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Thorough Bass Realization

*Del suonare sopra il basso: Concerning the Realization of Early Seventeenth-Century Italian Unfigured Basses**

Thérèse de Goede-Klinkhamer

In this paper a number of thorough bass realizations in modern editions of early 17th century Italian music are compared with the rules for harmonization, voice leading, *musica ficta*, and performance practice as laid down in treatises from the same period.¹

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¹ For this comparison fragments have been selected from modern editions of the following: Lodovico Viadana, *Cento concerti ecclesiastici* (1602); Dario Castello, *Sonata seconda* (1629); Girolamo Frescobaldi, *Canzona La Superba* (1628) and *Aria di Romanesca* (1630); and Paolo Cima, *Sonata* (1610).

A thorough bass player, confronted with early 17th-century unfigured basses, will generally try to work them out by looking at the solo part over the bass. In many cases it is clear which chords must be played. However, in cases in which the intervals between the bass and the melody leave us puzzled as to which chords to play, a number of questions may be asked, i.e.:

Is a root position or 6th chord appropriate?

Does the chord require a major or minor 3rd?

Which dissonant chords may be played?

Other questions concern the texture:

How high should the right hand play?

How full should the chords be?

To what extent might the solo part be doubled?

When and how often should passage-work or ornamentation be utilized?

Finally there are troublesome questions regarding accidentals and the (allowable or forbidden) *mi-fa* relations. These problems are particularly prominent when one plays from a facsimile, where (aside from printing errors) uncertainties may be present.

Most thorough bass players approach a thorough bass part, including a 17th-century bass, from the point of view of functional harmony. This is probably due to the fact that, although figured bass playing had already almost disappeared by the 19th-century, harmony instruction since that time has continued to utilize thorough bass figuring to represent chords. Hugo Riemann, for one, used thorough bass exercises to demonstrate functional harmony.²

This approach persists in modern editions, leading to realizations that resemble the style of the 18th century (or later) rather than that of the 17th century. For example, one finds sixth chords used far more frequently than was customary in 17th-century compositions. False relations are often not accepted—indeed, they are often

² Hugo Riemann, *Anleitung zum Generalbass-Spielen* (Berlin, 1889).

thought to be printing errors that need correction. Chords may be introduced that lie outside the context of the 17th century, while other progressions typical of that time tend to be avoided. Cadences on final notes may not receive a major third (which they should have, according to the rules). And parallel fifths and octaves may be avoided, even though theoretically they were acceptable.³

Until now, much less has been available concerning 17th- than 18th-century practice. A number of 17th-century authors did write about thorough bass in the prefaces of their printed collections, but the number of treatises devoted entirely to this topic is small indeed. Moreover, the treatises that do exist are quite concise compared with those of the 18th-century. To take two extremes, Heinichen's treatise of 1728 runs almost 1000 pages, whereas Bianciardi's of 1607 fills but a single (large) page! The conciseness of the earliest treatises is related to the fact that the thorough bass player was supposed to possess a good knowledge of counterpoint and of the rules to play "from the bass" (*sopra la parte*). The treatises were, above all, intended to serve as books of practical instruction. Thus, Penna could write (in the introduction to his third book):⁴

... and does not everybody know that Counterpoint is the Theory of Music, and playing the Organ from a bass part is the Practice of it; therefore before the latter is done, it is necessary, although not sufficient, to learn the former.⁵

For those who wanted to learn counterpoint (and composition) it was by no means difficult to locate textbooks. Large numbers of trea-

³ As is indicated, for example, in Viadana's rules for his *Concerti ecclesiastici*, as cited by Frank Thomas Arnold in *The Art of Accompaniment from a Thorough-bass as Practised in the 17th and 18th Centuries* (London, 1931). See p. 18 in the edition of 1961 (London: The Holland Press). "The Organ part is never under any obligation to avoid two Fifths or two Octaves, but those parts which are sung by the voices are." (. . . che non sarà mai in obbligo La Partitura guardarsi da due quinte, nè da due ottuave, mai sì bene le parti, che si cantano con le voci.")

⁴ Lorenzo Penna, *Li primi albori musicali* (Bologna, 1672, 5/1696). The third book is entitled "li Fondamenti per suonare l'Organo ò Clavicembalo sopra la parte."

⁵ " . . . e chi non sà, che il Contrapunto è la Teorica della Musica, & il suonare l'Organo sù la Parte, è la Pratica di essa; dunque prima di questa è necessario, se bene non simpliciter, non di meno secundum quid l'apprender quella."

tises on counterpoint were available both before and after the publication of Zarlino's renowned *Le istituzioni harmoniche* (1558), still considered to be the standard guide into the 17th century.

During the period preceding that in which organ players began to play thorough bass, it had been customary for the accompanist of vocal polyphonic compositions to compress the different parts of the piece onto staves (*intavolatura*) or to convert them into an organ tablature. In this way the parts of the composition were duplicated in the accompaniment. Since by the end of the 16th century compositions had become increasingly complex, and the number of parts greater, organ players turned to playing from the bass line only. These basses were unfigured, with at most some sharps and flats added to indicate whether the third needed to be major or minor.

Thanks to their knowledge of counterpoint, organ players were able to judge which harmonies they had to play from the way the bass progressed. However, due to the absence of figures, they must have frequently played the wrong chords. Since many composers no longer composed in strict *stile antico* but began to incorporate the new freedoms of the *stile nuovo* (in which the rules of counterpoint no longer applied in all cases) mistakes became more likely. Otto Kinkeldey brought to scholarly attention a number of excerpts from the prefaces of organ basses.⁶ From these it becomes apparent that not all composers were equally enthusiastic about the new invention. In fact, right up to the second decade of the 17th century there were composers who preferred to have their pieces accompanied from an *intavolatura*, which they themselves sometimes provided. Others were not against "playing from the bass" *per se*, but declined to have their basses published with figures, because (as Piccioni says in his Preface):⁷

... this causes confusion with the organ players who do not know them, while the knowledgeable organ player does not need them. organ players who are not experienced in playing from the thorough bass [*basso seguito*] had better make an *intavolatura*.

⁶ See Appendix no. II of Kinkeldey's *Orgel und Klavier in der Musik des 16. Jahrhunderts* (Leipzig, 1910/R1984).

⁷ Giovanni Piccioni, *Concerti ecclesiastici à 1-8 voci con il suo Basso seguito* (Venice, 1610), cited by Kinkeldey, pp. 224-5.

Still others added to the bass the top part of a piece as an extra help, as did Giaccobi.⁸

To the thorough bass with the usual signs for the accidentals I add the highest voice; this is not because the organ players should continuously play this part, but because one can accompany the singer better if one has his part before one's eyes.

The Preface of Cima (who also added a solo line to the bass part) is especially informative:⁹

In many places in the organ part embellishments are written as they are in the solo part; I have written it in this manner to make the style clear; it very much helps the singers if the embellishments are also played on the organ, but I think that it is better to play only the general line of the melody [*il fermo*].

It becomes clear from this description that the time was ripe for the appearance of thorough bass treatises. In Adriano Banchieri's Preface,¹⁰ it is announced that within a few days (!) Agazzari's treatise will be published.¹¹ In the same year Bianciardi's *Breve regola* appears and in 1611 Banchieri's *L'organo suonarino*. As mentioned above, the first thorough bass treatises contain mainly practical instruction. For the modern player, who as a rule has but little knowledge of counterpoint, they are rather incomplete in some respects. Therefore, I will summarize a number of rules from the earliest treatises and supplement these with the most important regulations concerning counterpoint from the following treatises: *Cartella musicale* (1614) by Banchieri; *Syntagma musicum* (1619) by M. Praetorius;

⁸ Giralomo Giaccobi, *Prima parte de Salmi concertati a due e piu chori* (Venice, 1609), as cited by Kinkeldey.

⁹ *Concerti ecclesiastici a 1-8 voci* (Milan, 1610). I express thanks to Alfredo Bernardini, who kindly translated this text fragment for me.

¹⁰ Adriano Banchieri, *Ecclesiastiche sinfonie à 4* (Venice, 1607), as cited by Kinkeldey.

¹¹ Agostino Agazzari, *Del suonare sopra 'l basso con tutti stromenti & dell' uso loro nel conserto* (Siena, 1607; 2/1608), as reprinted in Kinkeldey (216f.).

Tractatus compositionis (c.1650) by Christoph Bernhard;¹² and *Li primi albori musicali* (1672) by Penna. For information on early thorough bass the latter treatise may seem a bit late. But it remains quite relevant, since in addition to the basic rules (which are actually the same as those in the earlier treatises), it describes the innovations in performance that are already apparent, for example, in the lute tablatures of solo arias prepared by Giovanni G. Kapsberger (1612). This indicates how far theory sometimes lags behind practice.

The Ground Rules

In practically every treatise the first rule is the same, *viz.*

Play consonances on every bass note.

Penna formulates it thus:

The first rule. The playing must be full of harmonious consonances, namely the unison, the third, the fifth, or the sixth, the octave, and their doublings.¹³

Example 1. Lorenzo Penna, *Li primi albori musicali*.

Prima Regola.

Che il suonare sia pieno di Consonanze armoniose, cioè, che vi sia l'uno, terza, quinta, ò sesta, ottava, e loro replicate.

Esempio.

The musical notation shows two staves. The top staff is in C major (one sharp) and the bottom staff is in F major (two flats). The notation includes numbers 17, 19, 22, 15, 14, 12, 8, 5, 3, and 1, which correspond to the notes of the scale and their octaves. The example illustrates the first rule of playing consonances on every bass note.

Si avverta, che la Nota fondamentale, ò di fondo, cioè quella della rigata di sotto, e li suoi numeri servono per la mano sinistra, e la Nota della rigata di sopra con li numeri di sopra servono alla Mano destra; li come tutti li numeri, e di sopra; e di sotto si contano dalla Nota di fondo, ovvero dalla sua ottava.

¹² J.M. Müller-Blattau. *Tractatus compositionis*; in *Die Kompositionslehre Heinrich Schützens in der Fassung seines Schülers Christoph Bernhard* (Leipzig, 1926).

¹³ "Prima regola. Che il suonare sia pieno di Consonanze armoniose, cioè, che vi sia l'uno, terza, quinta, ò sesta, ottava, e loro replicate."

In Example 1 we see in the upper stave the lowest notes for the right hand and numbers above them which indicate the notes to be played, these being determined from the bass note in the lower stave (the same is true for the left hand). Penna continues:

All notes in the bass are accompanied by thirds, fifths, or their doubling, with the exception of *mi*, on which usually a third and a sixth, or their doubling, is taken, but rarely the octave. Exceptions to this rule must be indicated with figures.¹⁴

Penna then explains that *mi* in the keys without a *b* at the beginning of the stave (*per 4 quadro*) are *B* (*B fa 4 mi*) and *E* (*E la mi*) and in the keys with a *b* (*per b molle*) are *A* (*A la mi re*) and *D* (*D la sol re*). On *mi* the first note of a half tone step *mi fa*, generally a sixth must be played in order to avoid the diminished fifth. It is remarkable that Penna, unlike other authors (for instance Bianciardi and Ban-chieri), does not mention the *E* as *mi* in the key with *b*, since the flat in this key produces a diminished fifth. It is also remarkable that the point of departure remains the notational system of keys with and without *b* and that the hexachord names are still in use, while at the same time the positioning of *mi* on *D* (in other words with *E* as *fa*) indicates a widening use of various keys.

The word "consonances" is used instead of "chords." It is as if all voices accompany the bass individually, and they do so in predominantly consonant intervals with an alternate use of the fifth and the sixth, while the third and the octave accompany both the fifth and the sixth. (The sixth chord is not seen as the first inversion of the root position; words like root position and first inversion pertain to functional harmony, and they are not used until the 18th century.)

In harmony dissonances are a necessity too, for, as Zarlino writes:

With the help of dissonances we can proceed from one consonance to the next, and furthermore a dissonance makes the

¹⁴ "Che ogni Nota di fondo si accompagni di terze, e quinte, ò loro replicate; mà di raro di dal'ottava al mi; se si dovrà far altrimenti, farà segnato con il numero." The large number of figures per chord does not necessarily mean that the accompaniment should always be entirely full. At the end of his treatise Penna gives precise instructions as to the number of parts in the accompaniment, ranging from one part to many.

next consonance sound more agreeable. For then the ear appreciates and hears the consonance with more pleasure, as light pleases us more after it has been dark and as something with a sweet taste is more delicious when it has been preceded by something with a bitter taste.¹⁵

During this period, then, harmony is the result of the layering of melodic lines on top of each other. This does not mean that composers were not conscious of the harmonic (vertical) result or did not pursue certain objectives in this respect. Particularly during the period in which "the consonances and the harmony as a whole were amenable and subordinate to the words, and not the reverse,"¹⁶ harmony was used to depict affects. This is noticeable in the increasing use of harsh tone combinations and wrenching dissonances.

When the Bass Ascends a Fourth or Descends a Fifth

The second rule usually deals with the various forms of cadences, and it begins with the most common form, *viz.*: when the bass ascends a fourth or descends a fifth, the first bass note always gets a major third, even when it is not indicated with a # above the bass note. This rule not only applies in cadences, in other words at the end of a musical sentence or of the whole piece, but also at other points in the composition. It derives from the contrapuntal rule that every perfect consonance (unison, fifth, and octave) has to be approached from the nearest imperfect consonance (third or sixth).

Bianciardi gives a particularly instructive example, in which the first two rules are clearly illustrated. (See Example 2.) In bars 2, 3, and 11 we see the major third when the bass ascends a fourth and when it descends a fifth without there being a pronounced cadence. Also, we notice in bars 4, 5, and 9 parallel fifths (Viadana had already written in 1602 that "the organ part is never under any obligation to avoid two fifths or two octaves [in succession]."¹⁷

¹⁵ Gioseffe Zarlino, *Le institutioni harmoniche* (Venice, 1558), Book III, trans. by Guy A Marco and Claude V. Palisca as *The Art of Counterpoint* (New Haven, 1968), 54.

¹⁶ As Agazzari indicates, p. 5 of the original and in Kinkeldey p. 217. Also cited in Oliver Strunk, *Source Readings in Music History* (New York: Norton, 1950), 426.

¹⁷ Arnold, *Art of Accompaniment*.

Example 2. Francesco Bianciardi, *Breve regola* (Siena, 1607).



Example 3 shows a realization by Willi Apel of a *Concerto ecclesiastico* by Viadana.¹⁸ All sources emphatically state that if the bass leaps, consonances must be played on each bass note, even if the bass is written in small note values. Apel, however, keeps the chords stationary while the bass descends a fourth so that a six-four chord arises. In addition the thirds are not sharpened in these bass progressions.

¹⁸ Willi Apel and Archibald T. Davison, *Historical Anthology of Music* (Cambridge, MA, 1946/R1950), vol. 2, p. 4.

Example 3. Lodovico Viadana, *Concerto ecclesiastico* (as realized by Willi Apel)

Ex - au - di me Do - mi - ne, ex - au -

di me Do - - mi - ne, quo - ni - am be - nig - na est

The multi-part *Concerti ecclesiastici* by Viadana¹⁹ and Bianciardi's example show clearly that, even though they contain more complicated features than the examples in the treatises for beginners, this "beginners' knowledge" nevertheless still forms a regular feature of the compositions and is therefore not made invalid in actual practice (and it rarely is as a result of modernisms).

In Example 4 I offer my own realization of the first few bars of the Viadana example cited above.

¹⁹ Certain of these concertos for three or more voices can be found in Arnold, *Art of Accompaniment*, 25-33.

Example 4. Viadana, *Concerto ecclesiastico* (as realized by the author)**When the Bass Ascends a Fifth or Descends a Fourth**

In this case (according to the rules) a *terza naturale*, or in other words, the third belonging to the actual scale of the piece, has to be played on both notes. In most cases it turns out to be the minor third on both bass notes. But if it appears at the end of a piece, i.e. forming a plagal cadence, then the final bass note receives a major third. Penna gives much attention to this cadence; on p. 158, after having formulated the rule described above, he gives instructions about how (in this progression) the right hand can make a connection from the chord above the first bass note to the chord above the second, namely through an augmented fourth and a major sixth. An augmented second is created between the minor third above the first bass note and the augmented fourth above the second bass note. The augmented fourth functions as an added leading note. (See Example 5).

Example 5. Penna, *Li primi albori musicali* (one of his four orders of cadences)

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L I B R O

Seconda Regola.

1. Esempio.

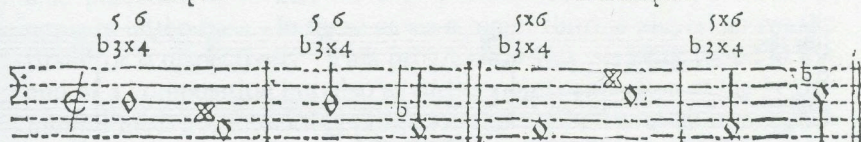
2. Esempio.

Quando la Nota, che cala di quarta in giù, ò ascende di quinta in su, farà di una battuta, ovvero di mezza battuta in tempo minore, si potrà fare li seguenti accompagnamenti, essendovi molto tempo cioè: Prima si facci la terza Minore con quinta, mà mai terza Maggiore; (se non fosse segnata) doppo quarta Maggiore & testa Maggiore, formando un trillo sù l'ottava, & nona, & un'altro Trillo sù la quarta, & quinta, e nell'ultima nota formi un altro Trillo sù la quarta, & terza Maggiore, calando doppo seconda, & terminando in terza Maggiore, ò Minore. & quinta.

Esempj.

1. Esempio.

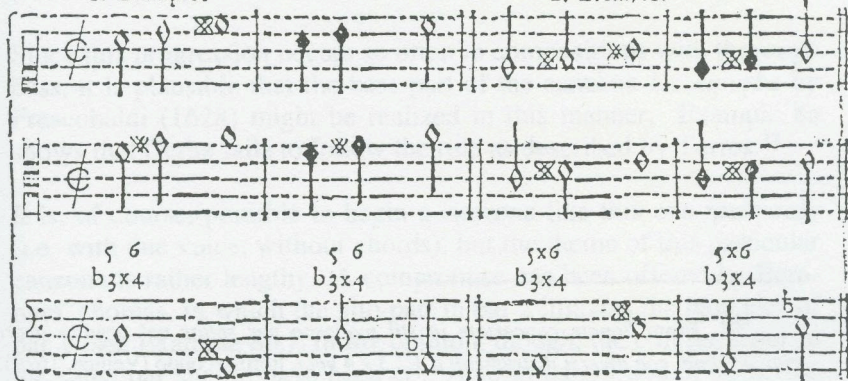
2. Esempio.



Prattica sù le Note pure.

1. Esempio.

2. Esempio.



An example of a cadence like this one can be found at the end of the *Sonata seconda* by Dario Castello.²⁰ Example 6 shows a realization by Friedrich Cerha.²¹ The augmented second is played by the violin in 8th notes in the middle of a virtuoso figuration above a bass note which remains immobile during five bars. The realization by Penna, described above, applies well here, for example on the bass note marked with an *, where the chord *g-e-c#* can be played. This progression should not be seen as an anachronism since this type of plagal cadence was already applied for instance by Giovanni Gabrieli.

Example 6. Dario Castello, *Sonata seconda* (as realized by Cerha).²²



²⁰ From *Sonate concertate in stil moderno per sonar nel organo overo clavicembalo con diversi instrumenti a 1.2.3 e 4 voci*, libro secondo (Venice, 1629).

²¹ In *Diletto musicale*, no. 88 (Vienna: Doblinger, 1965), 16.

²² The chord at * is not in accordance with any 17th century rule known to me. If we want to play the progression as it was used in the 17th century in a plagal cadence like this one (and also according to Penna), then instead of a *d* an *e* should have been played. On the second half note in the bass Cerha wrote a 2-4-6 chord, which should always have a resolution to a sixth chord.

The Tenorising Cadence

I have not found this progression described as such in the thorough bass treatises dealt with here, except in *Tractatus compositionis* by Bernhard. Usually it was implied in terms of its dissonance, the cadential suspension 7-6, or as a progression in which the bass note descends a semitone or a whole tone, and which always has a major sixth above the first of the two bass notes.

When the bass descends a whole step, then the third above the upper bass note must be a minor third, when the bass descends a half step the third above the upper note must be major. Above the final bass note of this progression the *terza naturale* is played when the bass descends a whole step and a *terza maggiore* when the bass descends a half step. This (when the bass descends a *half* step) is the so-called Phrygian cadence (which also does not appear in these treatises under this name). The final bass note of the Phrygian cadence often also precedes it, so that for example the succession *e-f-e* or *a-b^ba* appears in the bass. In these cases a major third is played above the first *e* or *a* respectively. This progression was not only found at the end of a composition but also at earlier points and often at the beginning. I have not found this progression described as such in treatises published before 1702. In that year it appears in *Reglas generales de acompañar en organo, clavicordo y harpa* by Joseph de Torres (see Example 7).

Since this progression occurs so often in compositions with thorough bass, it is plausible that the bass part of the canzona *La superba* by Frescobaldi (1628) might be realized in this manner. Example 8a shows that Cerha fails to follow the rule as described by Torres.²³

It is, of course, possible to begin a canzona like this one *tasto solo* (i.e. with one voice, without chords), but the theme of this particular canzona is rather lengthy. A compromise has been offered by Bernhard Thomas, in which the alto part in bar 2 imitates the bass part of bar 1 (see Example 8b.) In my opinion, though, the *c* in the tenor in the same bar should have been *c#*. Also in bars 4 and 5, under the theme in the solo part, there should have been a major third, since in this harmonic construction it does not matter whether the bass ascends a half tone or descends a whole tone before returning.

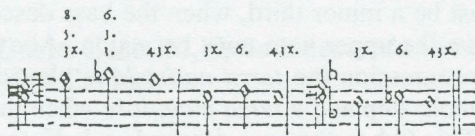
²³ Ibid., 10.

Example 7. Joseph de Torres, *Reglas generales*

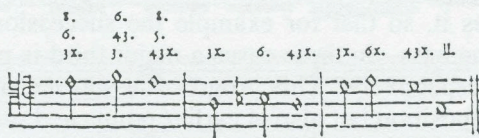
DE ACOMPÑAR. 47

las vezes que se hallare en los acompañamientos la Canturia siguiente, se debe acompañar la primera figura, con tercera mayor, y las demás voces en sus consonancias llanas, como en el exemplo primero, ò en sexta, y octava, como en el segundo.

Exemplo primero.



Exemplo segundo.



Tambien se debe observar la misma regla, aunque el baxo forme esta Canturia al contrario, como se puede reparar en el exemplo siguiente.

EXEM-

For the editors of both of these modern editions how to treat the theme becomes rather problematic. In places where only the beginning of the theme appears in the bass it can be harmonized according to the rules. But a problem arises with the bass diminutions (*passagio* and *accentus*) in the second bar. The bass line could instead have been realized, as I have, in Example 8c.

Example 8a, 8b, 8c. Girolamo Frescobaldi, *Canzona la superba* (as realized by Cerha, Thomas, and the author)

[Allegro]

The musical score is presented in three systems. The first system begins with a single bass staff, followed by a grand staff (treble and bass). The second system also begins with a single bass staff, followed by a grand staff. The third system consists of a grand staff. The music is in G major (one sharp) and 3/4 time. The tempo is marked [Allegro]. The score features a variety of rhythmic patterns, including eighth and sixteenth notes, and chordal textures. The first system shows a single bass line and a grand staff. The second system shows a single bass line and a grand staff. The third system shows a grand staff. The music is in G major (one sharp) and 3/4 time. The tempo is marked [Allegro].

Rules for Various Other Bass Progressions

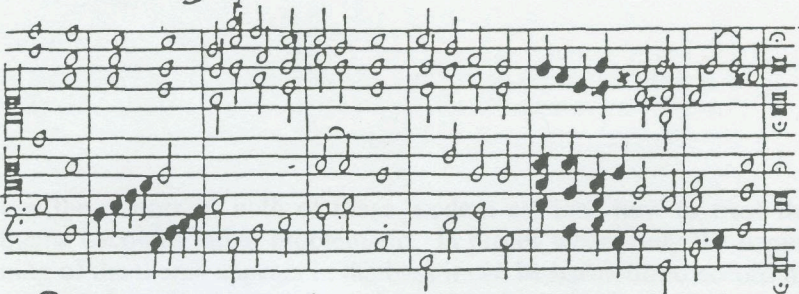
Rules have been provided pertaining to the movement of both hands relative to each other, such as the rules by Agazzari (repeated literally by M. Praetorius). Directives, for example as given by Bianciardi, also indicate which thirds must be played at which step, and when the sixths are major or minor. Agazzari provides four rules:

1. If the bass ascends stepwise, the right hand must descend, either stepwise or by leaps.
2. If, conversely, the left hand ascends or descends with a leap of a third, a fourth, or a fifth, the right hand must proceed stepwise, for it is not good when both hands move in the same direction because parallel fifths and octaves can result.
3. If the bass has a stepwise ascending passage, the right hand should remain stationary.
4. If the bass moves in leaps, each bass note gets its own "accompaniment."

Agazzari illustrates these rules with the following example.

Example 9. Agostino Agazzari, *Del suonare sopra 'l basso*

*ma: se per nere disciolte, si deue dare à ogni nota la sua accompagna-
tura. Ecco l'essempio del tutto.*



*Hauendo fin qui detto à bastanza delli stromenti, come fondamēto,
tanto però che l'huomo giudizioso potrà con questo picciol raggio ac-
quistarsi molto lume, perche il dir troppo genera confusione; diremo ho-
ra breuemente qual cosa delli stromenti d'ornamento.*

Li stromenti

Bianciardi's rules deal with the character of the chords themselves. Since the progressions of descending and ascending fifths and fourths have already been discussed, I will only summarize the remaining progressions:

If the bass ascends or descends with a second, a third, or a sixth the *terza naturale* has to be played, and in the final cadences (*cadenzi finali*) the *terza maggiore* must always be played.²⁴

If the bass ascends a second or a third and it is possible to play the sixth, then it should be a *sexta naturale*.

If the bass ascends a fifth or descends a second we always play the *sexta maggiore*.

According to Bianciardi, a sixth above the bass (if it is not above a *mi*) functions above all as a passing note, upper auxiliary, or leading tone. Bianciardi says the following in the explanation to his demonstration piece (see Example 2, m. 9):

If the bass note descends stepwise in small note values, one plays the fifth above the first note, the sixth above the second note, and one accompanies these with tenths above them.²⁵

In the sonatas by Castello (mentioned above), which otherwise are hardly figured, we see this method (designed to avoid parallel fifths) prescribed by means of figures. In *Sonata nona* one finds a descending bass, 6-5-6-5-6-5, and in the *Sonata settima* both an ascending and a descending bass, 5-6-5-6-5-6. (See Example 10.)

That this practice was continued for a long time, and moreover not only in Italy, is apparent from the fact that we also find this rule in Matthew Locke (*Melothesia*, 1673).²⁶ Bianciardi makes some fur-

²⁴ Here the "final note" is what is meant; "final cadences" may also imply the end of a sentence or of a segment at other points in the composition than the end. An exception is caused by a minor third in the solo part on the final note, or by a *cadenza sfuggita*.

²⁵ "... quando descende per grado, con diminutione, si farà sopra alla prima nota quinta; e sopra alla seconda, sesta, accompagnata con la decima di sopra."

²⁶ See the author's "Die Entwicklung von Generalbass und Harmonie im Zeitalter Henry Purcells," *Concerto*, nos. 110, 111 (1996).

Example 10. Dario Castello, *Sonata settima* (ascending bass).

ther important remarks concerning performance practice, in particular about the position and thickness of the chords. Thus, we can make the harmony more interesting and varied if:

instead of the third we play the 10th or 17th, and instead of the fifth the 12th or 19th, etc.²⁷

He further explains that, however large the number of parts in a composition, it still essentially consists of three parts, but

. . . because the harmony does become too poor if we play only three parts, it makes sense to add octaves to the bass and to the other parts in order to get a richer harmony and the possibility to move smoothly (without leaps that are too large) from one consonance to the other with more grace and more facility for the hands.

Often the text requires a full harmony and, in exclamations, assistance with the highest notes; in merry music we must accompany as high as possible, in sad music in low positions; in cadences we must play octaves below the bass; in low positions we should not play thirds and fifths directly above the bass.

If a dotted minim is followed by a crotchet, the chord (of the minim) must be repeated above the dot and the crotchet must be treated as a passing note.²⁸

In Example 11, an excerpt by Cima is compared in a realization by Cynthia Wilson²⁹ and one by the author. Here the bass descends

²⁷ Francesco Bianciardi, *Breve regola* (Siena, 1607).

²⁸ Ibid. Penna, as well, gives this prescription (p. 164). See also Arnold, *Art of Accompaniment*, 143.

stepwise over two octaves, providing an opportunity to apply Bianciardi's manner of treating 5-6-5-6-5-6 with a 10 above it, as can be seen in my version. This method is applicable up to *b* in bar 54, where I had to place an *f* \sharp in order to avoid a diminished fifth. The *f* \sharp must be resolved upwards so that the sequence can be continued with only the thirds. It is, however, possible that Cima would have preferred the *b*^{*b*} to the *f* \sharp because the *b*^{*b*} is part of the hexachord series and thus has priority over a *ficta* note, in which case the sequence can proceed down to the lowest note.

Example 11. Giovanni Paolo Cima, *Concerti ecclesiastici*, "Sonata" (bars 52-56, as realized by Cynthia Wilson and the author). In the second fragment the treble is silent, only the string (or wind) bass plays with the continuo bass.

²⁹ Giovanni Paolo Cima, *Sonata per cornetto & trombone, ovvero violino ò violone*. In *Two Sonatas* (1610), ed. Thiemo Wind (Amsterdam: Broekmans & Van Poppel, 1993).

The bass part in Wilson's edition has been realized very thinly, with occasionally only one part above the bass. In the Preface it is explained (by the editor, Thiemo Wind) that the realization "represents a musical imagination rather than an exemplary three- or four-part arrangement." My impression is that this reflects an attempt to avoid doubling the solo part. From the sources discussed in this paper it becomes clear that this was hardly ever a point of concern to the composers/writers of treatises (the few exceptions will be discussed later). Above all it was important that thorough bass players did not double the diminutions and (sometimes) the leading notes, as we can conclude from Cima's own Preface cited above.

In Example 12 another excerpt of Cima's sonata (bars 36-41) provides a further comparison between Wilson's and my own realization. Wilson's version is in three parts. On some notes (the dotted *f* and the dotted *a*) the bass note has been doubled and only the third (on *f*) and the fourth (on *a*) have been added. This leads inevitably to a *harmonia troppo povera*.

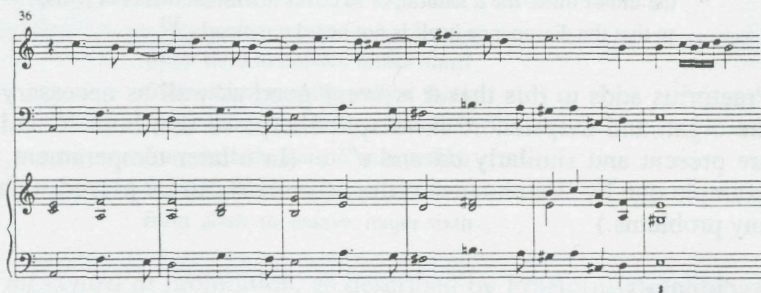
My version makes use of a predominantly four-part harmony (incidentally, in Bianciardi's example one notices that the number of parts varies between three and five) and everywhere I have added thirds, which have to be major, because in this sequence the bass always ascends a fourth. By playing these major thirds (in fact leading tones) on every bass note, starting on *F*, this fragment becomes much more urgent. After all, this urgency is already expressed by the continuous rising of both bass and solo part with the leaps of a fourth, as mentioned above. By this manner of harmonizing one creates the maximum contrast with the dejected, rather melancholy cadence which concludes this sequence.

The accidentals, which for this reason have to be added, cause problems in bar 39 in respect to meantone temperament, which was present in a rather outspoken form on organs and harpsichords during almost the entire 17th century; the *a*# and *d*# were tuned as *b^b* and *e^b* respectively. These problems were also encountered when transposing to particular modes. On this subject M. Praetorius writes:

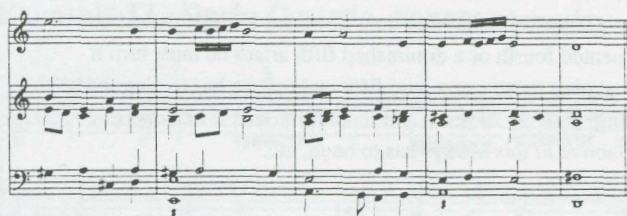
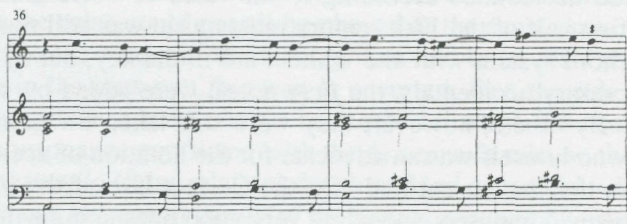
... Since, however, for the organist this is not only difficult and uncomfortable to play, but in many places it causes a nasty harmony, for instance when the *b natural* with the *f*# and in between the major third, *d*#, which is too narrow and too high,

Example 12. Cima, "Sonata," mm. 36-41 (as realized by Wilson and the author)

36



36




and also out of tune, has to be played. (In that case) the organist should not only see it immediately and avoid it, but also be very careful whether to leave out the third completely or instead play the minor third, the *d* natural, or to cover it with mordents or trills, so that the dissonance itself is not heard too clearly.³⁰

Praetorius adds to this that it is “very good as well as necessary” if the organ and harpsichord have split sharps so that both *b^b* and *a#* are present and similarly *d#* and *e^{b+}*. (In a later temperament, for example one by Werckmeister, the *a#* and *d#* can be played without any problems.)

Accidentals

In the 16th century singers and instrumentalists were expected of necessity to add accidentals according to the rules of voice leading. During the first half of the 17th century most music was still notated in the hexachord system with and without a *b* in the key, but by this time the necessary accidentals, the *ficta* notes, were added by some composers. By others, however, they were still taken for granted. Praetorius, who himself was an advocate for the notation of accidentals, wrote in the chapter entitled “On the Correct Use of the *b* and #” that too many composers, including very good ones assume that:

Every Cantor and musician does know for himself that, if an augmented fourth or a diminished fifth arises he must turn it into a pure fourth or a pure fifth and that he has to sing the leading note at the end and in addition that if he sings one note above *la* this always has to be *fa*, etc.³¹

30 “... Dieweil aber solches den organisten nicht allein schwer und unbequemlicher zuschlagen/ sondern auch an etliche örthern eine unliebliche Harmoniam von sich gibt; Wenn nemlich das  mit dem fis und in der Mitten die Tertia major das Dis/ welches etwas zu jung und zu hoch und also dargegen falsch ist/ gegriffen werden muss. So muss nicht allein ein Organist/; solches mit fleiss durchsehen und überschlagen/ sondern auch gute acht haben/ dass er entweder die tertiam gar aussen lasse/ oder die tertiam minorem, das d tangire/ oder aber mit scharffen mordanten es also vergütte/ damit die Dissonantz so eigentlich nicht observiret und gehört werde.” Praetorius, *Syntagma*, III, 81; facs., Wilibald Gurlitt (Kassel: Bärenreiter, 1958).

31 “Es wisse doch ein jeder Cantor und Musicus vor sich selbstn wol/ dass/ wenn ein Tritonus oder Semidiapente vorstellt/ er eine rechte Diatessaron, und

Earlier in this paper the rule that imperfect consonances must resolve into the nearest perfect consonances was already mentioned. Intervals that must be sharpened or flattened are specified by Banchieri in the following way:³²

from third to unison: minor third
 from third to fifth: major third
 from third to octave: major third
 from sixth the unison: minor sixth
 from sixth to fifth: minor sixth
 from sixth to octave: major sixth

The *mi contra fa* prohibition, as described by Praetorius, applied to perfect consonances; not only the augmented fourth and the diminished fifth had to be avoided, also the octave had to be pure. In addition, augmented seconds had to be avoided in the melody. Sometimes the rules could not all be obeyed at the same time. For example, if in the solo part the leading note had to be resolved upwards, while in the bass part *fa sopra la* occurred, then the rule that a perfect consonance must always be reached through the nearest imperfect consonance conflicted with the *fa sopra la* rule, so that a *relatio non harmonia* (false relation) developed (*mi contra fa*). An example of this can be seen in bar 49 of the *Sonata seconda* by Castello, mentioned previously.

Example 13. Dario Castello, *Sonata seconda*.



Diapente, und bei der Clausula formali das Semitonium singen und gebrauchen müsse: Item unicâ notulâ ascendente super la, semper canendum esse fa, &c.” Praetorius, *Syntagma*, 31 (this is not in the chapter on thorough bass).

³² Adriano Banchieri, *Cartella musicale nel canto figurato, fermo & contrapunto* (Venice, 1614), 93.

In the ascent of the solo melody the leading note c^\sharp occurs, resulting in a b (*mi*) instead of a b^b preceding it in order to avoid an augmented second. At the same time the bass has to descend through b^b (*fa*, because *sopra la*). In the same piece, in bars 95 through 99 a sequence occurs in the bass, with ascending fourths and descending fifths, which naturally have to be played with a major third.

Example 14. Castello, *Sonata seconda* (as realized by Cerha)

Adagio

The musical score for Example 14 is presented in two systems. Each system features a single melodic line on a treble clef staff and a bass line on a bass clef staff. The tempo is marked 'Adagio'. The notation includes various musical symbols such as notes, rests, and accidentals, illustrating the sequence of ascending fourths and descending fifths in the bass line.

The solo part above the second half tone in every bar has passages rising up to a third above the bass before descending again quickly, which leads to a minor third (*fa sopra la*). The false relation created thus occurs on a weak beat and is therefore permitted. For this reason the thorough bass player may, or rather must, maintain the

major chords in this sequence rather than convert them into minor chords, as was done in the modern edition.

Mi contra fa situations like this one occur quite often during this period, and they can still be found later, even in music by Vivaldi. Some composers did not even shrink from allowing *mi contra fa* to arise on a heavy beat. For instance, Francesco Rasi, who on the first beat of bar 6 of his eleventh madrigal³³ wrote a *c*# in the bass, which must resolve upward to *d*, while the sung part (for baritone, so only one octave higher), also on the first beat, has *c* descending to *b*. This makes for a very sorrowful effect, which adequately illustrates the text: "Filli tu vuoi partire. E non vuoi ch'io sospiri il mio dolore, ne vuoi ch'io pianga'l di mio morire" (etc.). In the *Aria di Romanesca* by Frescobaldi³⁴ we see a similar situation in bar 4 on the last half note. (See Example 15.)

In a modern edition realized by Gerhard Kirchner³⁵ the rule that the octave has to be reached with a *sexta maggiore* is not obeyed. Possibly the editor found the musical result of this rule too strong for his taste. For Frescobaldi himself it was apparently no problem at all, as can be seen in his *Partita sopra la Romanesca*.³⁶ The first bar shows the same progression as does the *Aria* in bar 4. Here in bar 8 we find an *f* $\frac{1}{2}$ in the soprano part above an *f*# in the bass.

Dissonances

Concerning the innovations in the treatment of dissonance, which occurred near the end of the 16th century, and which have been described by Artusi and Galilei, little can be found in the early thorough bass treatises. Artusi and Galilei describe the practice of contrapuntal improvisation in which musicians allowed themselves

³³ Francesco Rasi, *Madrigali di diversi autori* (Florence, 1610).

³⁴ Girolamo Frescobaldi, *Primo libro d'arie musicali per cantarsi nel gravicimbalo, e tiorba* (Rome, 1630).

³⁵ Frescobaldi, *Arie musicali* (Florence, 1630), 12. In *Musikalische Denkmäler* (Akademie der Wissenschaften und der Literatur in Mainz), vol. 4.

³⁶ Girolamo Frescobaldi, *Il primo libro di toccate* (Rome, 1615-1616).

**Example 15. Girolamo Frescobaldi, *Aria di Romanesca*
(the beginning as realized by Kirchner and
m. 4 by the author in two possibilities)**

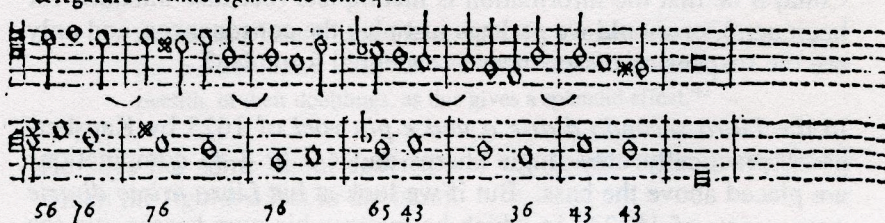
Dun - que dov-rò _____ del pu-ro ser - vir mi - o, Cru-del, or ri - por - tar

liberties which were included only later in the notated music, when the listeners had become accustomed to them.³⁷

During that later period in which composers like Monteverdi and Frescobaldi wrote the most daring tone combinations, the contemporary thorough bass treatises indicated little more than that "dissonances have to resolve into the nearest consonances,"³⁸ and that these dissonances with their resolutions were 4-3 and 7-6 suspensions. Banchieri gives examples of these dissonances and their resolutions. He does this in fact to show that figures are now also used to indicate the dissonances. Only in his last example is the combination 7-6 demonstrated. Here Banchieri shows how "some modern composers," to be on the safe side, write successions of 5-6 and 7-6 in harsh and tied passages (*durezze & ligature*).

Example 16. Adriano Banchieri, *Cartella musicale* (dissonances)

Et per maggiore intelligenza ne lafciar cosa di rilieuo, reffami à dire che alcuni compositori moderni, per maggior sicurezza segnano le Quinte & Sette, Settime & Sette, & simili, che nelle *durezze & legature* li vanno seguitando come qui.



Progressions like these acquire their real *durezze* character only when combined with other voices, as we can see in Frescobaldi's *Toccata ottava di durezze e legature*,³⁹ where we encounter com-

³⁷ Cf. Claude Palisca, *Studies in the History of Italian Music and Music Theory* (Oxford, 1994), 9.

³⁸ Agazzari, *Del sonare sopra il basso con tutti li stromenti*. Strunk, *Source Readings*, 427.

³⁹ *Il secondo libro di toccate* (Rome, 1627).

binations of intervals which (if we would figure them) we rarely, if ever, find in figured basses.

Example 17. Frescobaldi, *Toccata ottava* (figures of dissonances)



One may wonder how far information like that of Banchieri or Agazzari can help us to realize the thorough bass parts from this period. Could it be that the information is incomplete (because intended for beginners), or should we perhaps just play the consonances, and only use the suspension dissonances as cadential formulae?

In the *Libro secondo d'arie a una e piu voci* of 1623 by Kapsberger,⁴⁰ practically only single sharps and 4-3 or 4-#3 combinations are placed above the bass. But if we look at his *Libro primo di arie passeggiate* of 1612,⁴¹ in which he realizes his own basses, we see not only good consonances, but every now and then diminished fifths and the combination of the 5 and 6 in one chord written out in the lute tablature. That "painful" effects were intended becomes apparent from the fact that Kapsberger sometimes places very dissonant tone combinations between the bass and solo parts, which are in themselves consonant. (See Example 18a.) If, however, a dissonance is already caused by *accenti* in the vocal part, he writes the consonances according to the rules (See Example 18b.)

⁴⁰ Giovanni Girolamo Kapsberger, *Libro secondo d'arie a una e piu voci* (Rome, 1623). Facs. in *Archivum musicum* (Florence), no. 32.

⁴¹ Kapsberger, *Libro primo di arie passeggiate* (Rome, 1612).

**Example 18a and 18b. Giovanni Girolamo Kapsberger,
"Interotte speranze."**

Example 18a (measures 24-26) and Example 18b (measures 30-32) show musical notation for Giovanni Girolamo Kapsberger's "Interotte speranze." The notation includes a vocal line in treble clef and a lute line in bass clef with figured bass notation. The lyrics are: "lu - stri in - tie - - ri" for 18a and "Don - - na cru - del" for 18b.

It is only in Penna that we find indications about dissonances that go beyond the obvious cadential formulae. In the chapter concerning cadences of the third order (cadences in which the bass descends a whole or a half tone), he writes:

Accompany the 7 and the 6 with the consonances of the written (bass) note, i.e. with the octave, tenth, and twelfth, or their doublings, as this gives a splendid effect.⁴²

He says the same about cadences of the fourth order (cadences in which the *ligatura* lies in the bass):

Here too the dissonance can be accompanied (if so desired) with the consonances of the written (bass) notes and to the minor or major seventh one may add the false fifth, conforming to the nature [the key?] of the composition.⁴³ (See Example 19.)

⁴² "Accompagni la settima, e sesta con le consonanze della Nota scritta, cioè con l'ottava, decima, e duodecima, ò loro replicate, e faranno molto buono effetto." Lorenzo Penna, *Li primi albori musicali* (Bologna, 1672), III, 177.

⁴³ "Quì anco si accompagni pure (se vuole) le Dissonanze con le Consonanze della Nota scritta, & aggiunga alla quinta falsa la settima Minore, ò Maggiore conforme alla natura della Compositione." Ibid., 179.

This manner of filling out dissonant cadences already points ahead to the directions for the use of *acciaccature*, published around 1700 in the treatise *Regole per accompagnar sopra la parte* by an anonymous author,⁴⁴ and in one of the most famous thorough bass treatises from the 18th century: Francesco Gasparini's *L'Armonico pratico al cimbalo* (Venice, 1708).

Example 19. Lorenzo Penna, *Li primi albori musicali*



Whether or Not To Double the Solo Part

At the present time there is much discussion about the doubling of the upper part. During the 17th century it could have been no different. For an accompanist to play the upper part(s) was a logical consequence of the use of *intavolatura* and it was applied until well into the 17th century. From the sources (such as the preface by Girolamo Giaccobi, cited earlier) it becomes apparent that some composers did not favor it. Incidentally, as early as 1553 Diego Ortiz writes in his *Tratado de glosas* that if one wants to apply diminutions to the upper part(s) of a madrigal on the viola da gamba and to make a harpsichord accompaniment of the other parts, one should omit the entire upper part from the accompaniment. If, however, one wanted to apply diminutions to some part other than the upper part one was

⁴⁴ Ms. RI, “*Regole per accompagnare sopra la parte . . .*” (Rome, Biblioteca Corsiniana).

allowed to intavolate the entire madrigal, in other words all the parts.⁴⁵

In a fragment from a solo madrigal by Luzzasco Luzzaschi from 1601,⁴⁶ the harpsichord part of which was fully written out for this purpose by the composer (i.e. not as an *intavolatura* of a multi-part vocal work), we see that the solo part is entirely doubled by the upper part of the accompaniment, except in the cadences. There the solo part makes luxuriant diminutions and the accompaniment only has “il fermo” just as Paolo Cima preferred it. (See Example 20.)

Example 20. Luzzasco Luzzaschi, (accompaniment of a solo madrigal)

The image shows a musical score for a solo madrigal by Luzzasco Luzzaschi. It consists of two systems of music. The first system has a vocal line on a single staff and a harpsichord accompaniment on two staves. The vocal line is in G major, 4/4 time, and the lyrics are "que-sto si - a mor-te non mi per-do -". The harpsichord part consists of two staves, with the upper staff doubling the vocal melody and the lower staff providing a simple harmonic accompaniment. The second system continues the vocal line with the lyrics "ni, pri -" and the harpsichord accompaniment. The harpsichord part is written in a style that is typical of the early 17th century, with a focus on the upper part of the accompaniment doubling the vocal melody.

Lorenzo Penna also wants the organist, when accompanying solo voices like the soprano or alto, to play the solo part if it is printed above the bass, as is often the case. If the organist is not able to play all notes of the solo part (because of a fast tempo or a large number of notes) he can at least play the outline of the melody.⁴⁷ Further-

⁴⁵ Diego Ortiz, *Tratado de glosas* (Rome, 1553). Bärenreiter ed., no. 684, p. 36.

⁴⁶ Example in Kinkeldey, *Orgel und Klavier*, 289.

⁴⁷ Penna, *Li primi albori musicali*, Bk. III, ch. 14, p. 182.

more, until at least the middle of the 18th century it was advised to double the thematic entrances in fugal compositions. Viadana, for instance, writes:

When the concerto begins in the manner of a fugue the organist plays *tasto solo* until the other parts have entered.⁴⁸

That this does not only apply to a fugal entry in the bass becomes apparent from the following quotation from Penna:

If the first entry comes in the upper part or in the bass, the accompanist must first play with one finger, then with two, etc., until all the parts have entered.⁴⁹

In the penultimate chapter of the second book (i.e. on counterpoint, p. 137) Penna gives a further possibility, *viz.*: that if a fugato begins with the upper voices, one can provide a bass underneath, and this new bass can be used as the accompaniment until the theme in the bass line begins. Accompaniments which have been written in lute tablature are also very informative. In the accompaniment of the song "I saw my lady weepe" from *The Second Booke of Ayres* by John Dowland (1600),⁵⁰ we see that Dowland does not necessarily avoid the notes of the solo part in the accompaniment, but takes great pains to avoid doubling the leading notes which occur in the solo part. He accomplishes this by sending the accompaniment (in a subtle way) in another direction (bar 5) or by letting it temporarily disappear (bar 14). (See Example 21.)

Kapsberger, on the other hand, sees no problem when the solo part, inclusive of the leading note, is doubled, as we can see in the lute tablature of "Interotte speranze" in *Arie passeggiate* (1612). See Example 22.)

In general, when the solo player makes embellishments, the accompanist is discouraged from doubling them or spoiling the effect by

⁴⁸ Arnold, *Accompaniment*, 14.

⁴⁹ *Ibid.*, 185.

⁵⁰ See *An Elizabethan Song Book* (London: Faber & Faber, 1968), 105.

making embellishments at the same point himself.⁵¹ With the exception of Ortiz, there is no source in which the thorough bass player is expressly asked to leave out the solo part from the accompaniment. Anyhow, the chordal accompanist is asked to make a frugal accompaniment and to play passages only when the solo part has either a long note or a rest. Agazzari advises accompanying in the lower register within a reasonably small compass. He says nothing about the dividing of the chords between the hands, but his written-out example (see Example 11) shows a compass of a maximum of two octaves plus a third. How a player divides the chords between his hands is entirely up to him.

Example 21. John Dowland, *The Second Booke of Ayres*, "I saw my lady weepe."

saw my La - dy

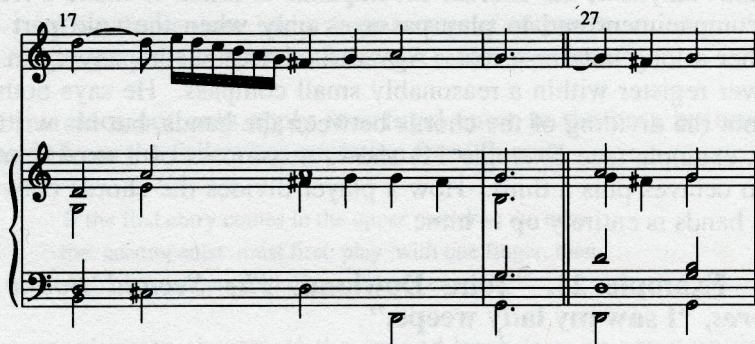
proud to be ad - vanc - ed

eies, where all per - fec - tions keepe.

⁵¹ The only author who gave extensive instructions for embellishments, in particular prior to cadences, was Lorenzo Penna.

Example 22. G. G. Kapsberger, "Interotte speranza."

The realization here is a literal transcription from the lute tablature.

**Final Remarks**

This paper has not attempted to exhaustively treat early 17th-century thorough bass. Concerning performance practice, some aspects, such as the performing of arpeggios or diminutions, have already received much attention, at least in comparison with harmony. And yet harmony was an important, perhaps even the most important, means through which passions were expressed in music. I have intended to show that by applying the rules of thorough bass and those found in counterpoint treatises can lead to a more expressive, one might say "more heartfelt," result. In particular I have wanted to show the following:

That the early pieces should in many places be harmonized differently from the way it has been done in many modern editions (even including so-called Urtext editions).

That a number of possibilities in thorough bass accompaniment, such as playing 5-6-5-6- sequences, doubling the bass in octaves, adding dissonances in certain progressions and allowing false relations, have until now hardly been used, or else they have been painstakingly avoided (because it has been incorrectly thought that they are not allowable).

Of course, one can ask if it is useful to put the details of modern editions under a magnifying glass the way I have done here. But these modern editions appear without exception to have been made with the serious intention to get as closely as possible to the original performance. In none of them have things like phrasing ties or dynamic indications been added. The thorough bass realizations, however, make one suspect that the editors have insufficiently studied the information which composers and theoreticians from that period have left us.