessors. It is ironic, then, that in the lute’s period of decline, the eighteenth century, the lute-makers reverted to the much earlier 9-rib model, sacrificing superior tone quality.

After we successfully build a lute that reproduces the volume, projection, and tone quality of the old instruments, we may find the sound disappointing. Nevertheless, we have a responsibility in the beginning to play the music of the sixteenth and seventeenth centuries on instruments with the voice for which the composers wrote. It is therefore necessary to pick up the raggle-taggle remnants of lute-building traditions, to reestablish the tradition, and then to begin again with the evolution of the lute.

Postscript

As this article was nearing completion, we received our copy of the 1974 Galpin Society Journal, Vol. XXVII. This contains Friedemann Hellwig’s article “Lute Construction in the Renaissance and the Baroque,” which we read with great interest. We were pleased to note the parallels in the two articles and feel that in those instances where our information and conclusions differ, we have documented our findings adequately, considering the number of instruments we were able to examine. It is hoped that further research will increase the accuracy of information on historical lute construction.
Despite the great number of seventeenth- and early eighteenth-century collections published for the five-course baroque guitar, only a few exist that attempt to give detailed technical descriptions of the baroque guitarists' art. Many publications contain only pieces with perhaps some brief words concerning the tablature, the notation of ornaments and strummed chords, and so forth; often even this information is lacking. During the baroque era at least three different tunings were employed by guitarists, but quite often composers make no mention at all of the tuning in which their pieces were intended to be played. Almost never does one come upon a work that truly achieves the status of a treatise and that gives satisfactory explanations of such matters or precise information on the general technique of playing the instrument.

As a result of these frustrating obstacles, the few complete treatises that we do possess become extremely important for an accurate historical understanding of this lost art. Curiously enough, the two most comprehensive treatises for the baroque guitar were published in Spain during the late seventeenth century. The first of these, Gaspar Sanz's *Instrucción de música sobre la guitarra española* (Zaragoza, 1674), has already been the subject of at least one fairly detailed study. Published only three years after Sanz's book was a treatise of nearly comparable thoroughness by Lucas Ruiz de Ribayaz entitled *Luz y norte musical* (Madrid, 1677): It is this work which will be the subject of the present article. Ruiz de Ribayaz's book fills in the gaps in Sanz's treatise and is especially valuable for

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1 See the "Nota Biográfica y Crítica" (pp. xxiii-xxix) and "Nota Bibliográfica" (pp. xxxi-xxxiv) by Luis García-Abrines that accompany the recent facsimile edition of Sanz's *Instrucción de música* published by the Institución "Fernando el Católico" de la Excma. Diputación Provincial (C.S.I.C.), Zaragoza, 1952 and 1966. Also see the preface to my forthcoming edition of the complete guitar works and writings of Sanz, to be published soon by Schott & Co. Ltd., London.
its elaboration of specific technical points. Considered in conjunction with Sanz's work, it helps to give a more thorough understanding of Spanish baroque guitar practice in the late seventeenth century.

Complete biographical information about the life of Lucas Ruiz de Ribayaz unfortunately is lacking. However, he himself gives some pertinent data in *Luz y norte musical*. These data, combined with information recently brought to light by Robert Stevenson, provide at least a rough outline of his career prior to the publication of his work of 1677.

On the title page of *Luz y norte musical*, Ruiz de Ribayaz describes himself as a native of the town of Santa María de Ribarredonda (located in the mountains near Burgos); he probably was born here somewhat before the middle of the seventeenth century. Also on the title page, Ruiz de Ribayaz indicates that at the time of the publication of his work, he was both a priest and a prebendary at the Collegiate Church of Villafranca del Bierzo. Furthermore, he gives a short biographical sketch of himself in a dedication contained in one of the editions of *Luz y norte musical*.

...I graduated from the minor orders into the holy priesthood, in which status I learned some principles of music which I acquired serving the Counts of Lemos y Andrade, from whence (through their intercession and upon presentation by their most excellent patron Don Fadrique of Toledo, Marquis of Villafranca) I came to enjoy a prebend, and after having obtained this stipend, being your most submissive servant and chaplain, I practiced in the spare moments that my schedule allowed me, so as not to have those moments totally idle...on tablature, instruments and music, with the result that I have composed this book.²

Further on in the book a reference is made that indicates some extensive travels—possibly even a visit to one of the Spanish colonies of the "New World":

...the author [i.e., Ruiz de Ribayaz himself] has seen different kingdoms, remote and overseas provinces, where they do not know or practice the said tablatures, nor any other type of tablature; because although they play and sing, it is only by memory, with the

²This brief autobiographical sketch is not found in the British Museum copy of Ruiz de Ribayaz’s work (upon which the present study is based), but appears on folio ii of the copy now in the Biblioteca Nacional, Madrid. It is quoted by J. Subirá and H. Anglés in their *Catálogo musical de la Biblioteca Nacional de Madrid*, Vol. 1 (Barcelona, 1946), p. 117. See text of present article for a listing of further differences between the British Museum and Biblioteca Nacional copies.
exception of some who know polyphonic music (page 1 of "Prólogo al curioso lector").

Robert Stevenson, in his recent book *Foundations of New World Opera* (Lima, 1973), establishes that Ruiz de Ribayaz did indeed visit the *nuevo mundo* while in the service of the aforementioned Conde de Lemos and prior to the publication of *Luz y norte musical*. The Conde de Lemos was appointed viceroy of Peru; and on March 3, 1667, he sailed from Cádiz for Peru with an entourage of 113 attendants, among whom were the young composer Tomás de Torrejón y Velasco and the musician-priest Lucas Ruiz de Ribayaz. Torrejón y Velasco remained in Peru, becoming one of the most important composers of the *nuevo mundo* and the author of the first American opera, *La púrpura de la rosa* (1701). Ruiz de Ribayaz, for whatever reason, chose to return to Spain—which he must have done well within ten years of his original departure from his native country. Apparently, nothing definite is known of Ruiz de Ribayaz's musical activities in Peru, although Stevenson suggests that during his sojourn abroad, he may have penned the music for a play by Martínez de Meneses, Pedro Rosete Niño, and Jerónimo de Cáncer entitled *El arca de Noé* and possibly the music for a brief *coloquio*—both of which were presented in Lima in 1672.

On his return to Spain, Ruiz de Ribayaz must have obtained his post at the Collegiate Church in Villafranca with the help of the Condes de Lemos y Andrade and their patron, the Marqués de Villafranca, as he himself explains in the above quotation. His associations with the nobility and the Spanish court must have continued, for in the "Prólogo" to *Luz y norte musical* he speaks of "este corte" ("this court"), and one of the approbations at the beginning of his book is by a composer affiliated with the court, Cristóbal Galán. Ruiz de Ribayaz was familiar with the compositions of his contemporaries Juan del Vado, Andrés Lorente, and Gaspar Sanz, and it is quite possible that he knew them personally. Unfortunately, information about his life subsequent to 1677 is lacking, and the date and place of his death are also unknown.

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3 For Stevenson's complete remarks on Ruiz de Ribayaz's sojourn in Peru, see *Foundations of New World Opera*, pp. 42-44, 46, and 73-74.

4 For biographical information concerning the Condes de Lemos y Andrade and Fadrique de Toledo Osorio, Marqués de Villafranca, see Stevenson, pp. 43 and 73 (Footnotes 42 and 43).

5 At the time Ruiz de Ribayaz's work was published, Galán (? - 1684) was *maestro de capilla* of the *Real Convento de las Descalzas*. He later became the *maestro* of the Royal Chapel (in 1680).
The full title of Ruiz de Ribayaz’s book is: Luz y Norte Musical/para caminar por las/ Cifras de la Guitarra Española y/ Arpa, tañer, y cantar a compás por/ canto de Organó; y breve explicacion/ del Arte, con preceptos faciles, indu-/ bitables, y explicados con/ claras/ reglas por teorica, y/ practica (Guiding light for a musical journey through the tablatures of the Spanish guitar and harp, and for playing and singing mensural music in proper rhythm; including a brief explanation of that art, with easy and indubitable precepts, explained by clear rules for both theory and practice). The work is dedicated to “queen of the angels, the most holy Mary of Curiñega” Patroness of the Collegiate Church of Villafranca.6 The book was published in Madrid by Melchor Alvarez. The British Museum copy7 (a microfilm of which was used for the present study) bears the date 1672 on the title page, but this is undoubtedly an error. That the date should be 1677 is clear for several reasons: First, all of the approbations at the beginning of the book are dated 1677; secondly, Ruiz de Ribayaz mentions having seen “on sale in Madrid” editions of Gaspar Sanz’s Instrucción de música, which was not published until 1674. Several other European libraries8 possess copies of this work, all of which bear the date 1677 on the title page. Wolf notes the discrepancy but offers no correction or explanatory remarks.9 Surely, the misdating of the British Museum copy is the result of a typographical error that was corrected in the majority of the impressions of the book.

Also on the title page of the British Museum copy are found the following words in late seventeenth- or early eighteenth-century handwriting: “costo 20 r. en / Madrid a 15 de Marzo de 1722. Yo Alvaro de la Puente.” The words “costo 20 r.”10 seem to be in a different hand than the remainder of the writing. Thus, it is probable that the original owner of the book was one Alvaro de la Puente, who purchased the book in 1722. Apparently, Ruiz de Ribayaz’s work was still being sold as long as forty-five years after the original date of publication.

Immediately after the title page, the British Museum copy

6 Anglés and Subirá explain that this Virgin takes her name from “unos religiosos” who would have come to Villafranca from “Cruti” (i.e., Cluny) in France. See Anglés and Subirá, p. 117.
8 Bibliothèque du Conservatoire, Paris; Bibliothèque Royale, Brussels; Biblioteca Nacional, Madrid.
10 That is, 20 reales. The real was the Spanish silver coin of the period.
contains the following: Approbación by Padre Fray Luis Zerbela\(^{11}\) (dated 21 February, 1677); Licencia by D. Alonso Rico y Villaroel (26 February, 1677); Aprobación by Cristobal Galán (12 April, 1677); Suma del privilegio (3 July, 1677); Tassa (24 July, 1677); Fee de erratas (dated 23 July, 1677); Prólogo. After the Prologue are sixteen capítulos or chapters. Chapters 1 to 4 comprise the guitar tutor, while Chapters 5 to 9 contain instruction for the harp. Chapters 10 to 16 contain information about mensural notation and general musicianship. Following these chapters is the final section of the book entitled Ecos del libro which contains intabulated pieces for both guitar and harp. The work concludes with a table of contents and an index of the pieces contained in the Ecos.

In addition to the error in dating, two further discrepancies between the British Museum copy and other existing copies are evident. The copy in the Biblioteca Nacional in Madrid has immediately after the title page a dedication to “Nuestra Señora de Curiñega María Santísima” along with an image of this saint.\(^{12}\) This dedication, lacking in the British Museum copy, also contains Ruiz de Ribayaz’s brief autobiography that was quoted previously. The Madrid copy also has a rather crude illustration of a five-course guitar that follows the Prólogo\(^{13}\); this too is lacking in the London copy.

Since the present study is concerned only with the baroque guitar, the Prologue, the guitar tutor (Chapters 1 to 4) and the guitar pieces in the Ecos del libro are the only sections of Luz y norte musical that will be discussed. In the Prólogo, Ruiz de Ribayaz sets forth his reasons for writing the book. He states that some readers may consider his task a “useless” one since many of the musical principles set forth in the work are so elementary that they are understood even by “los niños en Madrid” (“children in Madrid”). However, he defends himself from this possible criticism, with three arguments in support of his approach. First of all, he reminds his reader that “the world is large” (“el mundo es grande”), and that there are many places where people are not as musically knowledgeable as are the Madrileños. Secondly, a pupil may have a teacher who can teach a part, but not all of the information contained in his book; for example, a teacher might know how to teach the guitar cifras, but be unable to read and teach mensural

\(^{11}\)See Stevenson, pp. 43-44 and 73 (Footnote 44) for remarks on Fray Luis Zerbela (i.e., Cerbela) and his connections with the Collegiate Church at Villafranca served by Ruiz de Ribayaz.

\(^{12}\)See Anglés and Subirá, p. 117.

\(^{13}\)Anglés and Subirá, p. 118.

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notation. Thirdly, one may be in a place where there is no teacher at all, in which case a book that teaches the elements of music would be indispensable to any pupil willing to learn on his own. Clearly *Luz y norte musical* is aimed at beginners in music, particularly those interested in learning the art of the guitar or the harp. Its author has designed a work that attempts to give the pupil a grounding in both the theoretical and practical aspects of music.

In the second part of the *Prólogo*, Ruiz de Ribayaz comments on the difficulties that were encountered in the printing of the book. In speaking of the guitar and harp tablatures he says:

...these could not be adopted to the printing...because of the little use which this type of impression has had: Previously, the matter was so impossible that it was necessary to transcribe [i.e., copy by hand?] the harp tablatures, however, to print the other kind of tablature [i.e., the guitar tablatures?] it was necessary to make new characters with different moulds; but it was not possible to adopt this method because there was no one who would do it. Even for this printing some printers projected so many difficulties that it has been necessary to look for a means of doing it, the novelty of which can excuse the defects of it, of those who directed [the printing of] it and even those of its author. Indeed, it is not easy to be successful at the first attempt; and with regard to the quality of the results, there is no doubt that this book has been produced in Spain [!] (second page of *Prólogo al curioso lector*).

It is curious that faced with such difficulties Ruiz de Ribayaz still insisted on having his tablatures printed instead of engraved. Engraving was by far the most commonly used method of reproducing tablatures at the time; examples of printed tablature are not frequently encountered.\(^\text{14}\) One could perhaps postulate a dearth of engravers in Madrid at the time, but this hardly seems possible; and given the many problems that Ruiz de Ribayaz enumerates, the

\(^\text{14}\) Much of the Italian guitar music from the first half of the seventeenth century consisted only of strummed chords notated in alphabet notation. This early music was generally printed, since such simple notation would have offered few difficulties for a printer—for example, the *alfabeto* tablatures of Abatessa, Colonna, Millioni, Monte, Sanseverino, and Trombetti are all printed.

However, by the middle of the century, the five-line staff and a higher degree of complexity became the rule in tablatures of art music for baroque guitar, and printing was, on the whole, abandoned in favor of engraving. Indeed, the works of almost all of the major guitar composers of the second half of the seventeenth century—Campion, Carré, Corbetta (his books of 1643, 1648, 1671, and 1674), Foscarini, Guerau, Santiago de Murcia, Roncalli, Sanz, de Visée, and so on—were engraved. There are, nevertheless, some exceptions to this general rule; the main one is the guitar tablatures put out by the firm of Giacomo Monti in Bologna, all of which were printed—for example, the books of Calvi (1646), Corbetta (1639), Gramata (1646, 1659, 1674, 1680, and 1684), and Pellegrini (1650).
printing job certainly could not have been the cheaper of the two methods. At any rate, the "defects" in the printed tablatures to which Ruiz de Ribayaz refers are so numerous that the transcriber—his patience frequently stretched to the limit—often finds it a bit difficult to "excuse" them!  

The first chapter—"In which the guitar is described, what it is, and of what it is composed"—begins by enumerating the components of the guitar. After writing about the cexa (nut) and the trastes (frets), Ruiz de Ribayaz explains the stringing of the instrument.

The guitar has five courses, although it is customary to string this instrument with nine strings; strictly speaking, the five are sufficient, but the rest [of the strings] are there to give more body to the voices (page 1).

The mention of "nine strings" demonstrates that Ruiz de Ribayaz has in mind a guitar with a single first course, or chanterelle, in the manner of a lute. This is substantiated in Chapter Four, where he speaks of the second through the fifth course in the plural (for example, "las quintas") but the first course in the singular ("la prima"). He then explains that the five courses of the guitar are indicated in the tablature by five horizontal lines, the highest string indicated by the bottom line (see Example 1).

At the beginning of the second chapter—"In which is explained the tablature of the guitar, for playing both rasgado as well as punteado"—Ruiz de Ribayaz states that the guitar generally has ten to twelve frets, which are represented in the tablature by numerals that are placed on the horizontal lines that correspond to the courses. He explains that there are two types of tablature—one for the rasgado (strummed) style and one for the punteado (plucked) style. He then points out the essential features of the rasgado tablature: The characters above the horizontal line indicate the

15 See Footnote 31 for an outline of the transcription procedures employed for the examples in the present article.

16 Despite the curious fact that the majority of extant baroque guitars in more or less original condition are constructed to accommodate ten strings (only a few instruments seem to exist that have nine tuning pegs), almost all of the guitar treatises and publications from the seventeenth century prescribe a quota of only nine strings, with a single chanterelle. See the article by Sylvia Murphy entitled "The Tuning of the Five-course Guitar" in the Galpin Society Journal, Vol. XXIII (August, 1970), in particular the Appendix on pp. 59-60.

17 Spanish has two verbs—rasgar and rasguear—that have the meaning "to strum." The past participle of the latter verb—rasgueado—was used by other Spanish guitaristsof the period (Gaspar Sanz, for example) and is the verb most used today. Nevertheless, I have adhered to the use of the past participle of the first verb—rasgado—in this article because this is the form consistently employed by Ruiz de Ribayaz.
chords to be played; the small vertical lines above or below the horizontal line indicate the direction of the strums; the large vertical lines indicate the metrical structure of the music, serving essentially as bar-lines (see Example 2). He explains the necessity of learning twelve chords by memory to be able to play in the rasgado style; these chords are indicated by twelve characters, the numbers 1-10(X) plus + (cruzado) and P (patilla).

In the third chapter—"In which it is explained how to form the twelve chords which are referred to above, and with which fingers of the left hand"—Ruiz de Ribayaz describes in detail the fingering of each of the chords and follows this with a demostración showing the chords in tablature form (see Example 3). In this demostración, the left-hand fingering of each chord is indicated in the tablature by four letters (a = index finger, e = middle finger, i = ring finger, o = little finger). The zeros are placed on unstopped courses, according to Ruiz de Ribayaz, to indicate that the player must be careful to strum all of the strings for each of the chords, and thus to accustom the player to playing a string whenever he finds any numeral on it.

It should be pointed out that the row of chords in the demostración is divided by vertical lines into five groups, four of which have the headings "Por cruzado," "Por el tres," "Por el seis," and "Por el ocho"; this curious division of the chord series gives a clue to the logic behind the sequence of the harmonies. Each of the labeled groups comprises three chords, which constitute the tonic, subdominant, and dominant chords of a key—the very key indicated by the heading. For example, the group labeled "Por cruzado"
contains the + (D major), I (G major), and P (A major) chords, which are the tonic, subdominant, and dominant chords respectively in the key of D major; the heading ("Por cruzado") indicates that these three chords are "in" the key of the "cruza
do" chord—that is, D major. Further perusal reveals that the keys represented by the remaining three groups are F major ("Por el tres"), A minor ("Por el seis"), and B major ("Por el ocho"). The 7 chord is repeated because it is shared by both the keys of A minor and B major: It is the
dominant in the former, and the subdominant in the latter key. The
last three chords—the X (B minor), 1b (G minor) and 1 (sic! actually
a dissonant form of the 1 chord)—are, in a sense, simply "added on"
to the series, since they do not outline a further key area.

After setting forth this demostración with the twelve
intabulated chords, the author describes in more detail the difference
between the rasgado and punteado styles.

One strums all at once with the right hand in playing rasgado,
strumming, be it downwards or upwards, with all the fingers [of the
right hand] all the strings of the guitar, and delivering the golpes
[strums] that are indicated below the chords at the same time as the
left hand fingers them; and in playing punteado one must pluck
the strings with the right hand, using the three fingers of it, which are
the thumb, the index and the middle, although sometimes when a
full chord [punto lleno] is intabulated on four lines, one also uses
the ring finger, but no more. (page 8).

Ruiz de Ribayaz’s comments on rasgado playing are particularly
interesting, since very few treatises from the period describe
explicitly how one executes the strummed chords that are
ever-present in baroque guitar tablatures. Unfortunately, Ruiz de
Ribayaz does not go into more precise detail about the strumming
procedure. However, his use of the expression “all of the fingers”
most certainly indicates the use of the index, middle, ring, and little
fingers, minus the thumb, and his statement that the four fingers are
to pass over the strings “all at once” ("a un mismo tiempo") seems
to mean that all of them are to strike the strings at the same instant,
that is, in one “blow.”18

18 This is most likely a simplified explanation intended for beginners, since
experienced players probably would have employed a variety of different strums even in
simple rasgado accompaniments; strumming in more sophisticated art pieces definitely
would have been as varied as possible. Robert de Visée, for example, describes several types
of batteries in his Livre de guitare of 1682: In the usual downward strum one should use
all four fingers of the right hand, but they should be unfurled in rapid succession one after
the other ("l'une après l'autre"); for special effects the thumb alone or the thumb in
combination with the fingers can be used in downward batteries, and upward strums can be
He goes on to explain that the index and middle fingers are used to pluck the first, second and third courses in both arpeggiated chords (puntos sueltos) and in scalar passages. He adds that in using the index and middle fingers of the right hand one must never pluck twice in succession with the same finger, but must alternate the two. The thumb, which is used on the fourth and fifth courses, plays all the notes allotted to it, whether they are single notes or several notes in rapid succession. Ruiz de Ribayaz then gives two sample passacalles for the student to practice, one in the rasgado style, and the other in the punteado style (see Example 4). Each of these passacalles is based on the same set of harmonies (a I-IV-V-I progression in D Major) and each is given in two versions—one in triple meter (proporción menor) and the other in quadruple meter (compasillo). He then summarizes certain points that he has made before, repeating that in rasgado playing, one is to “pass the four fingers of the right hand over all the strings of the golpe, and all at once.” Finally, he mentions that as far as fingering is concerned, one is to use the nearest finger (“el dedo que se hallará más cercano”) in stopping notes with the left hand.

In chapter four—“In which is explained the manner of tuning the guitar with much facility and brevity”—Ruiz de Ribayaz very clearly sets forth his tuning procedure. First, the two strings of the third course should be adjusted to form a unison (“son en el sonido una”). Then the thinner string of the fifth course should be tuned so that it forms a unison with the note played by depressing the second fret on the third course; the thicker string (bordón) of the fifth should be adjusted to an octave lower than its companion. The two strings of the second course should be tuned in unison with the thinner string of the fifth course stopped at the second fret. The thinner string of the fourth course should be tuned in unison with the second course stopped at the third fret, and the thicker bordón should be tuned an octave below its companion. Finally, the first string should be tuned in unison with the thinner string of the fourth course stopped at the second fret.19 He gives an example of this executed with either the index finger alone, or the index and middle fingers playing one after another. In other words, the tendency certainly would have been to achieve as much coloristic interest as possible in rasgado passages. For a more extensive treatment of this subject, see Sylvia Murphy, “Seventeenth-Century Guitar Music: Notes on Rasgueado Performance,” Galpin Society Journal, Vol. XXI (March, 1968), pp. 24-32, and also the preface to my forthcoming edition of Gaspar Sanz mentioned in Footnote 1.

19 This is basically the same tuning procedure that is described by Gaspar Sanz in his Instrucción de música, “Regla segunda del templar,” pp. 2-3. It is quite possible that Ruiz de Ribayaz placed his bordones on the treble side of the fourth and fifth courses—that is, the disposition opposite to that generally found on the lute. This positioning of the bordones on the fourth and fifth courses is very clearly shown in an illustration in the article.
procedure in tablature, along with two pruebas to test the accuracy of the tuning once the procedure is completed (see Example 5). This procedure results in the tuning illustrated in Example 6.

Ruiz de Ribayaz then explains why he has intabulated only twelve chords for the student.

...although an ancient author [autor antiguo] intabulates a dozen other chords—the majority of them minor—in addition to those which are in the demonstration given above, and although it is true that, as this author explains, we would be able to profit by them, this was only because of the purpose which he wished to achieve; and that [purpose] which I have is ... to set down only those chords which are ordinarily played or intabulated, by which the majority of music is, frankly, accompanied, or those which are sufficient ... (pages 12-13).

The autor antiguo to whom Ruiz de Ribayaz refers is undoubtedly Juan Carlos Amat, whose guitar instruction book, Guitarra española y vándola, was first published in Barcelona in 1586. Amat's work was the first instruction book to teach a purely chordal (that is, rasgado) approach to the guitar, predating even the first Italian book of this type.20 The book apparently enjoyed enormous popularity, for it was reprinted at least five times in several different guises throughout the seventeenth and early eighteenth centuries.21 Amat's work presented twelve major chords (puntos naturales) and twelve minor chords (puntos b. mollados), the chords in each of the two groups being numbered from 1 to 12 and arranged according to the cycle of fifths.22 Ruiz de Ribayaz emphasizes that


20 Girolamo Montesardo's Nuova inventione d'intavolatura (Florence, 1606).

21 The first known reprint of Amat's work was published at Lérida in 1627. It was reprinted two more times with a foreword by Fray Leonardo de San Martin in 1629 (Gerona) and 1639 (Valencia). It appeared again in 1752 in a Portuguese translation by Dona Policarpa under the title Liçam instrumental da viola portugueza, and finally twelve years later as the Arte para aprender ... la guitarra "compiled and augmented" by Andrés de Sotos (Madrid, 1764). See Emilio Pujol, "La Significación de Joan Carlos Amat (1572-1642) en la historia de la guitarra," Anuario musical, Vol. V (1950), pp. 125-146.

22 The circular chart used by Amat to depict the twenty-four chords and their fingerings on the guitar is reproduced in facsimile in Emilio Pujol, op. cit., p. 135, and also in José Subirá's Historia de la música española e hispanoamericana (Barcelona, 1953), p. 220.

Amat's system of chord notation is, however, not identical to that of Ruiz de Ribayaz: While Amat uses the same fingering positions, he numbers them in a different sequence than does Ruiz de Ribayaz. It is from Pablo Minguet's Reglas y advertencias (Madrid, 1752-1754) that we learn that Ruiz de Ribayaz's system was known at the time as "Castilian" chord tablature, whereas Amat's system was referred to as "Catalonian"
Once the student has thoroughly learned all the material in his guitar tutor, and has gained a knowledge of general musicianship, the student will then be prepared to execute many such "extraordinary chords." He recommends Gaspar Sanz's book to the student desirous of further study.

And for he who wishes to learn more about music and is satisfied only with playing and discovering much through the *cifra*, there are many authors that have written about this, and now in particular there are on sale in Madrid some tablatures and compositions for the guitar, printed in Zaragoza, and composed by the priest Gaspar Sanz, which are entitled *Instrucción de música sobre la guitarra española*, in which are contained many very different and exquisite pieces (page 13).

Ruiz de Ribayaz proceeds to set down twelve more practice *passacalles* in the rasgado style (similar to those illustrated in Example 4), one in the key of each of the twelve chords. Each of these *passacalles* is notated in either triple or quadruple time, but can apparently be played in either meter, for he says: "Although the *passacalles* change in meter, they do not change in key [that is, in harmonic structure], so that one may play with the same chords in proporción menor and compasillo." He then sets down several rules for choosing strings, stating that strings must be crystalline, of equal thickness throughout, strong, and without knots. He gives two ways of testing a string, both of which involve plucking the string while taut to be sure that it is vibrating properly.

... choose a segment of the string of the length that is necessary for the guitar, [stretch it] between the thumbs of both hands and pluck it with one of the other fingers, and if in plucking it one sees that it makes two clear strings, it is a good segment, and if it makes more, it is bad. Also, a string may be poorly or unequally twisted, and can have one bad section and another good; and I say that if one finds a

tablature. Other proponents of Ruiz de Ribayaz's "Castilian" system were Luis Briceño (1626) and Joseph Guerrero, while Amat's "Catalonian" system was employed also by Minguet and Andrés de Sotos. See the discussion of the Castilian and Catalonian tablature systems in J. Wolf, *Handbuch der Notationskunde*, Vol. II (Leipzig, 1919), pp. 199-203.

These numerical tablature systems were utilized only in Spain, and then almost exclusively for the notation of simple rasgado accompaniments. In more complex art music consisting of a mixture of rasgado and punteado textures, either the alfabeto Italiano was used to notate strummed harmonies (in, for example, the works of Sanz and Santiago de Murcia), or rasgado chords were written out note for note (in the work of Guerau and Antonio de Santa Cruz).

23. "... aunque los passacalles muden de ayre, no mudan de terminos; con que se pueden tañer por unos mismos puntos, por proporción menor, y compasillo" (p. 13).
bad section one should look for a better section, pulling it with one hand and gathering it up with the other. . . . The other test is to tie the string to the bridge and afterwards to pass it over the nut, holding it so that it is partially taut, and to pluck it over the frets so that it can be seen whether it is false or not (page 15).

Ruiz de Ribayaz mentions that instrument makers, and especially guitar makers (guitarreros), ordinarily know how to put on frets and how to string and tune the guitar, and are able to give the proper instruction in these skills to their customers. He further states that strings should not be too thick—for they will break when stretched to pitch—nor too thin—for they will not sound well. He explains that if one breaks a fret, it can be replaced according to the following scheme: The thickness of the first fret should correspond to the thickness of the bordón on the fifth course, the thickness of the second fret to the bordón on the fourth course, diminishing the thickness of the rest of the frets according to that of the remaining strings.

Ruiz de Ribayaz next speaks of ornaments (habilidades), copying "to the letter" Gaspar Sanz's descriptions of the trino (trill), mordente (mordent), temblor (vibrato), and extrasino (slur). He adds to this his own explanation of the execution of the trino.

In all the places where one finds some T's placed before the numbers, one must make a trill on those numbers that have them; the manner of trilling is, to pluck the string on which one is to trill with the right hand, and shake the finger which pertains to the number (on the string and fret on which it is done) of the left hand; the manner of shaking the finger is to place it, and lift it two times, without interruption in the tempo, nor does one have to pluck with the right hand more than once for each trill (page 17).

This explanation seems to indicate a trill beginning with the main (written) note, but the description does not constitute positive proof because the exact correlation between the movements of the right and left hands is not explicitly stated. Various other sources from the period, however, indicate that the main-note trino was indeed predominant in late seventeenth-century Spain; thus it is probably safe to interpret Ruiz de Ribayaz’s words as descriptive of

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Finally, Ruiz de Ribayaz sets down twelve additional short practice passacalles in the *punteado* style (similar to those in Example 4), one in the key of each of the twelve chords. The fourth chapter closes with the observation that although the *puntos* or chords are played on all five courses of the instrument, they each consist basically of only three “voices” (that is, notes) and their octave duplications.

The final section of the work, entitled *Ecos del libro*, contains pieces for both the guitar and the harp. In the introduction to this part, Ruiz de Ribayaz implies that most of the pieces that follow have been gathered from other sources.

... I will set down the *cifras* that I have been able to collect, so that each student may ... learn, and be amused and taught, even finding that which was proposed, composed by the authors to which I have already referred [*autores referidos*]... (page 65).

These *autores referidos* are undoubtedly the composers mentioned in the harp tutor; here, after again speaking of the works of Gaspar Sanz and of two composers who have written works for the harp—“Andrés Lorente” (Andrés Lorente) and “Juan del Bado” (Juan del Vado)—Ruiz de Ribayaz states:

... and in case one does not have access to these works, I am offering some of them later on in this book, so that by being in the

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25 For the names of these sources as well as a detailed discussion concerning the Spanish baroque *trino*, see my article cited in Footnote 24, pp. 20-27.

26 Lorente (1624-1703) was an important Spanish organist and theorist. He was organist at the church of Saints Justo and Pastor in Alcalá de Henares, and the author of the treatise *El porqué de la música* (Alcalá, 1672). In *El porqué*, Lorente mentions a work for organ and harp entitled *Melodías músicas* that he hoped to publish the same year; however, no such work by Lorente is now extant, and it is possible that it never actually appeared. Ruiz de Ribayaz implies on page 32 of *Luz y norte musical* that some of the harp pieces in his *Ecos del libro* are taken from Lorente’s “*Melodías músicas*” (sic). For further information concerning Lorente, see J. Pena and H. Anglés, *Diccionario de la música* Labor, Vol. II (Barcelona, 1954), p. 1435, and Miguel Querol, “Lorente,” in *Die Musik in Geschichte und Gegenwart*, Band 8 (Kassel, 1960), cols. 1198-1199.

27 That is, Juan de Vado, well-known violinist, organist and composer *circa* the middle of the seventeenth century. In 1635 he was appointed violinist in the royal chapel in Madrid; he later became organist of the chapel as well as *maestro de música* to the king. He was the composer of a number of sacred vocal works, as well as many secular *villancicos* and cantatas (*tonos humanos* and *tonadas humanas*). See H. Anglés and J. Subirà, *Catálogo musical de la Biblioteca Nacional de Madrid*, Vol. I (Barcelona, 1946), pp. 196, 221, 247, 251, 280, and Vol. II (Barcelona, 1949), p. 255; J. Pena and H. Anglés, *op. cit.* in Footnote 26, pp. 2171-2172; Miguel Querol, “Vado,” in *Die Musik in Geschichte und Gegenwart*, Band 13 (Kassel, 1966), col. 1205.
Ecos of the book, they might achieve some recognition, even if it is only because of the work I have done in collecting them, for I would point out that they are by the best authors which are found at present ... (page 32).

Indeed, one does find that Gaspar Sanz is represented by a number of his punteado pieces in the final section of the book, and it is quite reasonable to assume that Lorente and Juan del Vado are represented in the harp section of the Ecos. Incidentally, while it is possible that Ruiz de Ribayaz magnanimously quoted the works of these three composers so that "they might achieve some recognition," there is equal cause to believe that he did this for a less altruistic reason—to increase the sales of his own book. It is well known that Sanz's Instrucción, at least, achieved tremendous popularity during the period and was thus in no need whatsoever of help from Ruiz de Ribayaz in achieving its due "recognition"!

All of the guitar pieces in the Ecos del libro are dance pieces which, when taken together, represent a fairly typical cross-section of late seventeenth-century Spanish music. Most are dances of Spanish origin. Many are forms that originated in Spain and subsequently spread from there to other European countries during the seventeenth century and, hence, are more familiar to us today—the folias, zarabanda, canario, españoleta, and passacalle. However, many of the dances are found only in Spanish sources and never emigrated from the country of their origin—the xácaras, villano, matachín, mariona, danza del acha, gran duque, gaytas, paradetas, dama, gallarda. A few of the dances, although frequently found in Spanish sources of the time, betray, nevertheless, a foreign origin—the habana and gran duque (originally Italian), the tardión (of French origin), and the zarambeque (imported to Spain

28 Nearly one half of all the punteado pieces set down by Ruiz de Ribayaz are actually by Gaspar Sanz. To the best of my knowledge, this fact has never before been realized by any of the scholars who have previously written about either of these two composers or their works.

29 Miguel Querol draws a distinction between the Italian gagliarda and the Spanish gallarda, defending the Spanish integrity of the latter; see his La música en las obras de Cervantes (Barcelona, 1948), pp. 111-112. The Spanish gallarda was always in duple meter, whereas the Italian gagliarda, the French gailarde, and the English galliard were always in triple meter. All the gallardas of Ruiz de Ribayaz, Sanz, and Guerau are in duple meter, and thus are of the Spanish variety.

Fabritio Caroso describes the dance steps to a "Gagliarda di Spagna" in his Il ballarino (Venice, 1581), Trattato II, fol. 22, and his Nobilì di dame (Venice, 1600), Lib. II, p. 159. The steps described resemble those of a pavaneiglia—the more ornamented Italian version of the pavane—and the intabulated music that is meant to accompany the dance is in duple time (I am grateful to Angene Feves for calling my attention to this information.) Indeed, it is very possible that the dance steps described by Caroso might have been essentially the same ones that were used to dance the Spanish gallarda in Ruiz de Ribayaz's time.
from the New World). At any rate, all of the dances found in *Luz y norte musical* are forms that were universally prevalent in Spanish art music and popular music at that time.

At the beginning of the *Ecos del libro*, Ruiz de Ribayaz sets down fifteen rasgado pieces, notated in the rasgado tablature that he discussed at the beginning of the work. These simple and unassuming "pieces" are similar to the short practice passacalles given in his third and fourth chapters (the first two of which are illustrated in Example 4); they undoubtedly represent the chordal accompaniments to compositions that would have been sung and/or danced, or perhaps played as well. Presumably, a melody or melodies for each of the given harmonic schemes already existed—melodies that would have been known to the student in much the same way that the tunes of current popular songs are more or less common knowledge today. These melodies would have been so well known that Ruiz de Ribayaz's guitar students would have needed to know only the chords for a particular song or dance to be able to "perform" (that is, accompany) it. The types represented in this rasgado group are the xácaras, folias, pabana, villano, zarabanda, matachín, mariona, rugero, gallarda, canario, dança del acha with its buelta (a fast Nachtanz in triple meter), españoleta, and gallarda del gran duque with its baylete (another Nachtanz in triple meter). 

Following the rasgado pieces in the *Ecos* are twenty-seven pieces in the punteado style. These are notated in the Italian guitar tablature that Ruiz de Ribayaz explained in the guitar tutor. However, his tablature differs from the usual Italian tablature of the time in one respect: He places letters—instead of the more usual note-values—over the staff to indicate the rhythmic structure of the piece. In his system, O = a whole note, D = a half note, L = a quarter note, S = an eighth note, and s = a sixteenth note. This unique manner of notating rhythmic values in baroque guitar tablature was, to the best of my knowledge, employed only by Ruiz de Ribayaz. It was undoubtedly necessary because of the printing difficulties alluded to in the Prólogo. Apparently, the printers were unable, or more likely unwilling, to attempt the printing of note-characters over the staves. Ruiz de Ribayaz's novel system could have been equally as effective as the standard one, but as a result of careless printing the letters are often misplaced, interchanged, or missing altogether, which makes them generally more of a hindrance than a help to the transcriber; even bar-lines are frequently misplaced. In fact, in

In transcribing these works, the most satisfactory results often seem to be achieved when one ignores the letters (and sometimes also the bar-lines) completely and relies almost entirely on one's own musical intuitions in determining the rhythmic structure.  

It has already been mentioned that Ruiz de Ribayaz has quoted a number of punteagó pieces by Gaspar Sanz in the *Ecos del libro*: The precise number is twelve, and they are taken from the first and second books of Sanz's *Instrucción de música*. The pieces quoted are a "Xácaras," "Canarios," "Gallarda," "Passacalles," "Torneo y Batalla" from Sanz's *Libro primero*, and a "Folias," "Rugero," "Paradetas," "Matachín," "Zarabandas," and "Españoleta" from his *Libro segundo*.

However, were we able to hear both Sanz and Ruiz de Ribayaz play one of these twelve pieces, we would notice immediately—all matters of interpretation aside—a striking difference in the overall sound of the two performances, for the following reason: Sanz advocated (and presumably used) a different tuning than the one described in *Luz y norte musical*. Sanz's tuning, shown in Example 7, omits the lower *bordones* favored by Ruiz de Ribayaz; the result is that the fourth and fifth courses are no longer the "bass" courses, and that the third course actually is the lowest in pitch. Despite the peculiarities of this tuning—its uniformly high *tessitura* and its complete lack of any "bass" register—it was one of the oldest and most frequently used tunings for the baroque guitar. Sanz gives two reasons for his preference for this tuning: The absence of the thicker *bordones* makes the execution of ornaments easier, and it also makes possible the use of *campanelas*. This word *campanelas* (literally "bells") denotes an effect whereby the notes in a scalar passage are played alternately between the upper (first, second, and third) and lower (fourth and fifth) courses; thus the notes overlap with one another and produce a truly bell-like sound (see Example 8). Often Sanz's variation pieces contain several sections in this *campanelas* technique that are interspersed with variations in the more usual *punteado* style. Of the twelve pieces by

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31 In transcribing pieces of Ruiz de Ribayaz as examples for this article, I have therefore disregarded the placement of letters and/or bar lines when necessary; thus, the transcriptions represent my own subjective interpretations in many instances. For comparison, the tablature in its original state is reproduced on the upper stave in each example.

32 It is the tuning prescribed by Luis Briñó in his *Método muy facilíssimo para aprender a toñer la guitarra a lo Español* (Paris, 1626), and it is also mentioned as the tuning for the guitar by Mersenne in his *Harmonie universelle* of 1635. See the discussion of this tuning in the article by Sylvia Murphy cited in Footnote 16, pp. 49-54.

Sanz that are quoted by Ruiz de Ribayaz, seven are variation-pieces; of these seven, three contain variations that make use of the *campanelas*.

Clearly, the *campanelas* technique would not be as successful with the tuning given by Ruiz de Ribayaz, for with the addition of the lower bordones, the scalar *campanelas* passages would be turned into a series of rather unattractive sevenths and ninths (See Example 9 for a realization of the tablature in Example 8 using Ruiz de Ribayaz's tuning). Certainly the delicacy and charm of this effect would be lost with this change of tunings.

It is interesting, however, that Sanz himself states that most Spanish guitarists used *bordones* on the fourth and fifth courses of the guitar. This seems to indicate that very few of the guitarists who might have purchased his book would have taken the trouble to change their customary tuning simply to play his pieces. Indeed, Ruiz de Ribayaz himself would be a case in point. What would such a contemporary of Sanz's—who preferred the usual Spanish tuning to that of Sanz—do with a piece by Sanz that employed the *campanelas* technique?

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34"In stringing there is diversity: In Rome those masters only string the guitar with thin strings, without putting any bordones on either the fourth or the fifth courses. In Spain it is to the contrary, for some use two bordones on the fourth, and others two on the fifth, and at least, as is ordinary, one on each of these two courses" (Sanz, Libro primero, p. 1).
Ruiz de Ribayaz can perhaps give us the answer to this question. In the three pieces by Sanz that he quotes in which this problem arises, he takes the simplest and most direct course of action: He merely omits the offending variations. The most interesting example of this is the "Passacalles" in A minor by Sanz, quoted by Ruiz de Ribayaz on pages 101 to 102. (See Example 10 for Sanz's original version of this work transcribed assuming Sanz's tuning shown in Example 7.) The original consists of thirteen variations; variations 4 and 13 employ the campanelas technique. Ruiz de Ribayaz quotes variations 1 to 3 and 5 to 10, omitting variations 4 and 11 to 13 (see Example 11). Of course, he could have included variations 11 and 12, but he probably felt that these two variations functioned as an "upbeat" to the thirteenth variation, and that to end with variation 12 would be an unsatisfactory solution to the problem. Certainly, the eleventh and twelfth variations seem to be tied so closely to the thirteenth, that to end on variation 10 seems to produce the most satisfactory conclusion to the piece. Ruiz de Ribayaz follows a similar procedure in the "Xácaras" and "Canarios"—the two other pieces in which similar difficulties arise. Again, all the campanelas variations (with the exception of the sixth variation of the "Xácaras," which is only partially in the campanelas technique) are omitted. However, many of the "normal" variations are omitted also, with the result that only the first one-third (approximately) of each of the two pieces is quoted. In these cases, Ruiz de Ribayaz may have felt that the last two-thirds of each piece was too dependent on the interwoven campanelas variations for structural unity, and thus chose to omit them altogether; or perhaps the omissions were due to more practical considerations such as lack of space.

The remaining nine pieces by Sanz are quoted by Ruiz de Ribayaz with only minor deviations from the original. The "Gallarda," "Rujero," "Paradetas," "Matachín," "Zarabanda," "Españoleta," "Torneo," and "Batalla" are all quoted in their entirety. Yet for some inexplicable reason, Ruiz de Ribayaz omits the final variation of one of Sanz's finest pieces—the "Folias" in D minor (from his Libro segundo, page 3).

The remainder of the punteado pieces in the Ecos del libro are presumably by Ruiz de Ribayaz himself. They are uniformly more conservative than Sanz's pieces, and in some, one even finds passages reminiscent of sixteenth-century instrumental style. This tendency towards archaism can be seen most clearly in three pieces that are based on the sixteenth-century harmonic pattern of the romanesca (see Example 12). The piece entitled "Bacas" (page 100) is actually not at all unlike a vihuela piece in sound (see Example 13); the title
is, of course, a reference to the sixteenth-century Spanish tune “Guárdame las vacas,” the harmonic pattern of which was identical to that of the romanescas. Ruiz de Ribayaz also includes a “Turdió” (page 91) based on the romanescas harmonies (see Example 14), which can be nothing less than a very late example of the French tourdion that was so common in the sixteenth century. The “Danza del Hacha” (“torch-dance”) was a Spanish form which, while actually indigenous to the seventeenth-century, nevertheless preserved the sixteenth-century romanescas harmonies. Sanz includes two hachas in his Instrucción de música,35 both of which are similar to Ruiz de Ribayaz’s version (see Example 15). The harmonic structure of the “Dama” (literally “woman”) is similar but not identical to that of the romanescas (see Example 16); the ending cadence of the variation (diferencia) of this piece is suggestive of certain cadential patterns found in Renaissance guitar music.

Also reminiscent of sixteenth-century practice are two pairs of dances—a slow duple dance, followed by a variation of the same in a fast triple meter—much in the manner of a pavan and a galliard. The “Galería de Amor”—“Baylete de Galeria,” and a “Gallarda del Gran Duque” and its “Baylete” are Ruiz de Ribayaz’s offerings in this form. Typical of the gran duque is the descending major scale with a flattened seventh degree that occurs at cadences—a feature also found, incidentally, in sixteenth-century instrumental pieces.36 Ruiz de Ribayaz’s “Gallarda del Gran Duque” (see Example 17) exhibits this characteristic, as does a “Gran Duque” by Sanz, the beginning of which is given in Example 18 for comparison. The “Baylete” to Ruiz de Ribayaz’s “Gran Duque” (see Example 19) is less successful than the “Gallarda” of which it is a variation, and the parallel octaves in the last eight measures serve—unlike their coloristic function in measures 21 to 23—only to further weaken the structure. Ruiz de Ribayaz also includes a “Gaytas” (“bagpipes”), a Spanish musette in which the alternating first and fifth degrees in the bass serve as a sort of pedal (see Example 20). The remaining pieces by Ruiz de Ribayaz—“Zarambeque,” “Gallarda por el cinco,” “Mariona,” “Pabanas,” and “Villano”—all preserve the same light, charming, semi-popular but slightly archaic character so typical of the Spanish music of the period.

36For an excellent discussion of the origin and history of the gran duque, see Warren Kirckendale, L’Aria di Fiorenza id est Il Ballo del Gran Duca (Florence, 1972).
Especially when compared with the *Instrucción de música* of Gaspar Sanz, Ruiz de Ribayaz's *Luz y norte musical* enables us to obtain a more complete picture of baroque guitar practice in late seventeenth-century Spain. It documents the coexistence of at least two different guitar tunings and substantiates a practice of the interchangeability of guitar music from one tuning system to another; it also indicates in what manner this interchangeability might have been approached. The work furthermore is quite indicative of the provincialism and conservatism of much of the Spanish music of the period.

However, in spite of its seemingly ultraconservative tendencies, Ruiz de Ribayaz's work also appears to be illustrative of a more progressive trend toward a less "guitaristic" and more "lute-like" approach to the instrument. In the majority of his pieces, Sanz used a mixture of the rasgado and punteado styles—a feature typical especially of the French school of guitarists. Interestingly, Ruiz de Ribayaz insists on keeping these two techniques entirely separate, using only the punteado technique for his more serious works. It is significant that when quoting Sanz, he chooses only pieces that make use of the punteado approach exclusively.

This abandonment of the rasgado style and the exclusive cultivation of the more lute-like punteado technique is a trend that seems to be followed by most of the later baroque Spanish guitarists. Even the more lute-like tuning suggested by Ruiz de Ribayaz seems to gain more favor as the eighteenth century approaches. The *Poema harmónico* of Francisco Guerau (Madrid, 1694)—possibly the finest of all the Spanish guitar tablatures of the baroque era—contains only
works written essentially in the *punteado* technique.\(^{37}\) Although it is not explicitly stated by Guerau, the pieces are without doubt intended to be played in the tuning described by Ruiz de Ribayaz.\(^{38}\) This trend is carried on into the eighteenth century by Pablo Minguet who, in his *Academia musical* (Madrid, 1752), gives the same tuning as Ruiz de Ribayaz’s and includes several dance-pieces in an early eighteenth-century style that require only the *punteado* technique. Twelve years later, in the adaptation of Amat’s book by Andrés de Sotos entitled *Arte para aprender... la guitarra* (Madrid, 1764), Ruiz de Ribayaz’s tuning is once more given as the common tuning for the instrument.\(^{39}\)

With the sole exception of the more French-oriented Santiago de Murcia, whose two collections of pieces—*Resumen de acompanhar la parte con la guitarra* (Madrid, 1714) and *Passacalles y obras de guitarra* (1732)—most likely call for a French adaptation of Sanz’s tuning,\(^{40}\) the particular approach to the baroque guitar propounded by Lucas Ruiz de Ribayaz in his *Luz y norte musica* is the one that finally became dominant in early eighteenth-century Spain. It is precisely this approach—characterized by a decline of interest in coloristic effects such as *rasgado* and *campanelas* and an increasing emphasis on the linear element and on the achievement of the fullest possible range from the instrument—that points the way towards the late eighteenth century, the abandonment of double-stringing, and the emergence of the six-string guitar of the so-called “classical” era.

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\(^{37}\) There are only a few instances where isolated *rasgado* chords occur in the works of Guerau: the textures in his pieces are approximately 99 percent *punteado*.

\(^{38}\) This can be ascertained by the fact that *campanelas* passages are absolutely nonexistence in Guerau’s oeuvre. Furthermore, the complex contrapuntal textures of his pieces would not be musically successful without the wider tessitura afforded by Ruiz de Ribayaz’s tuning.

\(^{39}\) The undated manuscript by Antonio de Santa Cruz entitled *Livro donde se verán pazacalles de los ocho tonos...* (Ms. M. 2209, Biblioteca Nacional, Madrid) also contains pieces that—like those of Guerau—contain only a few isolated occurrences of *rasgado* and are most likely meant to be played in Ruiz de Ribayaz’s tuning; it probably, therefore, dates from around the turn of the eighteenth century.

\(^{40}\) That is, the tuning used by Robert de Visère, Nicolas Derosier, and Francesco Corbetta (in his publications of 1671 and 1674): c’, bb, gg, dd’, aa.
VARIED TIES OF MEANTONE TEMPERAMENT REALIZED ON THE LUTE

By Eugen M. Dombois

Perhaps on occasion you are dissatisfied with the tuning of your lute even when strings and frets are in good order. You have changed the pitch of some strings or you have moved some frets but without success. The reason probably is the severity of the equal tempered major third. You may have heard the beautiful sound of a harpsichord tuned in meantone temperament and have wondered if it might be possible to approach this pleasing tuning on your lute. Indeed, it is possible to improve the tuning of a lute. This article's aim is to show how in practice you can realize meantone temperament and modifications of it on the lute. The following explanations hopefully will encourage lutenists to experiment with these possibilities.1

To understand fine variations of an interval it is helpful to use the "cent" measurement, a logarithmic system that was developed by A. J. Ellis in England in 1885: The equal semitone is the basic distance and has the quantity of 100 cents, the octave is always 1200 cents.2

In meantone temperament, the "pure" major third is the most characteristic interval. You can hear it as a harmonic in the region of the fourth fret, or as an overtone. This third may seem strange to modern ears and too low at first hearing. It is only 386.3 cents, as opposed to 400 cents of the equal tempered major third. On the other hand, the minor third seems too high. It is 310.3 cents as opposed to 300 cents of the equal tempered minor third. The fifth is not pure but even lower than the fifth of equal temperament. The

1 The theoretical and historical aspects of temperament are beyond the scope of this article. More detailed information can be found in J. Murray Barbour, Tuning and Temperament (East Lansing, Mich., Michigan State Press, 1951). Reprinted by Da Capo Press in 1972.

2 Barbour, p. vi, ix, and passim.
pure fifth, which you can hear as an overtone or as a harmonic in the region of the seventh fret, is 702 cents. In comparison, the fifth of equal temperament is 700 cents, but the meantone fifth is only 696.6 cents. The fourth is not pure but higher than the fourth of equal temperament. In comparison, the pure fourth is 498 cents, that of equal temperament is 500 cents, but the meantone fourth is 503.4 cents. Only the octave remains the same as in equal temperament, namely 1200 cents.

The following table illustrates these differences by giving the cents of meantone temperament in comparison with those of equal temperament. For simplicity, the C scale is chosen; it can be replaced by any other scale since the intervals are independent of the absolute pitch.

**CENT TABLE**

<table>
<thead>
<tr>
<th>P</th>
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<tr>
<td>C</td>
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<td>C#</td>
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<td>100</td>
</tr>
<tr>
<td>Bb</td>
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</tr>
<tr>
<td>D</td>
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<td>200</td>
</tr>
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<td>D#</td>
<td>269.2</td>
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</tr>
<tr>
<td>Gb</td>
<td>620.5</td>
<td></td>
</tr>
</tbody>
</table>

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You can see by the above table that in meantone temperament the octave is theoretically divided into nineteen pitches. The following diagram shows the relative positions of frets on the neck of a lute to achieve this division of the octave. The vertical lines represent the frets and the notes to the immediate left of each line are the pitches produced when the strings are stopped at these points.
The line beneath the letter A represents the nut of the lute, the open strings are G c f a d' g'. The lines under the letters C, F, H, K, and N represent the 2nd, 5th, 7th, 9th and 12th frets respectively. There are two possible positions for each of the remaining frets: B1, B2; D1, D2; E1, E2; G1, G2; I1, I2; L1, L2; M1, M2.

The meantone fret scheme is independent of the absolute pitch of the lute. Intervals of the same size are always identical. For instance, the third (386.3 cents) is constant whether between c and e, d and f#, or e♭ and g. Moreover, notes of the same name are always identical in pitch regardless of the positions on the lute in which they are played. One also sees, for example, that g♯ and a♭ lie quite far apart. Therefore they cannot be used as enharmonics, as they can in equal temperament. And, contrary to a general misconception, the sharped g lies lower than the flattened a.

The table that follows illustrates the factors for finding the distances from the nut to the frets in meantone temperament.

### MEANTONE TEMPERAMENT

<table>
<thead>
<tr>
<th>places</th>
<th>cents</th>
<th>factors</th>
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<th>cents</th>
<th>factors</th>
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<td>G1</td>
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<td>H</td>
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<td>0.3312680</td>
</tr>
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<td>I1</td>
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<td>L1</td>
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</table>

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I have explained the use of such factors in an article entitled "Correct and Easy Fret Placement." The formula that I have developed for finding the factors is as follows:

\[ y = 1 - \frac{1}{1200\sqrt{2^x}} \]

In this exponential function, \( y \) is the factor for finding the distance from the bridge to the fret; the variable \( x \) is the cent number of the given interval. When \( y \) is multiplied by the "playing scale" of your lute, the result is the distance from the nut to the fret. For instance, the pure major third is 386.3 cents. When \( x = 386.3 \), then \( y = 0.1999937 \), which, when multiplied by the "playing scale," for example, 62.7 centimeters, equals 12.54 centimeters. This is the distance from the nut to the point where the fourth fret should lie.

Now to show a practical application of meantone fret placement let us look at a "Ricercar" by Francesco da Milano:

In staff notation this would be:

If we enter all the notes found in this "Ricercar" in the appropriate places on a meantone fret scheme, we obtain the following:

---


Besides the places A, C, and F, we need only the fret places B2, D2, and E1. When the frets of your lute have been moved to the required positions and the lute has been tuned by unisons and octaves (for example, 6th course 5th fret = 5th course open, and so on, and 5th course open in tune with 3rd course 3rd fret, and 6th course open in tune with 4th course 2nd fret, and so on), we will be able to play this "Ricercar" and lute pieces of similar tonal structure in meantone temperament.

However, there are lute pieces that need more frets than we have on the lute, for instance Narváez' arrangement of "Mille regres":

The following scheme, in A-tuning—as implied by Narváez' instructions for the understanding of the mode of this piece—illustrates the needed fret places:

The "Fantasie" by Laurencini that opens as follows

results in the following scheme:

---

5 Luis de Narváez, Los seys libros del Delphin... (Valladolid, 1538), fol.44v.

These pieces pose several problems: We need both fret places, B1 and B2, and in one case the places D1 and D2 at the same time. What shall we do?

1) Shall we choose one place and tolerate the wrong tones resulting from the missing fret place?
2) Shall we move the fret in question into the middle of the two places and have neither correct?
3) Or shall we set the fret B in an oblique position, in the case of the Narváez lute piece, to get the notes g*, c*, and f somewhat closer to the right places but still not exactly correct?
4) Shall we have two frets, one in each place?
5) Shall we have temporary short sections of fret material glued on the appropriate places to supply missing notes?

I have examined these questions in practice. Some proposals are more or less serviceable, but no one solution is really satisfactory in all cases. The use of meantone temperament on the lute makes sense under special circumstances (for example, for pieces with a tonal structure like the Francesco piece above), but not in general. At this point you may want to "throw in the towel" and regretfully return to equal temperament.

However, an alternative does exist. We can choose a temperament for the lute that lies between meantone and equal temperament. If we see that the fifth of meantone temperament is 696.6 cents and that of equal temperament is 700 cents, then we will recognize that other temperaments are possible—for instance, with fifth of 698 or 699 cents. It is conceivable that lutenists of olden times used such a temperament by carrying out Galilei's or Dowland's instructions, then adjusting the frets by ear until they were satisfied. This remains an unproven—but nevertheless plausible—hypothesis.

The factors to find the distances from the nut to the frets for a temperament with a fifth of 699 cents are charted below. We will label it "699 cents temperament." As you will see in the column with the cents, each interval is much closer to that of equal temperament than to that of meantone temperament. But the major third is no longer pure, as in meantone temperament.

When these distances are realized on your lute (or on paper), you will see that the fret places B1 and B2, for example, are much closer to each other than in meantone temperament. You will also find, in the Laurencini "Fantasie," that the a* (produced by fret B1) can serve more tolerably for b♭ than the a# in meantone, especially since b♭ is required only once in the whole composition. In special cases you can try one of the possibilities discussed above: setting the
### 699 CENTS TEMPERAMENT

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### 698 CENTS TEMPERAMENT

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fret midway between the two places or in an oblique position; or using a temporary short fret section (which would work quite well for the g# in the Narváez piece).

If you would like to test a temperament between this one and meantone, you may use the following factors for a temperament in which the fifth is 698 cents. We will label it "698 cents temperament." Perhaps, for the sake of better sounding major chords, one can more easily tolerate the result that the half steps in this temperament will be more unequal than in "699 cents temperament."

Compared to the meantone temperament, a compromise between equal and meantone temperament has two advantages.

1) The fret positions are more comfortable for the left hand because they are closer to being regularly spaced.
2) The musical result is more acceptable to modern ears.

The following diagram shows fret positions for the temperaments discussed:

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<th>D</th>
<th>E</th>
<th>F</th>
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<tr>
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</tbody>
</table>

M – Meantone temperament ("696.6 cents temperament")
698 – "698 cents temperament"
699 – "699 cents temperament"
E – Equal temperament ("700 cents temperament")

Indeed, no ideal temperament exists for all occasions. Sometimes "699 cents temperament" is the optimum, sometimes meantone or "698 cents temperament," occasionally even equal temperament. Which is best depends on several factors, particularly on the tonal structure of a given lute piece. Now, at least, you will be able to experiment with different temperaments, and the knowledge can enrich your experience with the lute.
ECCENTRIC FORMS OF
THE GUITAR, 1770-1850

BY JOSCELYN GODWIN

If there are archetypes in the world of musical instruments, the guitar is certainly one of them. The familiar figure-eight shape has survived for over four hundred years, despite the opposition of those who thought that they could improve upon it. This article examines a few of the ingenious, if misguided efforts of guitar-makers between 1770 and 1850, the years that culminated in the work of Antonio Torres.

These eighty or so years have a strong claim to be the golden age of instrument making. They saw the final victory of the piano over the harpsichord and the development from the piano of Mozart to that of Liszt. The brass instruments were given valves, and the woodwinds most of their present keywork. The organ, for better or worse, became an orchestra in itself. Only the violin family and the harp remained unchanged. No wonder, then, that this era was rich in freaks and mutations, the results of an excess of creative energy.

Among the guitars, these freaks may be classified into four categories, according to the disposition of their strings: 1) guitars with added bass strings; 2) guitars with added treble strings; 3) guitars with added bass and treble strings; and 4) guitars with multiple necks. In treating these categories one by one, I omit the harp-lutes and lyre-guitars, which can be studied adequately in other sources. My sketches, while not by any means comprehensive, include most of the examples found outside of Anthony Baines’

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1Grateful acknowledgement is made to the Colgate University Ford Foundation Humanities Faculty Development Fund for assistance in the preparation of this article.

2For the lyre-guitar, see Stephen Bonner, The Classic Image (Harlow, Bois de Boulogne, 1972), and D. Fryklund, “Studier över lyragitarren” in Svensk Tidsskrift för Musikforskning, Vol. IX (1927), p. 117. For Edward Light’s harp-lutes and other instruments, see R. B. Armstrong, English and Irish Instruments (Part II of Musical Instruments) (Edinburgh, 1908), and D. Fryklund, Förteckn. över E. Lights mus. verk. (Hälsingborg, 1921). For Ventura’s variations on the harp-lute, see Bonner, Angelo Benedetto Ventura (Harlow, Bois de Boulogne. 1971).
European and American Musical Instruments, which is easily accessible and fundamental to any student of organology. Baines gives over sixty photographs of guitars and their variants to which I shall refer by plate number.

Guitars with added bass strings

The earliest guitars with extra bass strings stretched beside the fingerboard date from pre-Revolutionary France. The names of the two basic models, "bissex" and "décacorde," indicate the numbers of their strings: twelve and ten, respectively. The bissex was apparently invented by van Heck(e), and built by H. Nadermann, a Parisian harp-maker, in 1773. An example in the Paris Conservatory (Baines, 320, 321) bears the same date and looks like a lute with a rather unwieldy flat head bearing six levers that raise the pitch of the bass strings by a semitone—a refinement obviously borrowed from the pedal harp. The strings are tuned thus: six basses passing beside the fingerboard, tuned A' B' C D E F, and six strings over the fingerboard, tuned G A d g b e. The last five strings are, of course, those of the five-stringed guitar that was current at the time, while the first seven descend diatonically in the manner of the theorbo lute (which had up to eight courses off the fingerboard). The lower strings give a sonorous bass without necessitating extra fingering, and also make the playing of inversions simpler for amateurs who do not want to learn too many left-hand positions.

The name "décacorde" was given to two instruments from the extremes of the period in question. Examples of the older type by a Versailles maker named Caron survive at Yale University and in the Paris Conservatory, dated 1784 and 1895 respectively (see Baines, 322, 323, for the Yale décacorde). Mahillon mentions a model by Jean Baptiste Lejeune, bearing the date 1848, when it was apparently given to the maker's grandnephew. For the latter model he gives the tuning G A B^b C/d f A c' e' g, suggesting that the Caron models should be tuned likewise. This is certainly a novel tuning, quite unlike the guitar's but resembling that of the French arch-cittern that was popular in the later eighteenth century: A B c# d d# e' d e' a' e. Both the bissex and the earlier décacorde seem to have been immediately inspired by the


4Baines, pp. 53-54.


6Mahillon, p. 298.
arch-cittern, and share its lute-like shape. In that instrument the bass strings of the theorbo lute were adapted to the eighteenth-century cittern (or "English guitar"); it must have seemed logical to adapt them also to the true guitar. During the same decades Caspar Ferrari, a Roman maker, was doing the same to the mandolin. All of these adaptations may be seen as attempts to fill the void left by the decline and obsolescence of the theorbo lute.7

A nineteenth-century harp-guitar by Pasquale Vinaccia of Naples shows a different approach (see Figure 1). Here the bass strings are given further support and resonance through an elongation of the body (as sometimes occurred in the arch-cititers of Renault towards the end of the previous century), while the other side is decorated, for the sake of symmetry, with a turned bar similar to that found on certain mid-European zithers. But here the disposition of the strings departs from custom, and from logic: The bass strings go the wrong way, the lowest of them being the closest to the fingerboard. It is clear that fantasy, rather than practicality, inspired Vinaccia and many others of these instrument makers. They must have been building for people who wanted something new, elegant (to their taste), and easy to play; for people whose techniques would seldom be advanced enough for them to be worried by the essential clumsiness of these curious objects.

The same cannot be said of the instrument in Figure 2, which is certainly ugly but not impractical. It is a twentieth-century instrument known in Portugal as "violao-harpa" or "bandolim semilirado," and apparently is still in use as a folk instrument both there and in the Azores.8 Although it falls outside the 1770-1850 period, it is shown here to demonstrate that the theorbo guitar is not altogether extinct. The similarity of all its essential features with those of the instrument in Figure 1 is quite striking, the differences stemming only from the visual tastes of the respective periods.

Guitars with added treble strings

Whereas the addition of bass strings to the guitar turns it essentially into a theorbo, the addition of trebles, tuned diatonically and sounding above the e' string, makes it more like a psaltery—the diatonically-strung instrument much favored in the Middle Ages and later developed into zithers and dulcimers of all kinds. The practice


of adding such strings has a long history, dating from the later sixteenth century, as evidenced by the Tieffenbrucker “polyphant” (see the next section). It recurs in the Russian bandura (Baines, 196), with an unfretted neck and up to thirty-six trebles arranged over the asymmetrical body, and in the torban or Russian theorbo, a sophisticated version of the bandura popular around 1800. In all of these instruments it seems that the trebles were used melodically in order to avoid high positions on the fingerboard, while the left hand fingered accompanying chords that were strummed with the right thumb.

Very few guitars diverse from the norm by the addition of trebles alone. Baines, illustration 325 shows a guitar by Rafael Vallejo of Baza (Granada) made in 1788-92 that was apparently once the property of King Charles IV of Spain (1788-1808). It is a large instrument (102 centimeters in overall length) with six double courses of strings and ten extra wire courses that run across the belly. Its fanciful decoration suggests that it may have been a unique specimen made expressly to amuse the King.

The Milan Conservatory collection has a “chitarra-salterio.” an instrument of very different shape, in which the twenty-nine double courses are on the bass side (see Figure 3). It is hard to imagine this being played in any position other than horizontal, and almost impossible to imagine the playing technique, unless one is supposed to treat it either as a psaltery or as a double-strung guitar, but not as a combination of the two for practical purposes. The French “zithergitarre” in the Berlin Hochschule collection (Number 402) seems to be a close relative, with twenty strings on the expanded treble side. Sachs, in his catalogue of this collection, places it in the eighteenth century.9

A third variety. Number 2488 in the Brussels Conservatory collection, has no fewer than forty-one strings, tuned in two groups: strings 1-20, grouped in fours, give the chords of A, D, F, G, and C major; strings 21-41 give a scale from c' to c'', diatonic except for the addition of sharps for C, F, and G. This extraordinary creation of Messrs. Menzenhauer and Schmidt rejoices in the names “guitare-zither,” “guitare américaine,” or simply “La Merveilleuse.” But its only marvelous quality is that; as Mahillon says in his catalogue, “one could play it without preparatory study and without musical knowledge”; for it is even supplied with a method-book giving the music in a series of novel symbols, analogous to those used today for the electronic chord-organ. One plucks the melody strings

9Curt Sachs, Sammlung alter Musikinstrumente bei der Staatlichen Hochschule für Musik zu Berlin: beschreibender Katalog (Berlin, 1922) col. 175.
Fig. 1. Harp-guitar by Pasquale Vinaccia, Naples, nineteenth century (Copenhagen, Carl Claudius Collection, No. 204), strung 9/6 (see Footnote 10 for explanation of stringing symbols)

Fig. 2. Theorboed guitar ("violao-harpa") by Antonio Victor Vieira, Lisbon, twentieth century (from Instrumentos Musicais Populares Portugueses, p. 158), strung 5/6
Fig. 3. Psaltery-guitar ("chitarra-salterio"), late eighteenth century (Milan Conservatory collection, No. 267), strung $29^2/6^2$

Fig. 4. Polyphant (?) by Wendelin Tieffenbrucker, Padua, circa 1590 (Vienna, Kunsthistorisches Museum, No.C.67), strung $20/1+6^2+2/15$
with the right thumb, and the chords with the left hand—and hopes that a minor chord will not be required. I hesitate to class this invention as a guitar, but it demonstrates something of the amazing variety of hybrids, in this case between the guitar and the zither or autoharp.

**Guitars with added bass and treble strings**

The most ancient and mysterious example of a guitar with strings added on both sides of the fingerboard is the instrument by Wendelin Tieffenbrucker in the Vienna collection that was made in Paris circa 1590; it may well be a specimen, or at least a relative, of the "polyphant" which Queen Elizabeth I is said to have played (see Figure 4). Uniting the advantages of harp, lute, and psaltery, it must have been a fiendish instrument to master (and to tune); but no music survives to show what was played on it. It is not until the second quarter of the nineteenth century that one meets another such instrument. Figures 5 and 6 show two unsigned instruments from the Brussels Conservatory collection that each illustrate a different approach. The "guitare multicolor" was patented in 1832 by Charpentier and Munchs of Paris. Another specimen in the Berlin Hochschule collection (Number 2357) bears their label, but has the disposition 8/6/11,10 as opposed to the 6/6/9 pictured here in Figure 5. The curled horns of the fingerboard and right-hand side allude perhaps to those of the lyre-guitar, which was just reaching the end of its career. Most of these guitars have to be played in a vertical position, which precludes any real virtuosity. The other instrument (Figure 6) is supposedly of English origin and, like Figure 3, is more a combination than an integration of the two types. Part of it is tuned like an ordinary guitar, while the harp runs diatonically from A' to c''' with hooks provided for chromatic alterations. The small circles shown in my sketch are holes in the harp body about half an inch in diameter, some of which can be closed by ivory plaques; but this procedure would do virtually nothing to the sound. This instrument is reminiscent of the bizarre hybrids of harps and guitars made by Edward Light and A. B. Ventura in the second and third decades of the century.

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10 The disposition of the strings is shown throughout this article as follows: The digits represent the numbers of courses—the basses, the strings on the fingerboard, and the trebles being divided from each other by virgules. Courses are single unless indicated otherwise by a superscript. Thus, 5/1+5²/6 means "five single bass courses, a single fingered course (the lowest) and five double fingered courses, and six treble courses." In the case of guitars with multiple necks, the virgules separate the strings on each neck.
Fig. 5. "Guitare multicorde," Paris, circa 1832? (Brussels Conservatoire collection, No. 2490), strung 6/6/9

Fig. 6. Harp-guitar, English, nineteenth century (Brussels Conservatory collection, No. 1550), strung 6/31
Guitars with multiple necks

A guitar with two or more necks presents an entirely new problem to the player, who must now move the left hand not only up and down but also across the necks. Obviously this is not easy to do in the middle of a piece, since a mobile left hand will impair the stability of the instrument. One really wonders how some of the guitars in this category were meant to be held at all; a vertical position is almost inevitable for most of them (as was the case with the lyre-guitar, for physical as well as aesthetic reasons). The complexity of their construction is probably in inverse proportion to the difficulty of the music generally played on them.

To judge from the beauty of its decoration, the early double guitar shown in Figure 7 is a unique object made for a wealthy owner, as was the much later Vallejo instrument mentioned previously. It precedes the main period of these inventions, and differs from them in being a true "double guitar" rather than a single guitar with multiple necks.

Fig. 7. Double guitar by Alexandre Voboam, Paris, 1690 (Vienna, Kunsthistorisches Museum, No. 57 in Catalogue by J. Schlosser), strung 52/52
The variants that represent a single maker’s *jeu d’ésprit* can generally be distinguished from those that enjoyed some measure of popularity. At least three instruments similar to Figure 8 survive, each by a different maker, whereas Figure 9 is a unique specimen. Figure 10 again shows what may have been a more widespread model. It is a “harpolyre” of a type patented in 1829 by Jean François Salomon of Besançon. In 1806 one Le Dhui de Coucy-le-Château patented a “lyre organisée” with three sets of strings, 4/5/6, from which Salomon’s may have derived but of which I have found no example. The harpolyre’s three sets of strings are tuned: A B♭ B♭ c d♭ d e♭/E A d g b e'/c' d' e' f' g' a' b' c’.

They provide the combined advantages of extra basses and extra trebles. The chromatic basses obviate fingering on the A string (which for most people of the time, accustomed to the five-string guitar, would be the basses of any chord), and the trebles allow melodies to be played in psaltery fashion. The frets on the two flanking arms, therefore, are merely decorative, unless, as Baines suggests, they are for affixing capotastos. The technique of the harpolyre must have been similar to that of the instruments in Figures 4 and 5.

The triple guitar of Figure 11 is similar in looks to the harpolyre but different in function, since it is tuned like three guitars, each a third apart. This is obviously a transposing device. A triple guitar in the Berlin Hochschule collection (Number 2356) may have been tuned the same way, although its shape is different: Sachs describes it as having “separate necks, but the bodies joined progressively, so that the whole body rather gives the impression of an egg placed diagonally.”

Finally, there is another triple guitar in the same collection (Number 2388) which Sachs describes as: “A narrow pyramid with three sprucewood sounding boards; the purfling and the edging of the ten triangular sound holes are inlaid with ebony and mother-of-pearl. It is crowned with a brass ball containing a complicated screw-arrangement, supposedly to achieve a very fine tuning. The three surfaces hold: (1) five high strings and seven bone frets, (2) six lower strings and seven bone frets, (3) five bass strings. They are all fastened to diagonal bridges placed at various heights.” This sounds like a guitar maker’s answer to the problems of “what to give the Man Who Has Everything.”

11 This information is from Fryklund, “Studier över lyragitarren,” cited in Footnote 2.
12 Sachs, col. 176.
13 Sachs, col. 176.
Fig. 8. Double arch-guitar by Savains, Paris, circa 1783 (Brussels Conservatory collection, No.1534), strung 5/5/3/5

Fig. 9. Double harp-guitar by John Frederick Grosjean, London, circa 1840 (London, Victoria and Albert Museum, No.201-1872), strung 6/6
Fig. 10. Triple lyre-guitar by Salomon, Besançon, after 1829 (Berlin, Staatliche Hochschule für Musik collection, No.2370), strung 7/6/8

Fig. 11. Triple guitar by Georg Heidegger, Passau, 1850 (Copenhagen, Carl Claudius Collection, No.189), strung 3/6/6/6
A study of the music that was played on these variant instruments would be welcome, but the difficulty of compiling it would hardly be justified by the results. None of the eccentric guitars lasted long enough to attract the attention either of virtuosi or of first-rate composers. The repertoire of these instruments is found in rare and occasional publications and in tutors, often produced and even composed by the inventors of the instruments to promote sales. The phonograph record of songs and pieces by A. B. Ventura in Stephen Bonner’s book on Ventura shows a lamentable lack of musical inspiration on the part of an otherwise ingenious man. But a study of the instruments themselves is really more illuminating, if what one desires is a better understanding of one’s ancestors. A glance at these illustrations can tell one much more about the mentality of the “romantic bourgeois” than would a prolonged study of the trivial music that was probably all he could play on them.
REVIEWS

Books


The musician who pays even passing attention to booksellers' announcements cannot help but be struck by one publishing trend that has become increasingly important to the musicological world. This is the noticeable upsurge of activity in the field of facsimiles and in the republication of long out-of-print editions. Today the interested reader can obtain with relative ease (often, however, at a considerable price) copies of everything from medieval musical codices to nineteenth-century bagpipe tutors. Although the lutenist so far has not been particularly well served by this publishing phenomenon, indications suggest that things are rapidly improving. In addition to the beautiful Boethius Press editions of English lute manuscripts reviewed elsewhere in this Journal, lutenists will be glad to hear of the German enterprise operating under the elegant Latin title "Institutio pro Arte Testudinis" that has announced the publication of a large number of Renaissance and baroque lute prints. Among those involved in this project are Peter Päffgen (who has provided a Nachwort to the Newsidler edition) and the well-known German lutenist Michael Schäffer.

The first two editions are now available and may be purchased in either cloth or paperback formats. Although some evidence of penny-pinching is apparent, the publishers are to be congratulated for their efforts to keep costs down in this inflationary age. The announced price for each volume is approximately $7.25 in paper covers or $10.25 in cloth. Both books are small oblong octavos printed to suggest the physical characteristics of the original. The quality of the paper is excellent, even if the bindings don't appear to have been designed to stand the test of time.

Actually, only one adverse criticism can be made about these two editions. Apparently the publishers made use of the most readily available copy of the original edition for reproducing, rather than
searching for the cleanest surviving print. This is somewhat unfortunate for the reader. For the Newsidler, the publishers have used the copy in the Herzog August Bibliothek in Wolfenbüttel. Certain pages of this copy are faint compared with the microfilm of the Library of Congress copy in the Lute Society of America collection. The Bittner, taken from the Bibliothèque Royale (Brussels) original, likewise contains passages that are practically unreadable. It is a pity that some attempt was not made to improve the image in such places. Fortunately, the vast majority of the music in both volumes is easily discernible.

To launch their commendable project, the publishers have chosen two particularly interesting lutebooks. Hans Newsidler was born in 1508 in Pressburg on the Austro-Hungarian border. His Ein Newgeordent Künstlich Lautenbuch was the first in a series of some eight lutebooks published in Nuremberg between 1536 and the composer's death in 1562. Like Hans Gerle before him, Newsidler in his lutebooks shows himself to have been highly interested in pedagogy. The music is an attractive mixture of German song settings, "Preambels," and dances often displaying peasant-inspired characteristics.

Practically nothing is known about Jacques Bittner, whose one known collection contains ten suites for baroque lute in the refined French style and is dedicated, in an Italian inscription, to a German nobleman. Apparently Bittner was a particularly cosmopolitan musician. According to Ernst Baron (in his Untersuchung), Bittner's book was published in Nuremberg, although no place of publication appears on the title page. Bittner's music displays considerable charm and deserves to be better known. Hopefully this new edition will make his music more accessible to the ever-growing number of modern baroque lutenists.

The lute community will anxiously await further volumes in this series eventually to include facsimiles of Hans Gerle's Musica Teutsch, Jean Baptiste Besard's monumental Thesaurus Harmonicus, and the collected lutebooks of Esajas Reusner.—Peter Danner


When the Boethius Press of Leeds, England, first announced its intention to publish several heretofore little-known lute manuscripts in facsimile, I was intrigued to know who might be the idealists
behind the project. This is the type of enterprise in which only rich dreamers could indulge. The first three works are now in front of me, and I find it difficult to express my delight with them and with the knowledge that such idealists as Richard Rastall and Leslie Hewitt still exist on our crass commercial planet.

The first three editions are the Mary Burwell Lute Tutor, the Turpyn Book of Lute Songs (King’s College Cambridge Rowe MS2), and the Sampson Lute Book (formerly known as the Tollemache Lute Manuscript). They are a rare treat to behold, especially the Turpyn, which has a special fascination for me for reasons to be explained below.

As the above statements imply, the physical appearance of the books is most impressive. They are bound in what appears to be leather, each in a different color. The titles on the covers are embossed in gold leaf, rendering the whole package luxurious. These are exquisite examples of the bookmaker’s art—a nearly extinct craft. Boethius’ aims are lofty and the editors have shown great respect for the original manuscripts, even (in the case of the Turpyn) for the blotches, stains, doodles, and blank pages. The advertising brochure reads in part as follows:

The copy is made to look as like the original in its present condition as is reasonably possible. Aging, damp-stains and other marks are carefully printed on to the paper before the musical material is printed. Pencilled markings, library stamps, etc., are then added, using appropriately-coloured inks: thus they are clearly distinguishable for what they are. We believe that the word “facsimile” has been debased by its use, over a long period of time, for photographic reproductions that are not at all “like the original”: and we try to make ours live up to the true meaning of the word.

This interpretation of “facsimile” sounds a bit dogmatic to me. By including prefaces, indexes, fancy covers, and logos, the editors have not adhered to the strict meaning of facsimile, “an exact reproduction or copy,” and perhaps therefore they should have spent more time on their prefatory material and less on meaningless smudges, blotches, and the wrinkles of old age. Better and more complete editing could have made these works infinitely more useful.

The Turpyn Book is a good example of one that could use more prefatory material. The texts of most of the songs are written in an old, archaic, and nearly illegible hand. Most readers certainly will not be able, without considerable research, to make sense out of the texts; thus, the exquisite and expensive facsimile will have value only to collectors and will be musically unusable. Since the editor of the
Turpyn Book, Richard Rastall, seems capable of reading the old script, it would have been a kindness for him to give the poems in print in the preface or in an appendix, not necessarily even changing the old spellings or contractions. The songs themselves are a marvelous selection of something old, something new, and something borrowed. The “oldies” by Dowland are given a new twist: The rhythms are changed, the melodies slightly varied, and the accompaniments livened up a bit. “Can she excuse” is given a whole new approach to its rhythm that often deserts the galliard for the coranto; it seems decidedly to have been influenced by the version in the Seven Teares collection. (The fifth note of the melody, by the way, is flatted! ) Some of the songs use a C clef and the melody does not match the lute part in G tuning. This has prompted the editor to state that the lute should be tuned in D to agree with the voice. However, a clef is chosen to keep the most notes possible on the staff, ledger lines being a nemesis to both printers and singers. If the singer knows the first note, it does not matter much what the clef is since singers of the period sang by intervals. When a mismatch occurs, the singer’s first note is often given in tablature slightly before the lute part begins so that the accompanist can cue the singer. Perhaps the editor missed seeing these little tablature cue notes. Most of the songs in the collection are extraordinary, especially the long, poignant “Pandolpho” of Robert Parsons. Some lovely anonymous songs are “Miserere my Maker,” “Sweet youth, go bruise thy pillow,” “Seest thou not man today,” and the rowdy “Most men do love the Spanish wine,” the only song of the period I know that is a bass line.

The Sampson Lute Book is a collection mostly of diminution pieces for one and two lutes; it also includes some consort parts and a few solos. Often, however, the second lute part in the duets is missing (or more properly, was never included in this volume) and must be located in a different place. An introduction does tell where to find these parts, so the book is useful if you are willing to do a bit of hunting. Here again, the edition could have achieved a greater value by the inclusion of the missing duet parts. It would indeed be a further departure from the pure facsimile approach, but everyone would welcome it. The solos in the manuscript are very fine and include excellent versions of pieces such as “The Quandran pavin,” “Mrs Whites choice,” “The Levecho pavin,” and an interesting setting of a song by Sir Thomas Wyatt, “Heaven and earth.”

Although many readers are familiar with the Burwell Lute Tutor through Thurston Dart’s monograph published by the Galpin Society in 1958, the work takes on a new meaning when seen in the original. For one thing, the music, which was presented by Dart in a
drab transcription, is more understandable and playable when seen in the original tablature. These musical examples, probably in her teacher’s hand, are what gives the work a strong focus. The tutor is a valuable document that tells us about more than the vogue of lute playing in mid-century England. It tells us quite a bit about the *école précieuse* and the aesthetics of French music. Indeed, it signals the quality of one hundred years of baroque lute music to come. This is in addition to the excellent technical advice she has for lutenists. To anyone interested in pursuing the baroque lute, the tutor is must reading.

The Boethius Press is to be commended for its important work, and I anxiously await the remainder of the projected volumes.—*Stanley Buetens*

**Recordings**

BAROQUE LUTE RECITAL, VOL. I. Toyohiko Satoh. Klavier Record Co., KS514. Allemande “Tombeau de Vieux Gallot” and Rondeau “La Montsermeil” in A minor, Courante and Sarabande in D minor, Robert de Visée; Lute Sonata in D minor (Prelude, Allemande, Courante, Sarabande, and Gigue), Fantasia in C minor and Chaconne in G minor, Sylvius Leopold Weiss; Gavotte and Two Minuets from E Major Suite [BWV996], and Fugue in G minor [BWV1000], J.S. Bach.

BAROQUE LUTE RECITAL, VOL. II. Toyohiko Satoh. Klavier Record Co., KS528. Toccata VI and IV, Tenore Detto il Mercatello, Alessandro Piccinini; Gigue and Double de la Gigue, Allemande, and Chaconne, Robert de Visée; Folia d’Espagne, Anonymous; Allemande “La Polonoise” and Courante “La Belle Homicide,” Ennemond Gaultier; Menuet I and II, Sarabande, and Bourrée, Sylvius Leopold Weiss; Le Drôle and Trio, Ernst Gottlieb Baron; Loure and Gigue, J. S. Bach.

Toyohiko Satoh’s recordings are, without doubt, very technically skilled and he presents a musically tasteful performance. He must be applauded for his work (not to mention that of his teachers Messrs. Dombois, Wentzinger, and Minagawa). Satoh’s playing is crisp, clear, and beautifully ornamented. The use of *notes* *inégales* convinces the listener that the performer knows very well the French baroque lute school, a rarity among soloists of the plucked stringed instruments of this century. Satoh plays with great rhythmic vitality and never leaves us with the feeling that we would want to listen only once. He skillfully applies dynamic and ornamental variations appropriately. Little can be found to disturb the listener-performer or musicologist. The recordings provide eighty minutes of exemplary performance and are certainly deserving of
our collective applause. Our thanks should go too for the fine recording that is carefully “miked”—somewhat “tight” in certain selections, but not so much that we are aware of extraneous sounds.

Liner notes are important for those members of the listening audience who may be interested in obtaining information. Unfortunately, the notes on Volume I represent one piece of misinformation after another. The authors of these notes, Messrs. Hamada and Belanger, tell us that the lute has been the progenitor of a whole string of instruments (pun intended) such as the violin, the viola, the guitar, and so forth. They failed to note that the term viola was a generic term given to all stringed instruments since medieval times and that a particular kind of stringed instrument was distinguished by the following terms—da braccio, de arco, da gamba, de pendola, de mano, and so forth. They tell us that the harpsichord developed from the lute, when in fact the French keyboard players of the seventeenth century adopted only the style of the lute music to their instrument.

When Hamada and Belanger discuss the lute, one seriously wonders about their sources of information. Their statement that “extra necks and fingerboards” were added is entirely erroneous. One neck sufficed because generally no more than eight or nine courses were fingered, the remaining courses being diatonically tuned and played open. There were as many as three peg-boxes to accommodate the strings but all derived from the main neck. In their statement that Satoh uses a “rare” fourteen-course lute, it should have been pointed out that music for the fourteen-course lute is also extremely rare. Piccinini’s music as recorded on Volume II is the most important.

Further information and erratas are needed on the liner notes of both recordings. On Volume I, the works by de Visée will be found in both the Besançon manuscript and the printed work Pièces de théorbe et luth . . . Paris, 1716. The sonata by Weiss is not recorded in its complete form. It is listed as Weiss’ second sonata in the Dresden manuscript.

In Volume II, Douglas A. Smith, author of the liner notes, gives more accurate information as well as some sources for the works being performed. However, the following should be noted: The “Allemanda ‘La Polonaise’” is the “La Polonaise Allemande Boquet.” This “Allemande” and the “Courante ‘La Belle Homicide’” are found in the CNRS Edition Œuvres du Vieux Gaultier (1966), pages 7 and 22 respectively.1 Satoh has taken

Baron's "Le Drôle et Trio" from Teleman's Der getreue Musikmeister\(^2\) (1728). A modern edition may be found in the Hortus Musicus collection, Series 9, Volume 4. Baron's "Le Drôle et Trio" forms a part of his Suite in D Major and not in A Major as the liner notes indicate. The "Menuet I" and "Menuet II" and "Bourrée" complete the recording of Weiss' "Sonata II" found in Volume I. The "Sarabande," which on the recording follows the "Bourrée," is taken from Weiss' "Sonata XV."\(^3\)

One obvious error still remains unmentioned: The photograph of the artist on Volume II is reversed.

However, above and beyond the inaccuracies in the liner notes, Klavier Records must be commended for producing a first for the lute-listening audience. The contents and the performance found in both albums are excellent.—Ron Purcell, David Lyons

\(^2\)It is worthwhile to note that the original edition of Teleman's Der getreue Musikmeister also includes a "Presto" by Weiss in tablature.

\(^3\)The liner notes incorrectly list the sequence as Menuet I and II, Sarabande, and Bourrée.


Like a Puccini opera, this record sounds better than it is. Without knowing why, the listener will be fascinated by the strange sounds emanating from his speakers. However, the unprepared listener, which must include everyone, will require a long time to acclimatize himself to these highly unusual arrangements, probably the first such in recorded history. The cittern family is the theme or subject of the disc, but it would be understandable if the average early-music buff never expected what he will find here.

The first impression communicated by this record is that the sound is delightful, the second impression is that the music lacks guts, the third that it is a bit precious, and the last that it is boring. This latter impression is due no doubt to the sameness of the arrangements. Although the music is a mishmash of periods, styles, and nationalities, it all ends up sounding alike. In addition, no information is given about the composers, sources, or the original format of the compositions. Another problem is technical: The recording sounds as if it were made in a well-carpeted and draped telephone booth. This kind of lifeless sound insures clarity but sacrifices much to achieve it. The stereo balance is also poor, and I
had to jump up frequently to adjust it to hear a softer instrument.

Although this is a "cittern" record, not one piece on it, to the best of my knowledge, was originally intended for citterns. With the large literature of cittern music in existence, one would certainly expect a few original versions of pieces. The music consists merely of arrangements of consort music for "citterns" and various other instruments such as viol, cornetto, recorder, and percussion. There is a great deal of percussion on this disc, much of it giving the impression that the phonograph arm is skipping. High, twangy, plucked sounds predominate, leaving a large gap in the bass. Ensemble music such as this needs a strong bass to hold it together, but unfortunately it is lacking here.

The "citterns" on this record are actually mandolins, mandolas, and mandocellos in disguise. Someone could perhaps convince me that mandolins are similar to citterns, but I don't want to be told that they are citterns. For example, on Side Two the second band is called "Three Lute Pieces" (by Dowland and Pilkington), and underneath is written "performed by 3 citterns," and under this in parentheses, "mandolin, mandola, and mandocello." Really now!

Anthony Holborne is heavily represented here with five pieces including his famous "Lachrimae Pavin" ( ! ), but not one of the five comes from his Cittharn Schoole of 1597. This is hard to understand.

In spite of everything, the record fares better than it ought to, and many may find it delightful if they stick with first impressions. Some of the ensemble playing is shaky, but as a player in a lute quartet I am inclined to forgive this. In fact, I am glad to learn that others also have difficulty in putting plucked instruments together. I hope that the director, John Curtiss, will try again someday with "real" citterns and "real" cittern music.—Stanley Buetens
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