HOW TO *SOLFEGGIARE* THE EIGHTEENTH-CENTURY WAY: A SUMMARY GUIDE IN TEN LESSONS

This step-by-step guide provides a simplified summary of the findings of Chapters Three to Eight of *The Solfeggio Tradition: A Forgotten Art of Melody in the Long Eighteenth Century* (forthcoming) – without the distraction of evidence-based arguments to back up its claims. It is designed to help you to acquire skills in singing (and thus understanding) melodies in the eighteenth-century manner, and to enable you to apply this knowledge to current debates in music pedagogy, history, and performance.

The method applies to melodies from the era of Arcangelo Corelli (1653–1713) to that of Vincenzo Bellini (1801–1835), or roughly 1680–1830. There were many local variants, as well as alternative systems and dissenting voices, but the following guidelines hold generally true for solfeggio in most parts of Catholic Europe and German-speaking regions.

We tend nowadays to think of solfeggio in terms of nineteenth-century compilations used for singing lessons, or exercises for sight-singing. Back in the eighteenth century, solfeggi (as didactic melodies sung to traditional *solfa*) were used to teach plainchant, sight-singing, vocal skills, notation, the rudiments of keys and scales, modulation, counterpoint, and composition.

The syllables (*do*, *re*, *mi*, *fa*, *sol*, *la*) were not mere labels, as they are in modern fixed-*do solfège*. They were essential for learning how to improvise and compose. This explains why at church schools and foundling homes the *maestro di canto* (or cantor) usually taught both singing *and* counterpoint.

At the Neapolitan conservatories, students were only allowed to progress to keyboard playing and figured bass (partimento) once they had mastered singing (solfeggio). They spent a year or more just adding syllables to melodies. This explains why partimento treatises seldom mention the crucial issue of melodic contour. There was no need, because students arrived at their first keyboard lesson having spent years singing the melodies and hearing the basses of the very patterns they were about to be taught how to play.

Condensing a year or more of practical instruction into a few pages is never going to make it any easier. To get the most out of this summary guide, you will have to sing the examples like an eighteenth-century apprentice: over and over until they become ingrained. There is no substitute for practice.

To make the process a little less burdensome, this guide does at least avoid mention of the many additional lessons that an apprentice was expected to master. The conceptual frameworks that underpinned solfeggio had coalesced over centuries into an unwieldy amalgam of old and new. Learning, for instance, how to classify plainchants according to their mode and liturgical function remained an important professional skill. All such matters have been brushed aside in the following guide, in favor of a practical approach that is intended to enable you, with minimum effort, to *solfeggiare* the eighteenth-century way.

LESSON ONE: THE SIMPLE SCALE

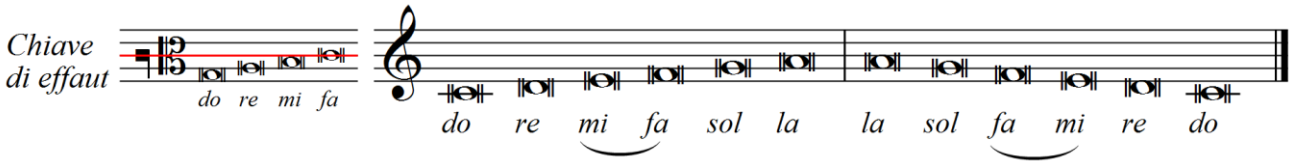
Most professional music-making in the eighteenth century took place in church. Because plainchant (*canto fermo* – "fixed melody") was central to the catholic liturgy, there was a great demand for boys (and sometimes girls) to sing in choirs. This explains why almost every child earmarked for a career in music learned the rudiments by singing plainchant, and why most pedagogues were members of the clergy.

It may seem arcane to begin lessons in Enlightenment solfeggio with a medieval method for sight-singing plainchant. But, as should become clearer below, this method – established by the Benedictine monk Guido d'Arezzo around 1025 – remained fundamental to eighteenth-century notions of key and modulation.

Instruction in the practical rudiments of music had scarcely changed since the middle ages. Lessons began with the letter-names of the pitches, from A to G. Children were then introduced to the six notes of the hexachord or simple scale (*scala semplice*). Ex. 1 shows Neapolitan maestro Leonardo Leo's version of this initial lesson, probably dating from the 1730s. Ignore the snippet from the original for now, and focus on the modern transcription to its right.

By speaking aloud and singing these six syllables, children acquired skills in sight-reading and singing in tune. They learned to think of the scale in terms of its ambitus or range and the functions of its syllables. For instance, the semitone was usually *mi-fa* (highlighted in Ex. 1 with slurs) while *re-do* normally signified a cadence. *Do-mi-sol* outlined the major triad and *re-fa-la* the minor.

Performing a melody at sight called for little more than an ability to spot the central *mi-fa* semitone. In this respect the original notation, shown on the left in Ex. 1, is more intuitive and easier to grasp than our fixed treble and bass clefs. It uses a moveable "F-clef" (*Chiave di effaut* – the little flag symbol) to indicate the position of *fa*. Although this clef sign could shift to any part of the stave (to avoid the need for leger lines), a singer had only to glance at it to know the location of *fa*, with *mi* immediately beneath. A red line illustrates this process. Eighteenth-century musicians were thus accustomed to reading different clefs from their very first lessons. Modern notation obscures the coherence and simplicity of their methods.



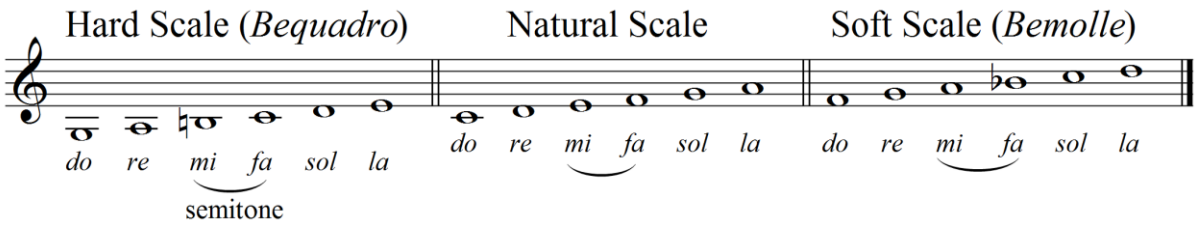
Ex. 1 The Simple Scale: from Leonardo Leo (1694–1744), *Canto fermo (primi elementi o solfeggio esacordale)* (c. 1730; I-Nc, 34.4.13), fol. 1r: "There are six notes" (*Le note sono 6*).

A four-line stave was normally used for *canto fermo*, with little or no indication of rhythm. From it was derived a more versatile system of notation called *canto figurato*, which was used for all other music. This "figured melody" is known today as normal notation. It has a five-line stave and extra "figures," such as rhythmic values, bar lines, pauses, accidentals, slurs, etc. Leo's lesson in Ex. 1 employed an unusual hybrid form of notation, in which *canto fermo* was set to the five-line stave and clef sign of *canto figurato*.

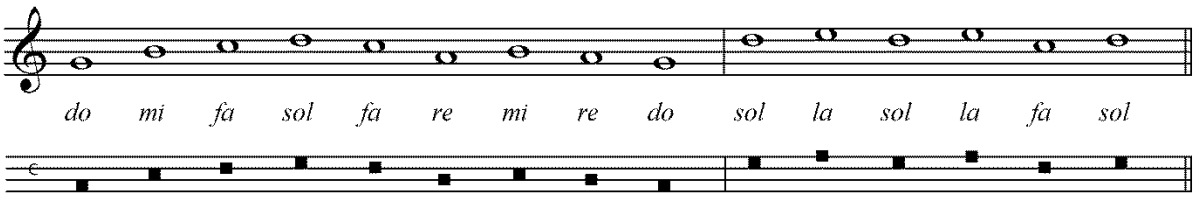
LESSON TWO: HARD, SOFT, AND NATURAL SCALES

There were three simple scales (or hexachords) in *canto fermo*, as illustrated in Ex. 2(a). The "hard" scale started on G and was named after ♮ (*Bequadro*), an angular square symbol for B (or, in German, h), the precursor to the modern natural sign. The "natural" scale started on C and did not include the problematic note B. The "soft" scale, so called because of its rounded symbol ♭ (*Bemolle*) for B♭, started on F.

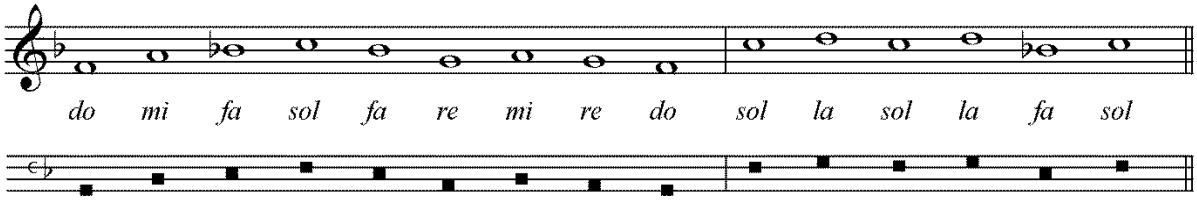
Each scale encompassed exactly the same set of intervals, sung to the same syllables. Try singing the practice melodies in Ex. 2(b) and Ex. 2(c) to gain familiarity with the "hard" and "soft" scales. This exercise is taken from a 1759 textbook used at one of the Neapolitan conservatories. The original notation (appended below the modern transcription) makes it easier to find the crucial *fa* syllable, by glancing at the clef. The C-clef in Ex. 2(b) even looks like a C. The B♭-clef in Ex. 2(c) indicates the location of both C and B♭ on a four-line stave. This simplified form of notation also helps singers to get used to the idea of *do* on G and F as well as on C.



Ex. 2 (a) The three types of simple scale in plainchant.



Ex. 2 (b) A melody on the "hard" scale: from Giacomo Tritto, *Regole di bellamente Cantare, in Canto Fermo* (1759; I-Nc 15.7.21), fol. 12v; in modern transcription and original notation.



Ex. 2 (c) A melody on the "soft" scale: Ex. 2 (b) transposed.

LESSON THREE: HARD AND SOFT MELODY

For melodies that went beyond the six notes of the simple scale, it was necessary to combine two or more hexachords. There were two ways to do this. Merging the hard hexachord on G with the natural on C gave rise to "hard melody" (*Canto di Bequadro* / *cantus durus*). Merging the soft hexachord on F with the natural on C gave rise to "soft melody" (*Canto di Bemolle* / *cantus mollis*). These formed the two main tonal "systems" of renaissance and baroque music – one with no key signature and the other with a single flat. For ease, it may help to think of *Canto di Bequadro* as similar to the modern key of C major and *di Bemolle* as similar to F major. Remember, though, that in plainchant they were commonly encountered in both "authentic" and "plagal" aspects – i.e., "hard melody" could start with *do* on C (authentic) or G (plagal), "soft melody" with *do* on F (authentic) or C (plagal). The term "plagal," by the way, comes from a Greek word meaning "oblique."

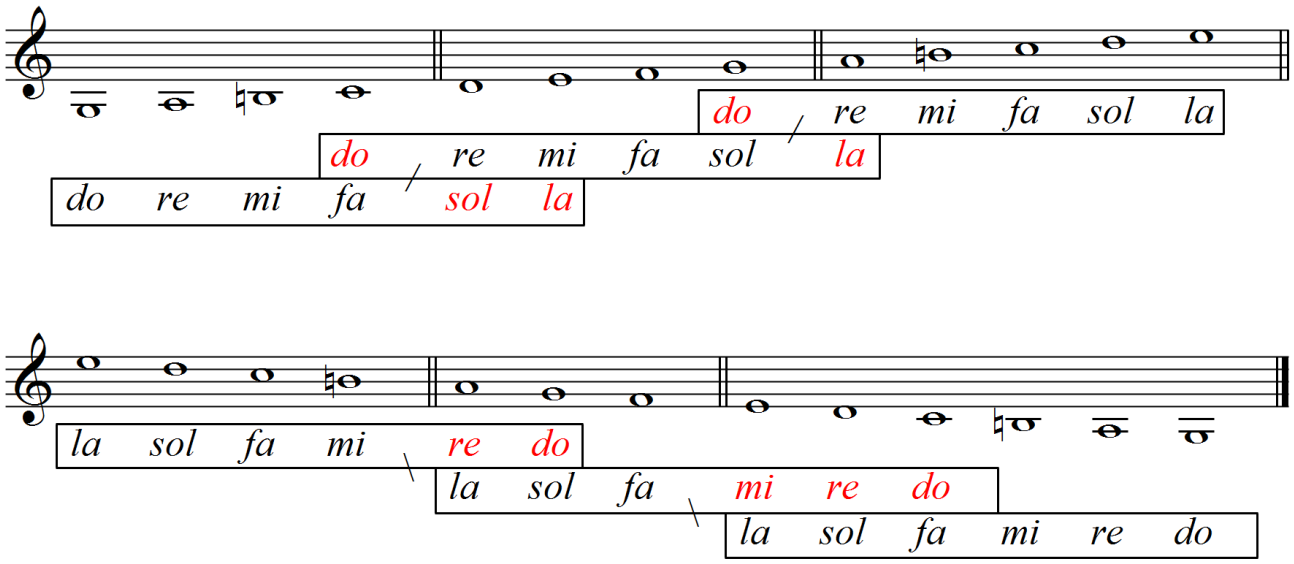
In seventeenth-century practice, it was common for *Bequadro* melody to venture occasionally onto the soft hexachord and for *Bemolle* melody to incorporate a similar additional hexachord. This meant that *Bequadro* was often made up of overlapping hexachords on F, C, and G and *Bemolle* of hexachords on B♭, F, and C. Within these aggregate scale-systems, the final (i.e., tonic) could be shifted onto different notes. It could fall just as easily on *re* or *sol* as on *do*. You should ignore these expanded versions of hard and soft melody for now. By the eighteenth century, the two scale-systems were firmly identified with a single pairing of hexachords (as explained in Lesson Four below).

Shifting from one hexachord to another in solfeggio is called "mutation." In this lesson, you will learn the essential technique of "mutating" between simple scales. It can seem difficult to grasp at first, but keep practicing: it is essential for singing solfeggio in the eighteenth-century manner.

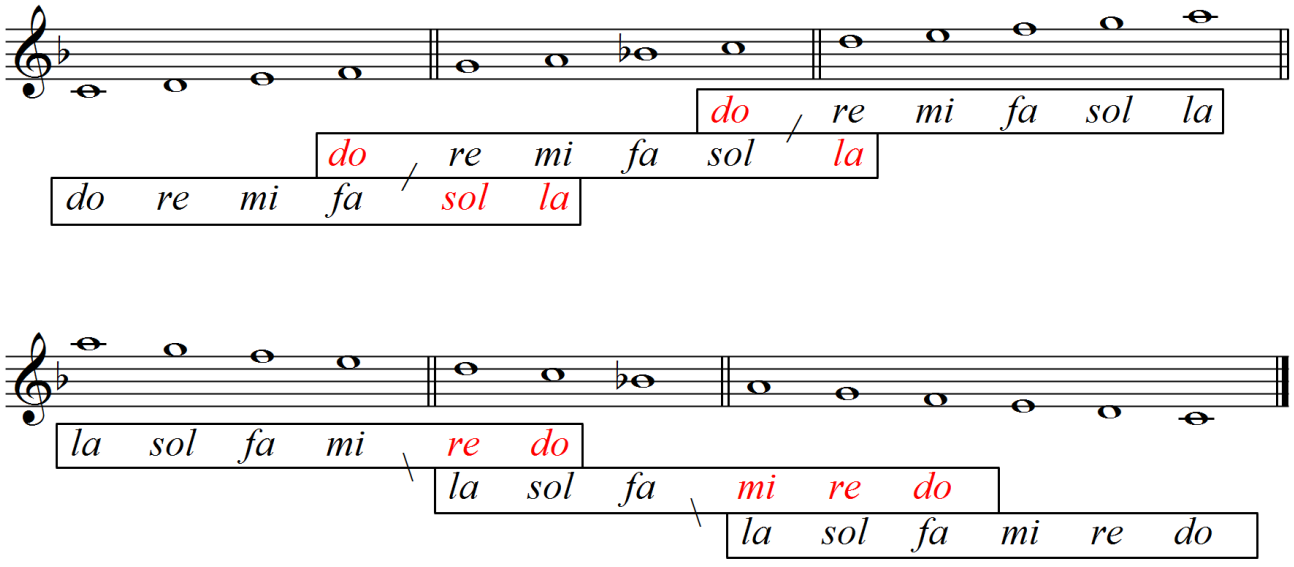
First, try singing the separate hexachords in Ex. 3(a) and then Ex. 3(b) by reading each boxed set of six horizontal syllables in turn, including those in red font: *do-re-mi-fa-sol-la* ascending and *la-sol-fa-mi-re-do* descending. Get a feel for the location of *do* on C and G in hard (*Bequadro*) melody and on C and F in soft (*Bemolle*) melody. Next, ignore the notional red syllables and follow only those in black font to "mutate" from one hexachord to another.

In ascending motion, the change takes place on the syllable *re*. In other words, as soon as you encounter a potential *do* (i.e., not sung as *do*!), the next note will be sung as *re* from the hexachord above. In descending motion, the change takes place on the uppermost *la* syllable of the lower hexachord. So, the rule for mutations is: change scale on *re* when ascending and on *la* when descending. In this guide – but not in the original sources – mutations are marked by stroke symbols, indicating a shift to a hexachord either above (/) or below (\).

Because in stepwise motion mutations necessarily occurred on every fourth or fifth note, they were known in the eighteenth century as either "at the fourth" (*alla quarta*) or "at the fifth" (*alla quinta*).



Ex. 3 (a) "Hard melody" (*Canto di Bequadro* / *cantus durus*).

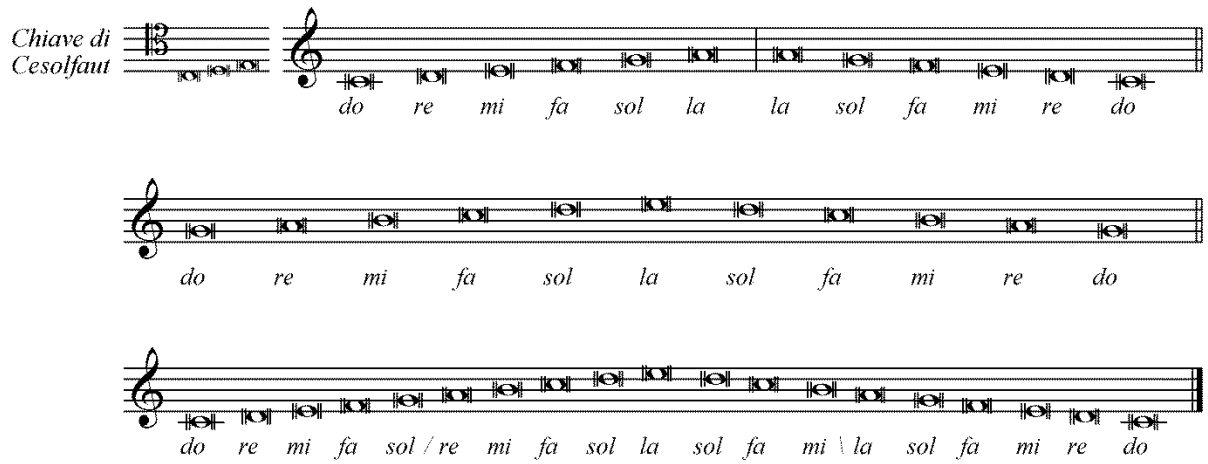


Ex. 3 (b) "Soft melody" (*Canto di Bemolle* / *cantus mollis*).

LESSON FOUR: THE COMPOUND SCALE

The everyday practice of transposing liturgical music at the organ created the need for a fixed referential scale, against which different transpositions could be pegged. Guido's hard, soft, and natural scales were fine for *a cappella* singing, but hopelessly inadequate when paired with transposable instrumental accompaniments. A stable reference-point was eventually found in the "natural" compound scale (*scala composta*). We would recognize this, in its most usual form, as a C major scale outlining a tenth, from middle-C to E in the octave above. To eighteenth-century musicians, it was a reduced version of the old "hard melody," consisting of two interlocking natural hexachords a fifth apart, one on C and the other transposed onto G.

In this lesson, you will learn how to conceptualize a key in the form of the natural compound scale. Take a look at Ex. 4(a), which shows Leonardo Leo's method for teaching this scale. Its origins in "hard melody" are clearly apparent. Apprentices were introduced first to each simple scale in turn, before combining them through mutations into a single compound scale. Try singing it several times to get used to the idea that what we think of as an integrated octave scale was conceived by eighteenth-century musicians as a merger between two separate scales. Tonic and dominant keys were in this respect far more closely associated than modern theories allow.



Ex. 4 (a) The natural compound scale: from Leonardo Leo, *Canto fermo (primi elementi o solfeggio esacordale)* (c. 1740; I-Nc, 34.4.13), fol. 1r.

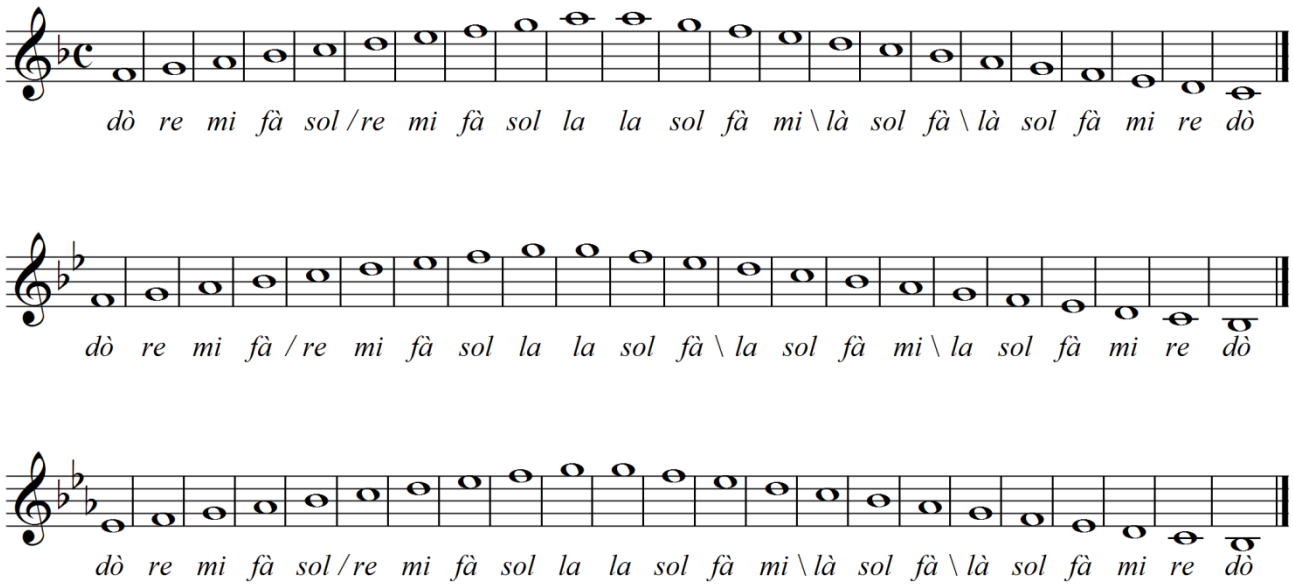
Mutating between hexachords can seem tricky for the uninitiated, but it is crucial for understanding eighteenth-century music on its own terms. It explains, among many other things, the commonplace practice of answering a statement in the tonic with a response in the dominant. To the eighteenth-century musical mind, they possessed identical syllables. In the key of C major, for instance, the melodic figure *do-mi-sol* could be grounded just as well on the note G as it could on C. Both A-G-F-E and E-D-C-B could be represented by the syllables *la-sol-fa-mi*.

An ability to imagine the major scale as two matching sets of six syllables was essential for fluent solfeggio singing. Leaps from one hexachord to the other were accomplished by imaging correspondences between their syllables. In C major, for instance, leaps from E to B and E to E would normally be sung as *mi-mi*, from F to C, F to F, and C to C as *fa-fa*.

The "natural" compound scale encapsulates the eighteenth-century concept of a key. It formed the conceptual model for all twelve chromatic keys, based on the notes of the keyboard. By dispensing with two of Guido's three types of hexachord (the hard and soft scales), each key could be regarded as a transposition of a "natural" scale grounded on C. Thus the key of C major encompassed two simple scales with *do* on C and G, the key of C♯ major encompassed two simple scales with *do* on C♯ and G♯, the key of D major encompassed two simple scales with *do* on D and A, *etc*. In an F♯ major scale, *do* was located on F♯ and C♯; in a G♭ major scale, on G♭ and D♭.

To gain some familiarity with this system, try singing the transposed compound scales reproduced in Ex. 4(b). They are taken from a beginner's guide to solfeggio by Neapolitan maestro Carlo Cotumacci (c. 1709–1785). For apprentices accustomed to plainchant, these scales would have been understood as extensions of "hard" or "soft" melody, with analogous interlocking hexachords. Note how flexibly Cotumacci treats the component hexachords. The examples do not have to begin and end on the *do* which, for us, would be the tonic (in Ex. 4(b), from the highest system to the lowest: F, B♭, and E♭). Cotumacci uses the "plagal" ordering as well as the "authentic." Note also how he highlights the *dò* and *fà* syllables of each scale with grave accents. These helped the student to relate the *canto figurato* notation to the more familiar *canto fermo*, by emphasizing the location of potential F- and C-clefs. In the initial F major scale, Cotumacci also placed an accent on *là*, to draw attention to the descending mutation.

Some musicians still considered the compound scale on F as an additional "natural" scale, by analogy with "soft" *Bemolle* melody, and pegged flatward transpositions against it. This explains why Cotumacci began his flat scales from F major, rather than C.



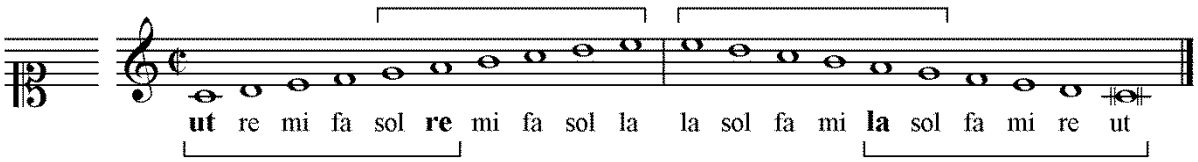
Ex. 4 (b) Transposed compound scales: from Carlo Cotumacci, *Principij e Solfeggi* (c. 1755; GB-Lbl, Add. 14241), fol. 4r.

LESSON FIVE: MINOR KEYS

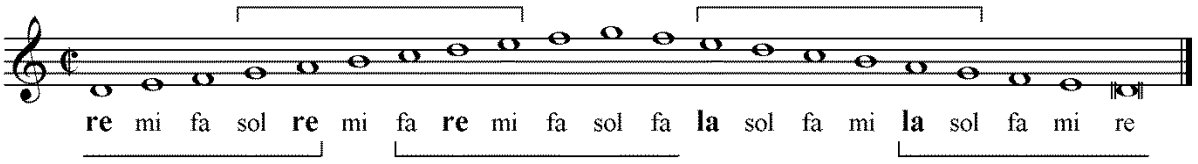
There were two ways to sing a simple scale (*do-re-mi-fa-sol-la*). Starting on its first note (*do*) gave rise to a major-sounding melody, while starting on its second note (*re*) created a minor-sounding melody. A natural hexachord on C, for instance, was understood to encompass two melodically unfolded, interlocking triads, corresponding to C major and D minor. Framing a melody with *do-mi-sol* (1-3-5) gave the impression of a major key. Emphasizing *re-fa-la* (2-4-6) evoked a minor key.

This meant that a minor-key melody was conceived and sung using precisely the same syllables as its parent major scale. It simply started and finished on *re* instead of *do*. In this lesson, you will learn the difference between *do-mi-sol* and *re-fa-la* melodies, and how minor keys in the eighteenth century were thought to begin on the sixth degree, *re*, of a major scale.

Ex. 5(a) and Ex. 5(b) illustrate this process with extracts from a guide to singing fugues by Thuringian pastor Cyriacus Schneegaβ (1546–1597). Brackets have been added to highlight the component hexachords. In (a), the compound scale is sung in the usual way, with an old-fashioned *ut* on C (soon to be replaced by the more singable *do*). In (b), the same scale begins on its second note, *re*, creating a different "minor-key" type of melody. (In this instance, the scale on *re* corresponds to the Dorian mode. It could also map onto the Aeolian mode. The distinction was relevant only for liturgical purposes. In Catholic Europe, the modes were used primarily for *classifying* plainchants, to assist in communication between choir and organist during church services. In Germany, where plainchant was no longer used, the modes assumed a greater importance for theorists).



Ex. 5 (a) The first way to sing a compound scale: from Cyriacus Schneegaβ, *Isagoges Musicæ Libri Duo* (1596), appendix.

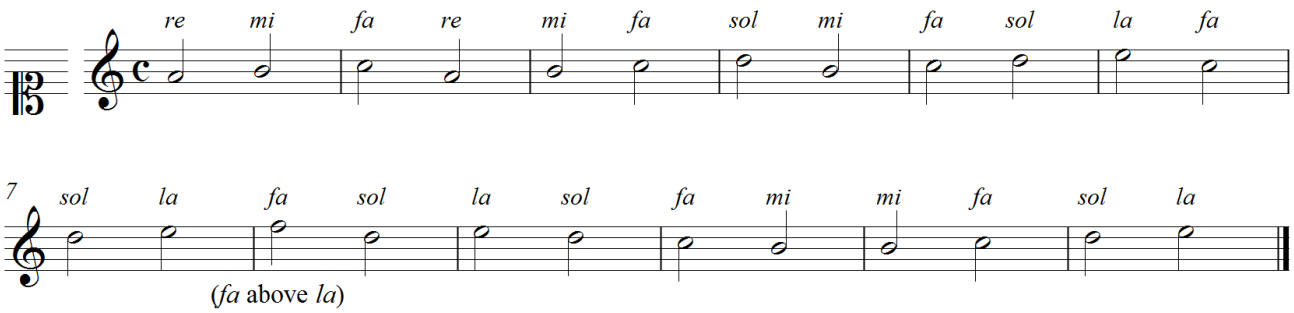


Ex. 5 (b) The second way to sing a compound scale: from Schneegaβ (1596), appendix.

By the eighteenth century, minor keys had become associated more firmly with the "plagal" ordering of their parent scales. They began with *re* on the sixth note, rather than the second. A minor, for instance, was sung to exactly the same syllables as a C major scale starting on G. In this sense, minor keys were not independent tonalities. They were "born from" their parent compound scale and distinguished only by their characteristic *re-fa-la* triad and *re-mi-fa* minor-third (*terza minore*).

Try singing the practice melody by Neapolitan maestro Gaetano Greco (1657–1728) reproduced in Ex. 5(c). It requires only an awareness of the hexachord on G, conceived as the top half of a compound scale on C. Simply by starting on *re* and finishing on *la* – the outer notes of the minor triad – the melody gives an unmistakable impression of being in the key of A minor.

The *fa* on F in bar 8 of Ex. 5(c) appears to lie outside of the simple scale on G. This is a very common feature in solfeggio, known as "*fa* above *la*" (*fa sopra la*). To avoid having to mutate for the sake of one extra note, the semitone above *la* was always sung as *fa*.



Ex. 5 (c) A *re-mi-fa* melody based on the simple scale on G: from Gaetano Greco, *Partimenti* (c. 1700; I-Nc, 45.1.65), fol. 6r.

LESSON SIX: ACCIDENTALS

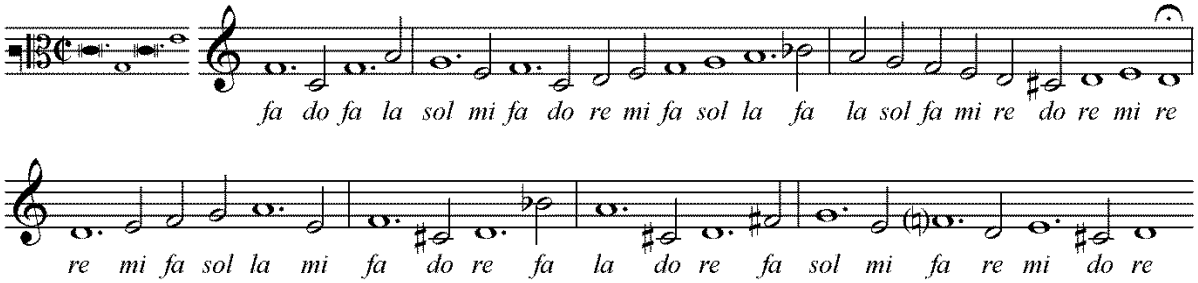
The general rule for accidentals – any ♯, ♭, ♮, 𝄪, or 𝄫 that did not belong to the governing scale – was to ignore them in solmization. They were sung at the notated pitch without altering the syllable, as if merely vocal inflections. In a melody in C major or A minor, for instance, both G♯-A and G-A♭ could be sung as *sol-la*, and the syllables *do-re* could apply just as well to C♯-D as C♮-D. There were, however, important exceptions to this rule, as described in Lesson Seven below.

In this lesson you will learn how to solmize chromatic passages by ignoring accidentals.

One of Leonardo Leo's initial lessons for dealing with accidentals is reproduced in Ex. 6(a). It uses only the "natural" simple scale on C, plus an extra B♭ "*fa* above *la*." Although there is no ♭ in the key signature, the natural scale here calls to mind "soft" *Bemolle* melody, analogous to F major but with *do* on C and F. By the end of the first system, the final (i.e., tonic) has clearly shifted from C-*do* to D-*re*, giving rise to a scale starting on *re* and similar to the modern key of D minor. Try singing this part of Ex. 6(a) to get a feel for the shift from the *do-mi-sol* (or *do-re-mi*) arrangement of the scale to the *re-fa-la* (or *re-mi-fa*). Take note that the C♯ before the first cadence (indicated by a pause mark) retains the syllable *do* even though it is sharpened when sung. This ♯*do-re* interval is commonly encountered in minor scales, although it may seem odd to modern musicians.

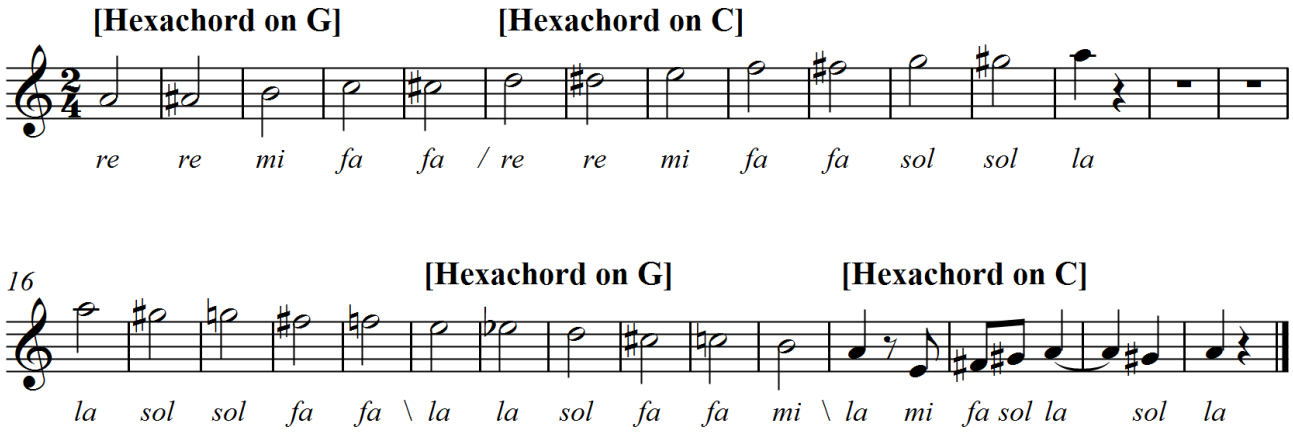
The *re-fa-la* or "minor-key" ordering of the scale remains in charge until the end of the extract. Two further sharpened *do* notes feature in the second system of Ex. 6(a). Towards the final cadence, F-*fa* is also sharpened. As F♯, it leads more intensely to G-*sol*, without departing from the syllables of the governing scale.

As can be seen from the incipit at the left of Ex. 6(a), Leo's lesson used a hybrid system of notation. It combined the traditional *Fa*-clef from *canto fermo* (the little flag symbol) with the C-clef and five-line stave of *canto figurato*. It also borrowed three rhythmic values to fashion a peculiarly Neapolitan "metrical" form of *canto fermo*.



Ex. 6 (a) An exercise in ignoring accidentals: from Leonardo Leo, *Canto fermo (primi elementi o solfeggio esacordale)* (c. 1740; I-Nc, 34.4.13), fol. 1v.

As Leo's exercise and many other sources attest, it was perfectly feasible to sing elaborate chromatic passages using only the syllables of "hard" or "soft" melody. Even the chromatic scale could be accommodated in this way. Try singing the exercise presented in Ex. 6(b). It is taken from a textbook compiled by Brother Luigi Sabbatini (1732–1809) for his young apprentices at the church of San Antonio in Padua.

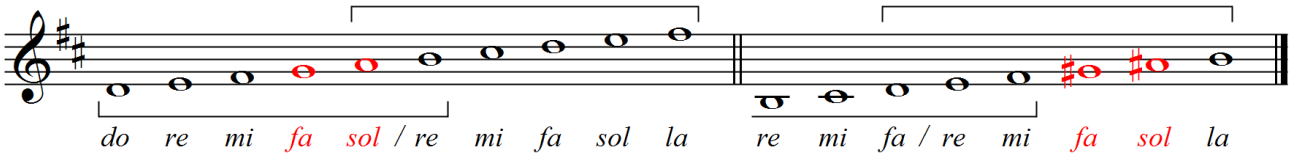


Ex. 6 (b) The chromatic scale: from Luigi Sabbatini, *Elementi Teorici* (Bologna, 1789), III, 33: "Scala di semituoni."

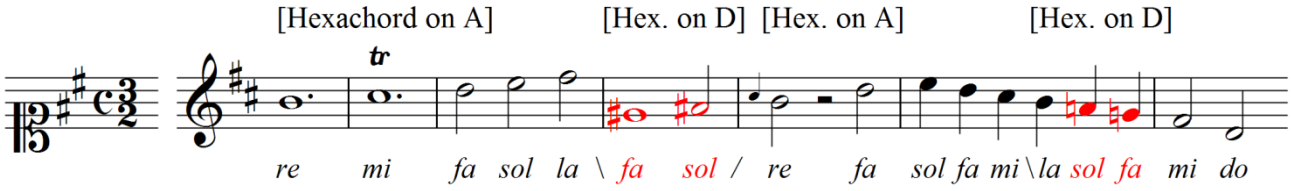
The rule for ignoring accidentals made basic sight-singing very easy. Rank-and-file choir singers had only to know two scales, one with *do* on C and G, and another with *do* on C and F. What, for us, would be a melody in G major, for instance, would, for them, have been "hard melody" with *do* on C and G, a final on G-*sol* / G-*do*, and a sharpened F-*fa*.

The application of accidentals to these basic frameworks was probably learned by ear. There is evidence to suggest that well-schooled musicians added accidentals intuitively in performance. The practice of *musica ficta* (accidentals that were sung but not notated) seems to have survived well into the eighteenth century. Proof can be found in solfeggio manuscripts. When Neapolitan maestros supplemented their incomes by offering private singing lessons to well-to-do ladies in Paris or Vienna, they used solfeggi that were originally written for apprentices. The copies made for amateurs contain numerous accidentals that are absent from the originals.

Ex. 6(c) and Ex. 6(d) demonstrate how the rule for ignoring accidentals applied equally to transposed keys. The compound scale on D in Ex. 6(c) can be sung to correspond to either D major or B minor. In its minor guise, the notes *fa-sol* – scale degrees 6-7 in the modern octave minor scale – are sharpened, without affecting the syllables. This was a recognized case, known as the "unchanging syllables." Cotumacci put the rule into practice in Ex. 6(d), by answering a phrase in B minor with one in D major. Compare the sharpened *fa-sol* in bar 4 with the natural *sol-fa* in bar 6 – both are shown in red.



Ex. 6 (c) The compound scale transposed onto D, sung as *do-re-mi* (i.e., D major) and *re-mi-fa* (i.e., B minor) scales.



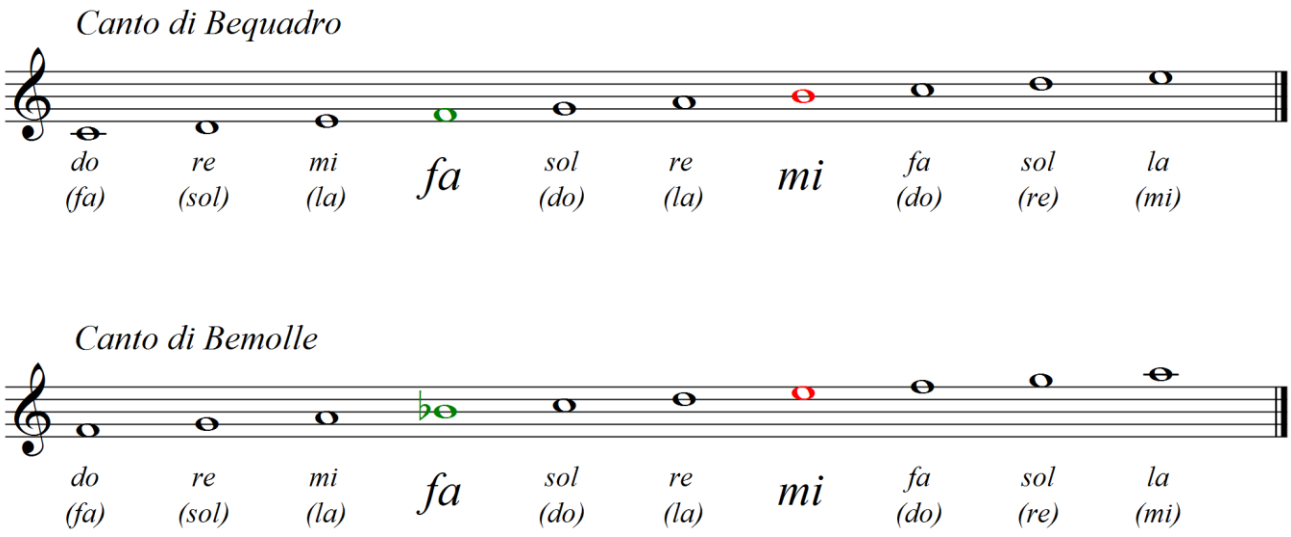
Ex. 6 (d) A solfeggio showing how the syllables *fa-sol* are unaffected by accidentals: from Carlo Cotumacci, "Rudiments and Solfeggi" (c. 1755; GB-Lbl, add.14241), fol. 14r.

LESSON SEVEN: KEYS, MODULATIONS, AND THE CIRCLE OF FIFTHS

There were important exceptions to the rule for ignoring accidentals. In many contexts, sharpening the fourth degree of an authentic compound scale turned it into the seventh degree of the compound scale a perfect fifth above, prompting a modulation. Sharpening F♮ in C major to F♯, for example, changed the key to G major. Flattening the seventh degree reversed the process, by turning it into the fourth degree of the key situated a perfect fifth below. Flattening B♮ in C major to B♭, for example, changed the key to F major. These techniques of modulation were known as the "altered fourth" (*quarta alterata*) and "altered seventh" (*settima alterata*). They grew out of an inherent property of the medieval system for singing plainchant.

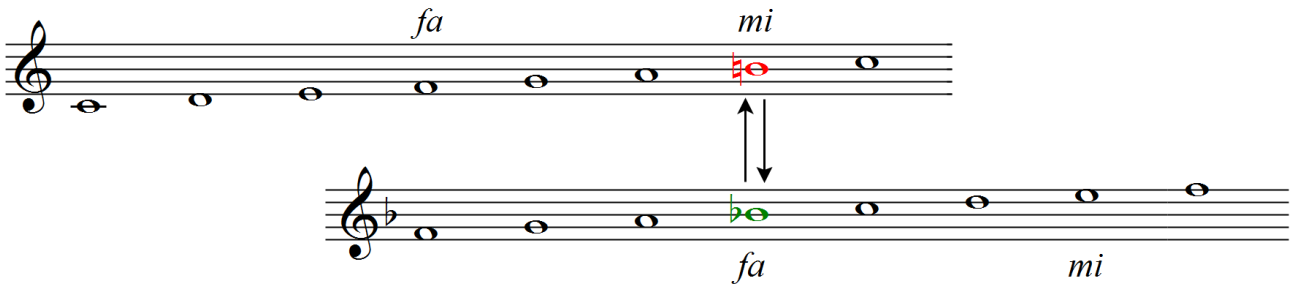
In this lesson, you will learn how each scale or key was defined by its fourth-note "fundamental *fa*" and seventh-note "fundamental *mi*," how altering either of them led to a modulation, and how the ancient technique of singing *fa* in place of *mi* and *mi* in place of *fa* gave rise to twelve keys around the circle of fifths.

Ex. 7(a) depicts the compound scales of "hard" (*Bequadro*) melody and "soft" (*Bemolle*) melody. Owing to overlaps between the hexachords, in both scales, each note possesses two alternative syllables, with the significant exceptions of the fourth-note *fa* and seventh-note *mi*. These were always sung as *fa* and *mi*. For this reason, they defined the scale or key and were called its "fundamental *fa*" and "fundamental *mi*." Altering one or other of them changed the key. In this sense, a scale was defined more by its fourth and seventh notes than by its dual *do* syllables on the "tonic" and "dominant." *Canto di Bequadro* was differentiated from *di Bemolle* by having its fundamental *fa* and *mi* on F and B, rather than on B♭ and E.



Ex. 7 (a) A key was defined by its fundamental *fa* and fundamental *mi*.

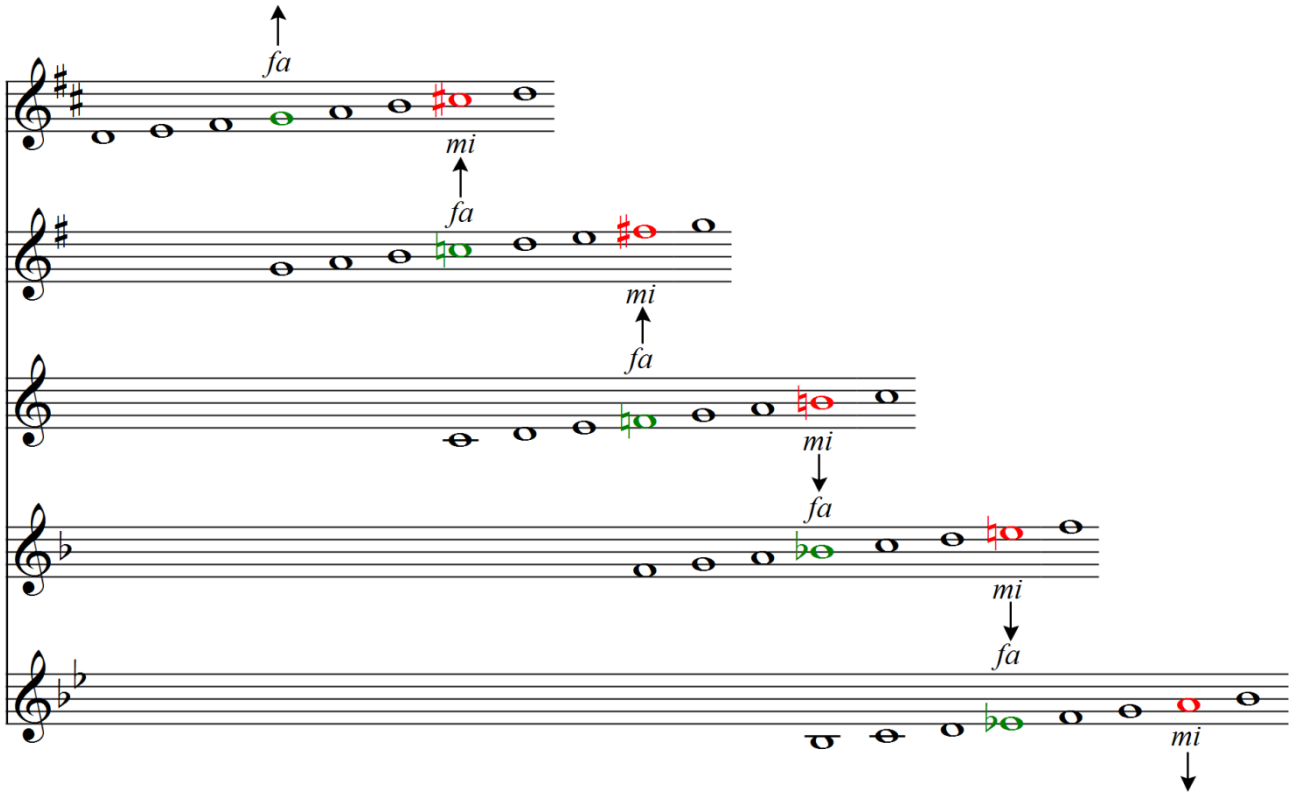
Traditionally, choral singers had to switch frequently between *Bequadro* and *Bemolle* systems. This was accomplished by singing *mi* in place of *fa* and *fa* in place of *mi*. As Ex. 7(b) demonstrates, singing the fundamental *fa* (B♭) of *Bemolle* as *mi* turned it into the fundamental *mi* (B♮) of *Bequadro*. By the same token, singing the fundamental *mi* (B♮) of *Bequadro* as *fa* turned it into the fundamental *fa* (B♭) of *Bemolle*. In effect, singing *fa* as *mi* modulated up a fifth, while singing *mi* as *fa* modulated down a fifth. This principle formed the basis for modulation in eighteenth-century music. Sharpening the fourth of a scale (as if from B♭ to B♮) effected a modulation to the key a fifth above, while flattening the seventh (as if from B♮ to B♭) modulated to the key a fifth below.



Ex. 7 (b) Singing *fa* in place of *mi* changed "hard" melody into "soft," or transposed it down a fifth. Singing *mi* in place of *fa* reversed the process, transposing "soft" melody up a fifth.

By extension, the technique of singing B-*fa* as B-*mi* could apply analogously to the F-*fa* of *Bequadro* melody. As F-*mi* (i.e., F♯), it became the fundamental seventh of the key of G major, a fifth above. See the central stave of Ex. 7(c) for an illustration of this process. (This practice, incidentally, was known as "permutation" and frowned upon in music before 1600). Similarly, the technique of singing B-*mi* as B-*fa* could apply equally to the E-*mi* of *Bemolle* melody. As E-*fa* (i.e., E♭), it became the fundamental fourth of B♭ major, a fifth below. This practice led inevitably to the circle of fifths, which existed in practice centuries before Johann Heinichen's famous diagram of 1711 (which probably had more to do with tuning in fourths and fifths than modulation, in any case).

Eighteenth-century musicians generally presented sharp keys as ascending by fifth from C major (*di Bequadro*), through G, D, A, and B to F♯ major. They were understood to result from the technique of swapping *fa* for *mi*. Flat keys were presented as descending by fifth from F major (*di Bemolle*), through B♭, E♭, A♭, and D♭ to G♭ major. They resulted from the technique of swapping *mi* for *fa*.

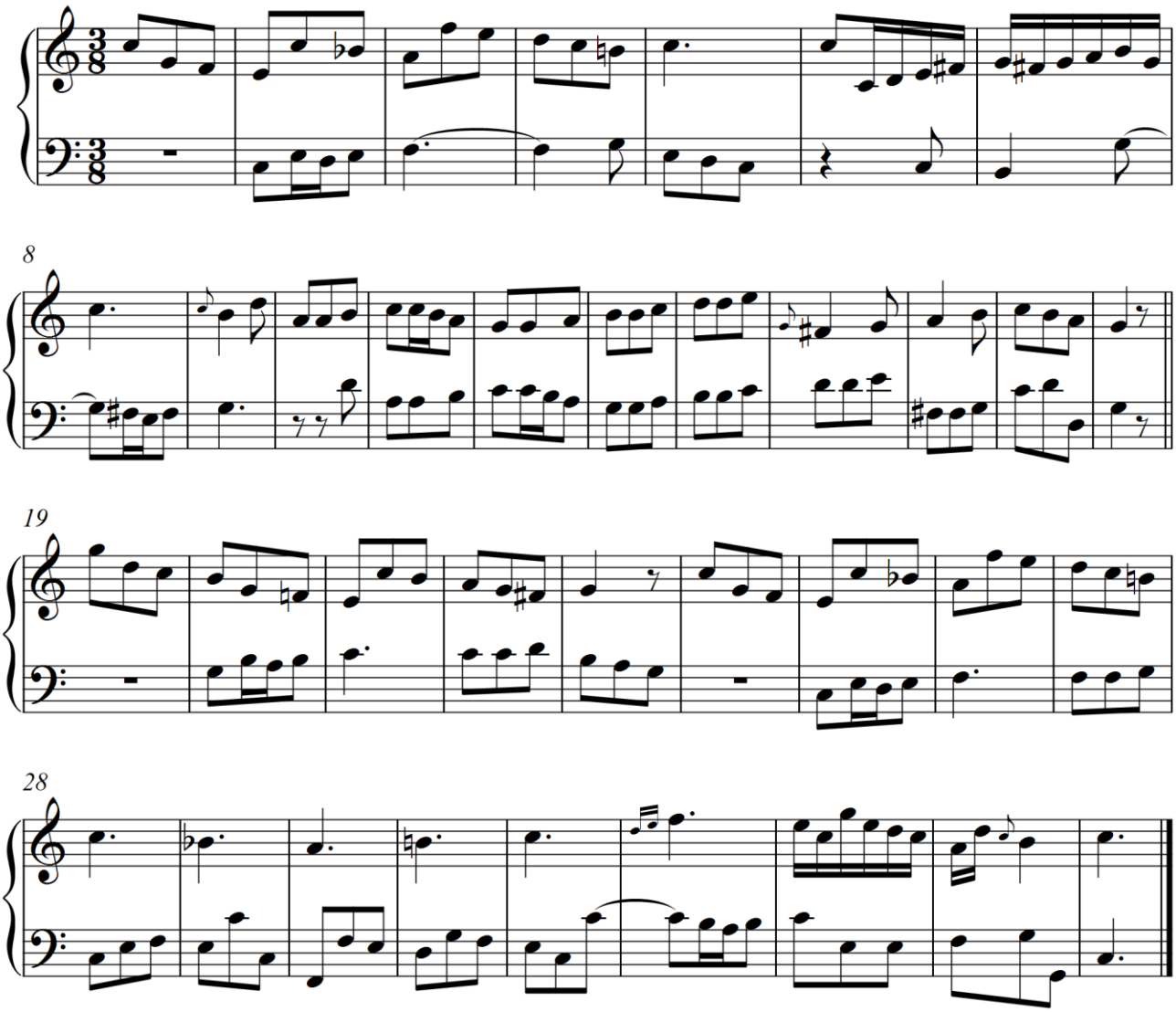


Ex. 7 (c) To sing *mi* in place of *fa*, or *fa* in place of *mi*, is synonymous with the circle of fifths.

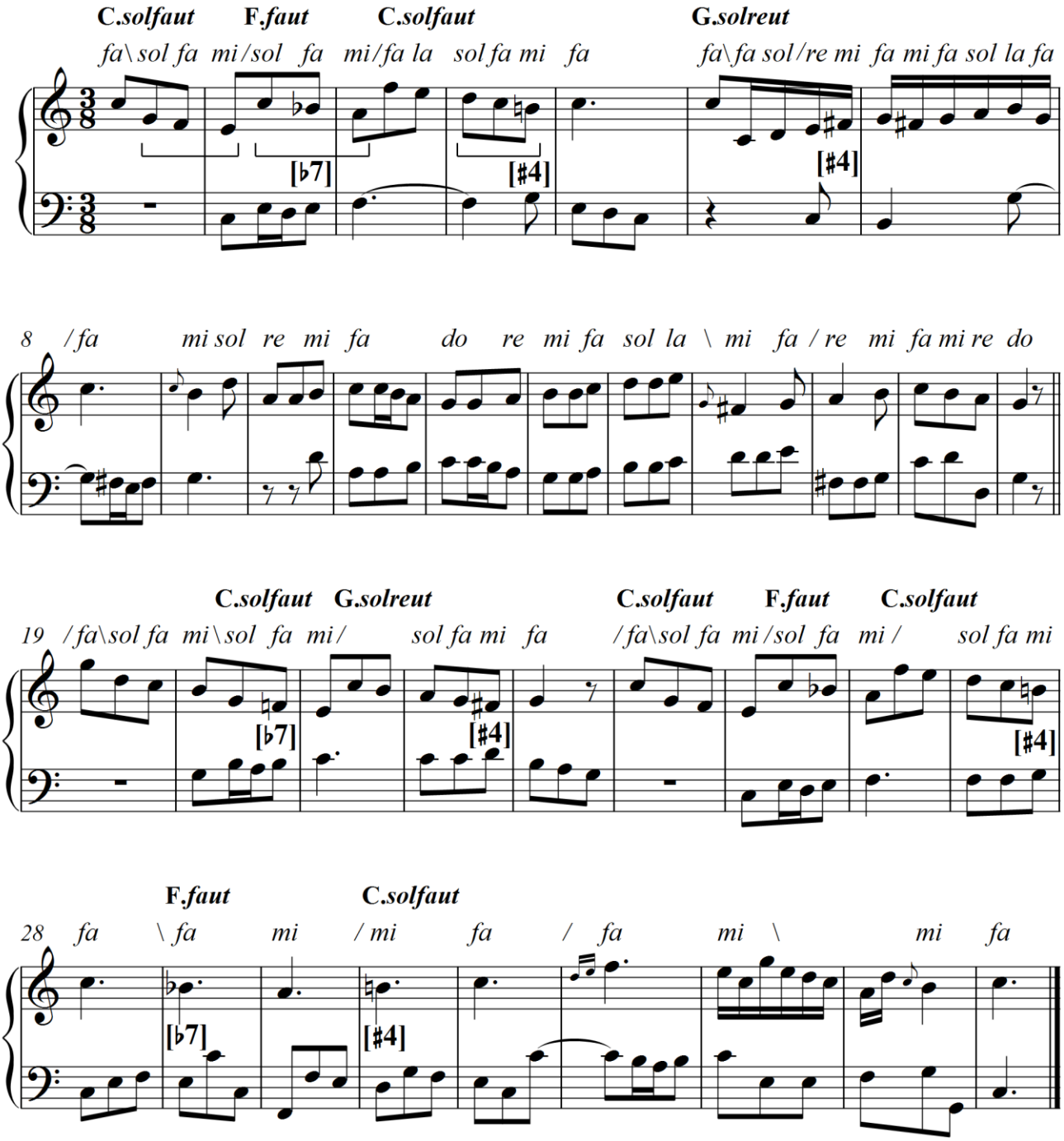
To consolidate this lesson with a practical exercise, Ex. 7(d) presents an abridged version of a solfeggio by Leonardo Leo. First, identify any altered *fa*s and *mi*s and mark them as sharpened fourths (♯4) and flattened sevenths (♭7). Remember that in C major the fundamental *fa* is F and the fundamental *mi* is B. Altering F-*fa* to F-*mi* (F♯) modulates to the dominant, while altering B-*mi* to B-*fa* (B♭) modulates to the subdominant. Once you have located the altered fundamental syllables, add the remaining syllables and sing the melody. Can you find a regular pattern within the syllables of the main theme in bars 1–4? How do bars 1–4 relate to bars 28–32 and 19–23?

A model solmization is presented in Ex. 7(e). It indicates mutations between hexachords with ascending and descending stroke symbols, and flattened sevenths and sharpened fourths with figures in square brackets. The scales that govern the melody at any given moment are designated above the stave using eighteenth-century terms (C.*solfaut*, etc.). These will be explained in the next lesson.

Note that Leo's main theme presents the melodic figure *sol-fa-mi* (highlighted in brackets) first in the tonic hexachord on C, then in the subdominant hexachord on F, and finally in the tonic hexachord on G. The theme thus encapsulates the basic principle of modulation, requiring the singer to perform a swift mental calculation in which an assumed B-*mi* is sung as B-*fa* before returning to B-*mi*. When the theme is transposed to the dominant in bars 19–23, the same lesson applies to F-*mi*, which is sung as F-*fa* before returning to F-*mi*. The move to the dominant takes place in bar 6 by way of an obvious sharpened fourth (F-*fa* becomes F-*mi*). Towards the end, in bars 28–32, Leo sets a trap for the student in the form of a close juxtaposition of the two modulation-inducing notes. This didactic ruse, called a Quiescenza in Gjerdingen (2007), became a common feature of galant music.



Ex. 7 (d) Leonardo Leo, *XII solfeggi a voce sola di soprano con basso* (D-MÜs, Sant Hs 2369), Gj5006: abridged.



Ex. 7 (e) The solfeggio in Ex. 7(d) annotated and solmized.

LESSON EIGHT: NAMING KEYS

Eighteenth-century musicians employed an antiquated set of terms for musical notes and the scales and keys based on them. They were named after the letters (*litterae*) and syllables (*voces*) of Guido d'Arezzo's hard, soft, and natural scales. Significantly, they used the notes of Guido's high (*acuto*) register to refer to keys, rather than those of the bass. This testifies to their melodic origin in *solfa* training. This short lesson will provide you with a list of note and key names.

Each note received a letter name, followed by the various syllables it occupied within the three scales. Because C, for instance, could appear as *sol* in the soft scale on F, *fa* in the hard scale on G, and *ut* (i.e., *do*) in the natural scale on C, it was called C *sol-fa-ut*. Because E could appear as *la* in the hard scale and *mi* in the natural scale, it was called E *la-mi*.

The technique of singing *mi* in place of *fa* led to a series of sharpward modulations through the circle of fifths. In this respect, the ♯ sign meant "*fa* turned into *mi*." Starting from the "natural" compound scale (i.e., C major), the six sharp keys were named as follows:

C.*solfaut* = C major and A minor
G.*solreut* = G major and E minor (1 ♯)
D.*lasolrè* = D major and B minor (2 ♯♯)
A.*lamirè* = A major and F♯ minor (3 ♯♯♯)
E.*lamì* = E major and C♯ minor (4 ♯♯♯♯)
B.*mi* = B major and G♯ minor (5 ♯♯♯♯♯)
F.*faut diesis* = F♯ major and D♯ minor (6 ♯♯♯♯♯♯)

Keys based on sharpened notes used the same names as these but with the word "sharp" (*diesis*) added. Thus C♯ major and A♯ minor belonged the scale of *C.solfaut diesis* and F♯ major and D♯ minor to *F.faut diesis*.

Italian authors often conflated the letter-name and syllables into a single word, presumably to reflect normal pronunciation. Thus C.*sol-fa-ut* became *Cesolfaut* and F.*fa-ut* became *Effaut*. The general name for B, taking account of both ♭ (B-*fa*) and ♮ (B-*mi*), was *Befabemì*. Grave accents on *rè* and *mì* appear in some sources for emphasis.

F major (F.*faut*) was the usual starting-point for flatward modulations around the circle of fifths. This was a leftover from the old system of *Canto di Bemolle* / *cantus mollis*; as was the use of the syllable *fà* to indicate a flattened note-name, by analogy with B-*fa*. In this sense, the ♭ sign meant "*mi* turned into *fa*." Only "accidental" flats received a grave accent on *fà*.

Because flatward scales were conceived in descending order, those that began with one of the three possible *la* syllables, (which marked downward mutations in hard and soft melody, on E, A, or D), also had *la* appended to their names. Thus E-*la*, flattened to E♭, became E.*la-fà*. Those flattened notes that did not fall on a *la* were called simply G-*fà* (G♭), C-*fà* (C♭), *etc*. The seven flat keys were thus named as follows:

F.*faut* = F major and D minor (1 ♭)
B.*fa* = B♭ major or G minor (2 ♭♭)
E.*lafà* = E♭ major or C minor (3 ♭♭♭)
A.*lafà* = A♭ major or F minor (4 ♭♭♭♭)
D.*lafà* = D♭ major or B♭ minor (5 ♭♭♭♭♭)
G.*fà* = G♭ major or E♭ minor (6 ♭♭♭♭♭♭)
C.*fà* = C♭ major or A♭ minor (7 ♭♭♭♭♭♭♭)

LESSON NINE: MELODIC CADENCES, KEY ENDINGS, AND ADVANCED MODULATION

In addition to the basic rules of the sharpened fourth and flattened seventh, modulations were also indicated in solfeggio by melodic formulas similar to the "key endings" (*terminazioni di tono*) used in keyboard playing. This lesson will give you an overview of the principal ones. They derived from the four basic melodic cadences encountered in plainchant and in melody generally: soprano, alto, tenor, and bass. In the key of C major, for instance, the cadences – categorized in terms of note names, numbered scale degrees, and *solfa* syllables – were as follows:

Soprano cadence: C-B-C; 1-7-1; *fa-mi-fa*
Alto cadence: G-F-E; 5-4-3; *sol-fa-mi*
Tenor cadence: E-D-C; 3-2-1; *mi-re-do*
Bass cadence: [E-]F-G-C; [3-]4-5-1; [*mi-*]*fa-sol-do*

A passing allusion to one or other of these cadence figures in a melody could be enough to induce a modulation. Thus in C major the notes F♯-G could imply a 7-1 soprano cadence to G major, the notes C-B could imply an alto cadence to G major (4-3, *fa-mi*), A-G a tenor cadence (2-1, *re-do*), and C-D a bass cadence (4-5, *fa-sol*). Deciding when and when not to invoke the "key ending" depended upon context.

In minor keys, the melodic cadences were slightly different. They allowed more leeway in terms of chromaticism. Taking the modern key of A minor as an example, the melodic cadences can be listed as:

Soprano cadence: A-G♯-A; 1-7-1; *la-sol-la* or *re-do-re*
Alto cadence: [D♯-]E-D-C; [4♯-]5-4-3; *[sol-]la-sol-fa*
Tenor cadence: C-B-A; 3-2-1; *fa-mi-re*
Bass cadence: F-E-A; 6-5-1; *fa-la-re*

In guides to partimento playing, these cadences were reduced to two-note formulas. Upon encountering a descending semitone, for instance, players were advised to treat it as scale degrees 6-5 in a minor key and to modulate accordingly. The same held true for solfeggio singing. This close relationship between the "key endings" of partimento and melodic cadences points to a profound relativity between soprano and bass in eighteenth-century music. The parts were often interchangeable. Both could be understood in terms of *solfa* syllables.

LESSON TEN: PRACTICE MAKES PERFECT

You are now ready to begin *solfa*-ing the eighteenth-century way! To help you to gain confidence and fluency, this lesson presents a couple of exercises to work out and sing. Model answers are provided, but try not to rely on them too soon.

1. The first exercise, shown in Ex. 10(a), is taken from a solfeggio for soprano, alto, and bass probably noted down by Giovanni Pergolesi (1710–1736) during his years as an apprentice at the *Conservatorio dei Poveri* in Naples. Its pervasive echo effects mean that you only need to solmize the leading voice. The others simply follow. The soprano leads from the start, but from bar 4 the bass takes over.

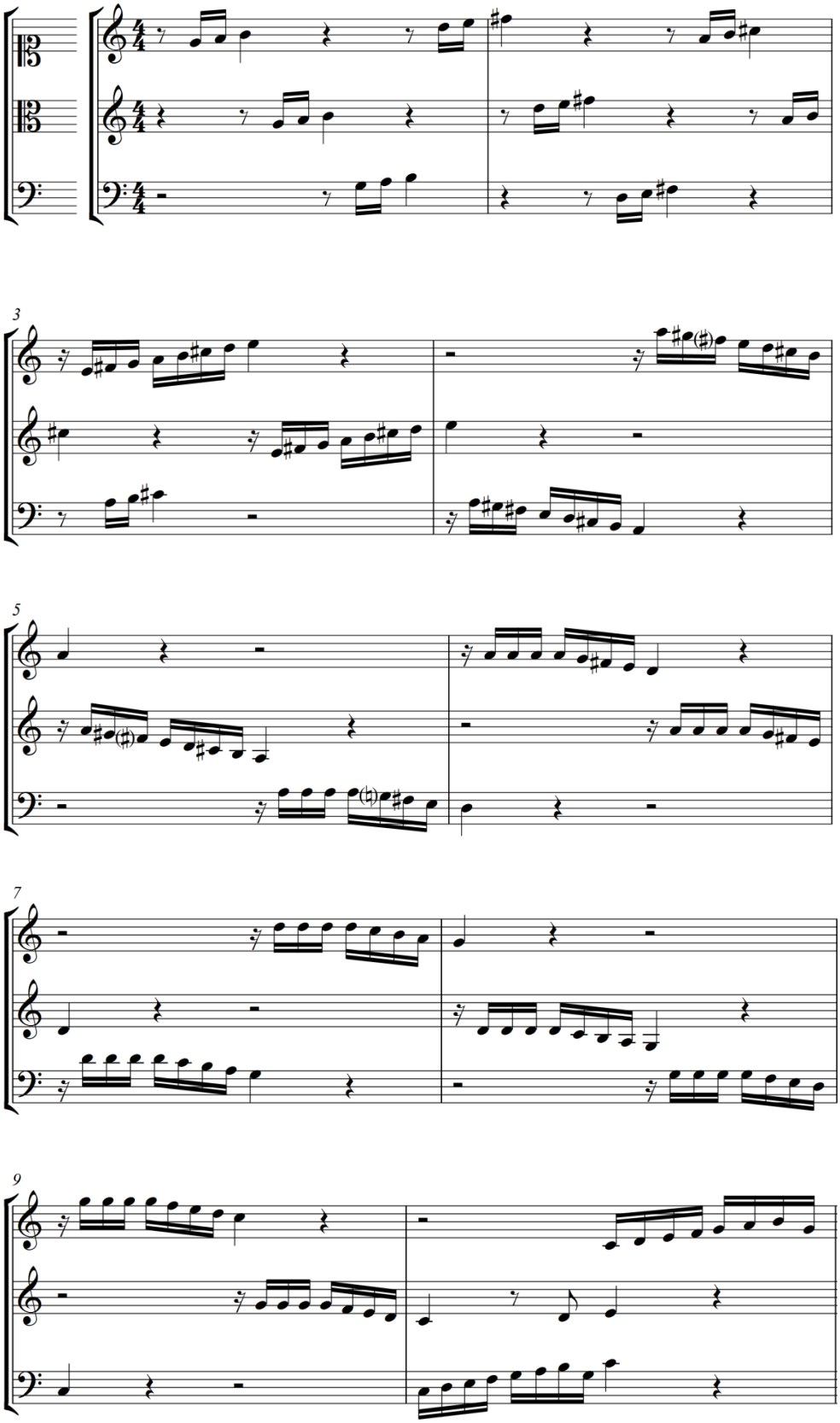
A few hints: Take note of the lack of key signature. It suggests C major (C.*solfaut*) as a starting-point. Knowing this will enable you to identify any altered fundamental *fa*s and *mi*s (i.e., sharpened fourth degrees or flattened seventh degrees). These tell the singer to modulate to a new governing scale. Otherwise, the exercise contains only scale figures.

A model solmization is provided in Ex. 10(b). It shows that the solfeggio was intended primarily as a lesson in modulation, advancing three sharpward steps around the circle of fifths before returning three flatward steps. The opening *do-re-mi* figure, echoed by the other voices, emphasizes the fundamental *mi* of the key, as highlighted in red. A transposition of the *do-re-mi* figure leads to a similar fundamental *mi*, although now on F♯ in the key of G major (G.*solreut*). This would have been spotted immediately as the "first sharp": the fundamental F-*fa* of C major altered to the fundamental F-*mi* of G major. A further transposition ensues, raising the key up another fifth to D major (D.*lasolrè*) by way of C♯, the "second sharp" to result from the technique of singing *mi* in place of *fa*. A scale in the soprano part of bar 3 serves to consolidate this new key. In bar 4, the bass reverses the melodic direction and takes the key to its furthest point, A major (A.*lamirè*), by replacing G-*fa* with the "third sharp," G-*mi*. From here, a simple *sol-fa-mi-re-do* figure leads the music back through the circle of fifths from A, through D and G, to the initial C major, by naturalizing each sharp in turn, or restoring altered *mi*s to *fa*s. They are marked in green in Ex. 10(b).

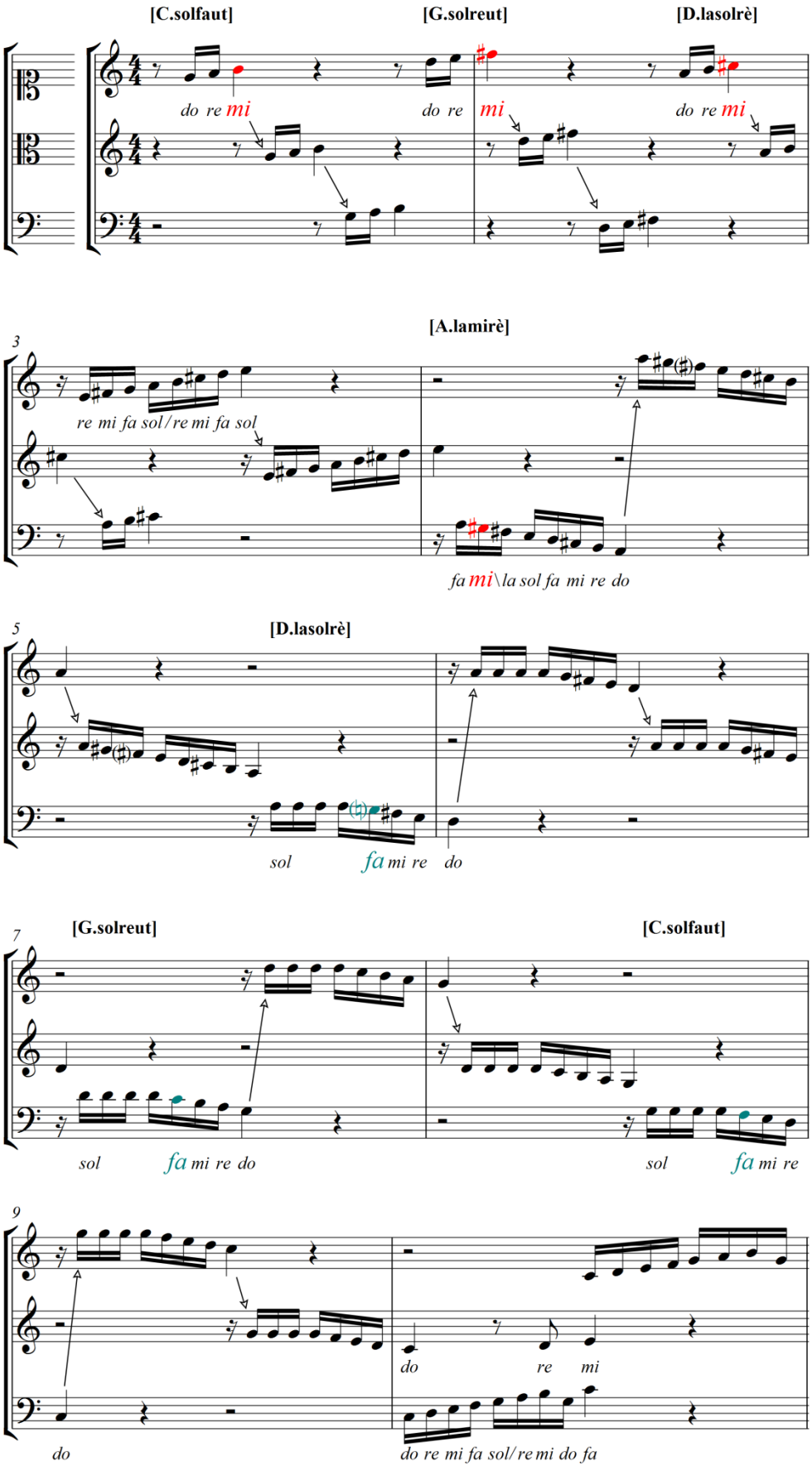
2. The exercise in Ex. 10(c) is drawn from the same collection of solfeggi attributed to Pergolesi. Add syllables to each of the parts in bars 1–9. Does this solfeggio exploit the *do-mi-sol* or *re-fa-la* aspect of the key? Are there any flattened sevenths (fundamental *mi*s sung as *fa*s) in the remainder of the solfeggio? Can the same syllables be used for bars 10–18 and 19–27? Hint: the key signature suggests C major / A minor (C.*solfaut*) as a starting-point.

The model solmization in Ex. 10(d) suggests that this is a lesson in flatward modulation. The opening phrase in A minor is transposed down a fifth to D minor in bars 10–18 and again to G minor in bars 19–27. The indicative flattened sevenths are highlighted in green. This is also a lesson in basic counterpoint and in *re-fa-la* singing, with a characteristic ♯*do-re* cadence. The out-of-phase descending scales in soprano and alto parts form a classic chain of 7-6 suspensions, set against a standard "regular movement" in the bass of a third down and a step up.

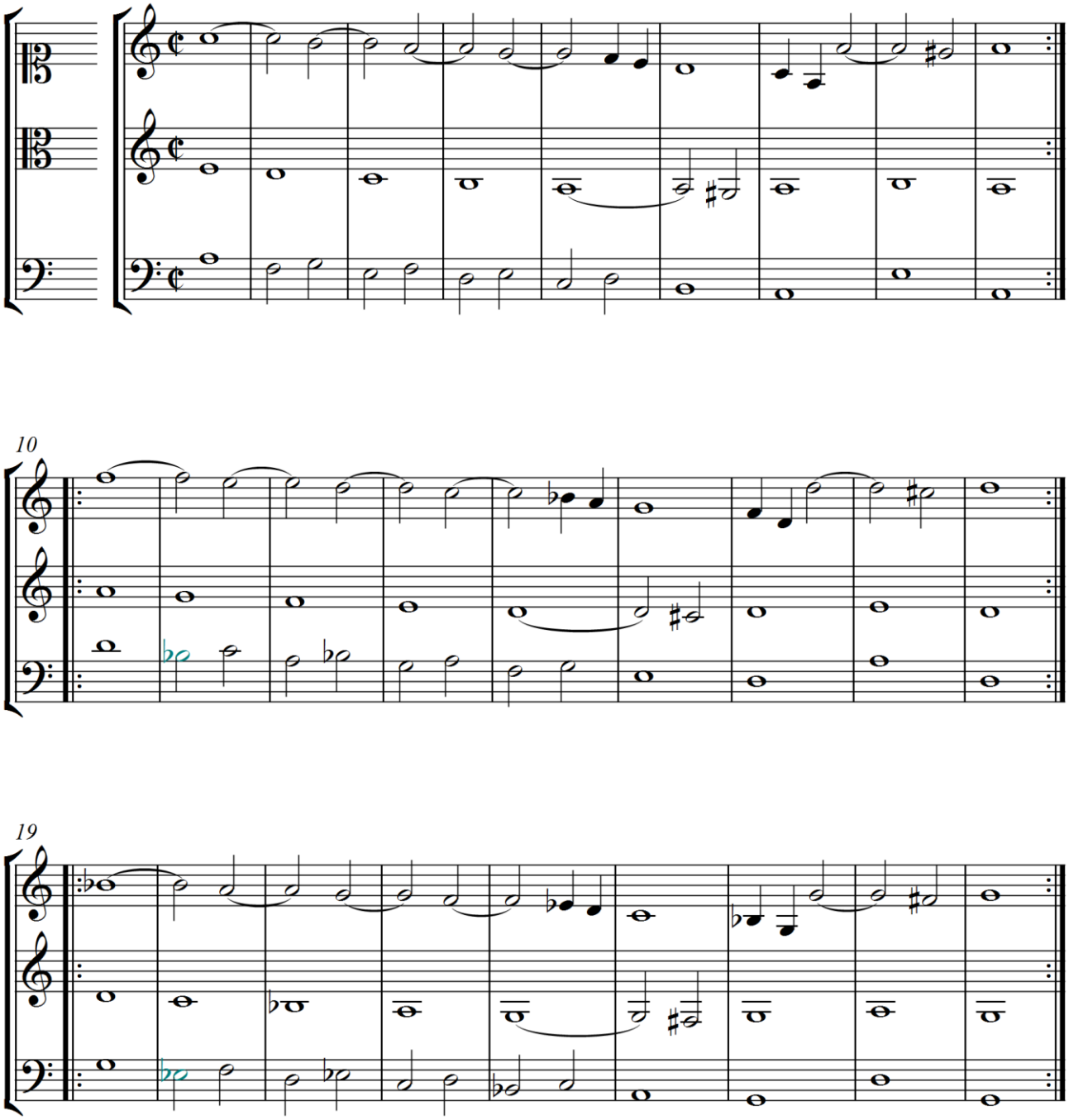
If you found these exercises tricky, take heart! Eighteenth-century apprentices spent years mastering the method. As Neapolitan Francesco Ricupero wrote in his guide to partimento (1803), "our famous and renowned masters … would never sit youngsters at the harpsichord unless they had already received three years of instruction in solfeggio." One rule remains as relevant now as it was then: Practice makes perfect.



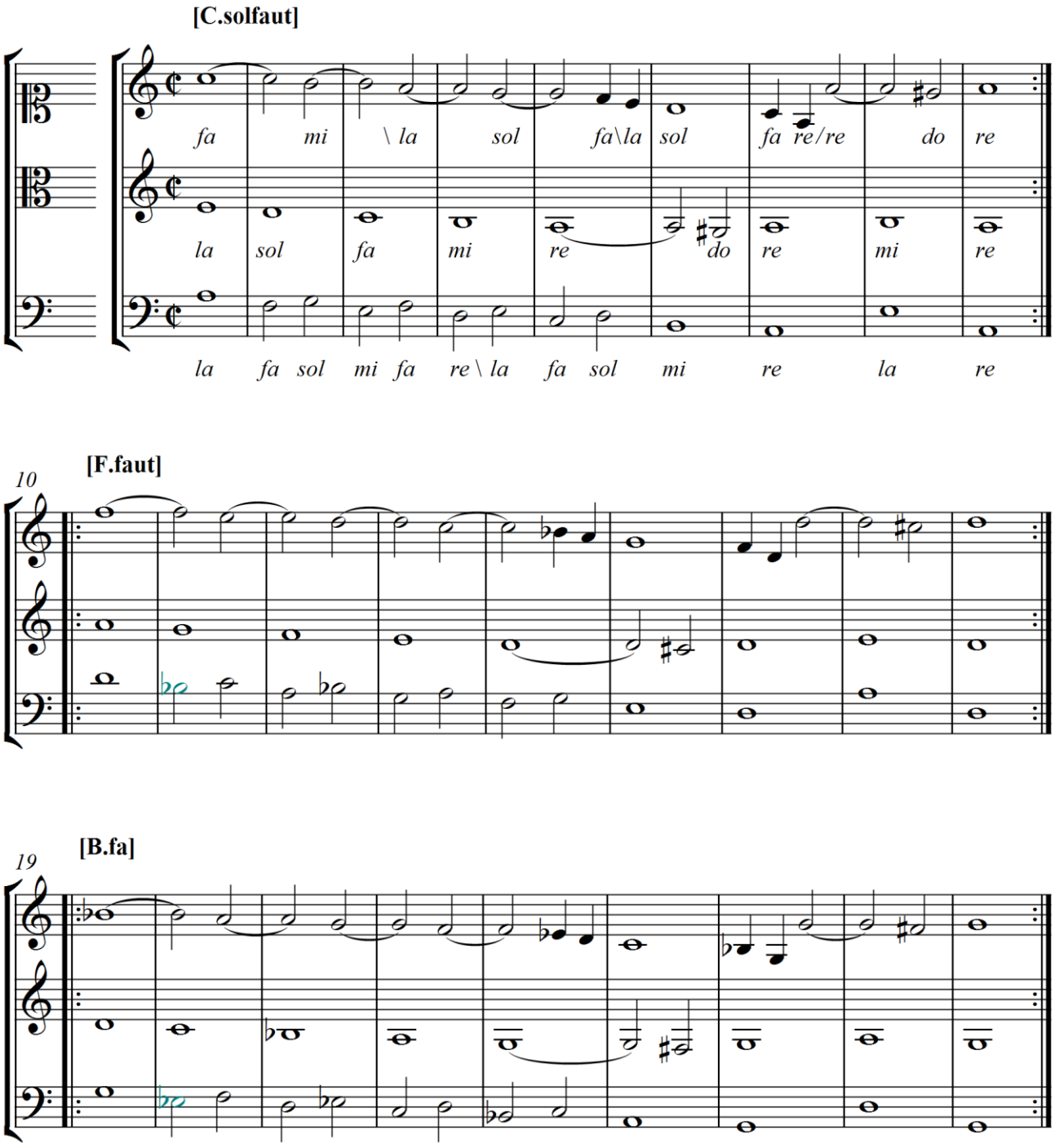
Ex. 10 (a) Giovanni Pergolesi, *Solfeggi à tre Voci: Canto, Alto e Basso* (c. 1725; I-Nc, Rari 1-6-29/4 olim 18-3-3/21), No. 9, bars 1–10.



Ex. 10 (b) Pergolesi's solfeggio from Ex. 10(a) solmized and annotated.



Ex. 10 (c) Giovanni Pergolesi, *Solfeggi à tre Voci: Canto, Alto e Basso* (c. 1725; I-Nc, Rari 1-6-29/4 olim 18-3-3/21), No. 21.



Ex. 10 (d) Pergolesi's solfeggio from Ex. 10(c) annotated and solmized.