

Sight Singing Schubert: A Study in Solfège

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Most of us in the music theory community agree that undergraduate music majors should learn to sight sing. We see the ability to sing a score at sight as an important skill that enhances our students' musicianship. It is a skill that is of direct and obvious importance in all their musical activities, from performing, to score study, to teaching. But acknowledgment about the importance of sight singing is usually where the agreement ends. There is no consensus on how to fit sight singing instruction into the undergraduate curriculum, which texts offer the most useful activities, whether intervals or scale function should be stressed, whether syllables should be used and, most contentious of all, which syllable system offers the most advantages. In this article, I will present interpretations of two Schubert songs using solmization syllables to illustrate the relative strengths and weaknesses of the two most common systems in the United States (moveable-*do* with either *la*- or *do*-based minor), and to demonstrate the analytical insights offered by both systems. In *do*-based minor, *do* is always the tonic, regardless of mode. In *la*-based minor, the tonic syllable moves with mode; thus, in minor the tonic is *la*, in Dorian it is *re*, and so on. I will also refer to this as *moveable tonic*.¹

¹I will not address the important issue of sight singing atonal scores here, in which moveable *do* is irrelevant. In the undergraduate theory curriculum, it makes sense to focus on mastering tonal sight singing before turning to post-tonal styles; it seems reasonable to assume that the two might require different sight-singing approaches.

The debate about the correct method of teaching singing by sight has raged for hundreds of years.² Recent writers have expressed it this way: "[Movable *do* systems are] harmful in the long run to those who become musicians. . . . My early fluency with 'the' scale [i.e. movable *do*]-so convenient for my chorus director--now seems analogous to knowing the five lines [of the staff] as 'Every Good Boy Does Fine.'" ³ Another supporter of fixed *do* writes that the movable *do* approach is a "musical dinosaur;" students who learn this system are "brainwashed," and never "cultivate an awareness of the uniqueness of each tonality-its character and color."⁴ A supporter of moveable *do* writes, "To ask Americans to use [fixed *do*] (in spite of startling claims that absolute pitch can be taught with it) would be asking us to use a foreign language when we already have a perfectly good set of symbols for pitches."⁵ Another describes fixed *do* as "simplistic, ambiguous, and inaccurate," while moveable *do* with *la* as the tonic in minor "insinuates a dependence on the major to define the minor, as if to suggest that minor cannot exist independently of its relative."⁶ *Do*-tonic minor shows that "in the Americanization of solmization pedagogy, theory is king. What matters to these theorists is how well a given solmization system conforms to a predetermined theory. Theory wins and music students lose."⁷

In the United States, collegiate music theory programs use a wide range of sight singing approaches. In a recent survey of four-

²See, for example, the vitriolic exchange of letters between Fux and Mattheson in the early 18th century, translated by Joel Lester in "The Fux-Mattheson Correspondence: An Annotated Translation," *Current Musicology* 24 (1977): 38-50.

³W. Multer, "Solmization and Musical Perspective," *Theory and Practice* 3 (1978): 48.

⁴L. Martin, "Solmization: Getting the Facts Straight," *Theory and Practice* 3 (1978): 23.

⁵John D. White, *Guidelines for College Teaching of Music Theory* (Metuchen, New Jersey: Scarecrow Press, 1981): 31.

⁶T.A. Smith, "A Comparison Of Pedagogical Resources In Solmization Systems," *Journal of Music Theory Pedagogy* 5 (1991): 1-23.

⁷M. Houlahan and P. Tacka, "The Americanization of Solmization: A Response to the Article by Timothy Smith," *Journal of Music Theory Pedagogy* 6 (1992): 149.

year degree-granting music departments in the United States, Cynthia Crump Taggart and I found that the most common sight-singing approach used department-wide is solmization using moveable *do*, with *la* as the tonic in minor being slightly more common than *do*.⁸ Next in frequency was the use of numbers, followed by fixed *do* with no chromatic inflections. Infrequent was the use of fixed-*do* with chromatic inflections, neutral syllables, or note names. The most common reasons given for the use of moveable *do* with *la*-tonic in minor were that it facilitates functional hearing, it retains the half-step relationship between *mi-fa* and *ti-do*, and it makes clear the relationship between modes. The most common reasons given for the use of moveable *do* with *do* as the tonic in minor were that it helps in understanding scale degree function, it reinforces the study of tonal harmony, and it is consistent, with the tonic always being *do*. Fixed *do* was said to develop perfect pitch, to be universally used, to work in all genres of music, and to be simple. Many of the responses were vigorous, even heated, concerning the relative merits and weaknesses of the various systems.

Generally missing in the debate is the consideration of real music using the various approaches. We may argue that one system does not work well, but we seldom give the example that proves it. Critics of moveable *do* argue that it does not handle modulation well; critics of *la*-based minor argue that it conceals harmonic function by setting up two parallel systems of nomenclature for the same harmonies in major and minor; critics of *do*-based minor argue that it requires an extra analysis step, in which scale degree is determined, to get from the notation to the performance. But throughout the debate, real music is not presented for us to consider except as short, anecdotal problem passages.

Perhaps the most important reason for this comes from the near impossibility of abandoning our personal solmization orientation in favor of another, even for a short time, in order to consider its merits. For the fixed-*do* adherent to allow *do* to float from note to note, for the moveable-*do* adherent to hear *si-re-fa* as a tonic triad in either B or

⁸Cynthia Crump Taggart and Bruce Taggart, "Sightsinging Systems: A Survey of American Colleges and Universities," *Southeastern Journal of Music Education* 6 (1994): 194-209.

B-flat (major or minor), for the *do*-based minor adherent to hear *la-do-mi* as the tonic triad, or for the *la*-based minor adherent to add “extra” accidentals in order to get the *le* and *me* of *do*-based minor, all seem somehow contrary to the musical laws of nature. The primary strength of solmization, namely that it creates strong verbal and aural associations between notes and syllables, also prevents easy change from one system to another. Those of us who have taught all three systems know this challenge only too well.

But perhaps we can step back from our own systems for a moment and try to consider sight singing from other perspectives. I will present solfège analyses of the two compositions in minor using moveable *do* with both *la* and *do* as tonic. I call these solfège *analyses* because sight singing using a moveable system can require the singer to make decisions about the tonic during modulations, and because the syllables themselves reveal melodic and harmonic structures to the singer. I will not present the compositions using fixed *do* because such decisions during modulations are not necessary with that system, and because the syllables reveal no analytical structures that the original letter names of notes would not reveal. The sight singer would gain as much analytical insight from singing the letter names themselves.

I demonstrate a bias against fixed *do* solmization here. Although I have taught using this system, I was never satisfied that my students were gaining skills as a result of the solmization; instead, it seemed that the syllables were added after the note sounds had been determined. This may well be an example of an inability on my part to shed my own moveable *do* inclinations in order to consider fixed *do* with an open mind. I am sympathetic to those who argue that fixed *do* develops a sense of *keyness*—that is, how different scales and keys built on the various syllables sound—and a general sense of pitch location, but I am skeptical about claims that a system in which *do* can be C, C#, C♭, or even C*, can develop perfect pitch in those who start using it only as adults.

I will try to present the compositions from the perspective of the sight singer encountering the notated melodies for the first time with no accompaniment. As we will see, sight singing the melodies alone using moveable *do* without the written or sounding accompaniment often forces a difficult decision about tonic when

the harmonic context would have been set by the piano. How do we decide what note to call *do* if we don't know what the momentary key center is? This problem is especially pronounced in minor, in which the melody can drift in and out of the relative major with no added accidentals. Often the melody itself is quite ambiguous. In the course of these analyses, we can at least address the main criticism of moveable *do* systems that they do not deal well with modulation. In the analyses, I will present both a conservative approach to tonicization and modulation, in which the syllable to note assignments do not change unless a true large-scale modulation has taken place with a change of key signature, and a more aggressive approach, in which even brief (but obvious) shifts of tonic cause a shift of syllable. As we will see, both have strengths and weaknesses.

I will use the following syllables: *do, di, ra, re, ri, me, mi, fa, fi, se, so*⁹, *si, le, la, li, te, and ti*. Some teachers may have a different set of syllables for inflections. I know of some who say *to* instead of *te*, and *lo* instead of *le*. Unfortunately for us, the syllables are not internally consistent. It would be better if all flats ended in "e" and all sharps in "i," but *mi* and *re* prevent this. Standardization is obviously not one of the strengths of American sight singing.

The two songs by Schubert, *Der Schatzgräber* (Ex. 5) and *Schäfers Klagelied* (Ex. 6), offer considerable challenge to the sight singer who lacks the support of an accompaniment to provide harmonic context. Both songs are in minor, and both contain modulations and tonicizations that are both brief and subtle. Because melody and accompaniment are meant to lace together in defining harmonies and keys, sight singing these melodies alone can be a disorienting experience.

We should make several assumptions before we begin. First, let us assume that we are encountering the scores and the compositions for the first time. Second, we have had no cues to harmonic structure (such as preparatory tonic chord or key-establishing scale). Third,

⁹Although contrary to solfège tradition, substituting *so* for *sol* has several advantages. First, it makes the entire set two-letter syllables; *so* now agrees with its inflections *se* and *si*. More important, *so* is much easier to sing than *sol* and promotes good singing mechanics; the swallowed "l" of *sol* is a sure tone killer for non-singers.

our primary goal is to sing the notes correctly. Any analytical insight that we glean must come *in addition* to a successful performance of the melody. Fourth, we will have no trouble performing the rhythms of the piece.¹⁰

I have notated the syllables for both *la*- and *do*-based minor moveable *do* beneath the melody line. Line 1 represents *la*-based minor; line 2 is *do*-based minor. These first two lines are conservative interpretations in which the syllables remain fixed to the diatonic set as determined by the key signature (line 1) or by the original key and mode (line 2); syllables do not change with local changes of tonic or mode. When the key signature changes (as in m. 24 of *Der Schatzgräber*), the syllables are adjusted accordingly. Syllable lines 3 and 4 represent a more aggressive analytical approach, in which the tonic syllable shifts whenever the sense of key center audibly shifts, either through modulation or prolonged tonicization. Line 3 is *la*-based minor, and line 4 is *do*-based minor; both reflect a shift of tonic in modulation or tonicization. The question of when to shift the tonic syllable lies at the heart of much of the debate about sight-singing systems, and it relates to a thorny analytical question; namely, when do we call an audible shift of key center a modulation, and when do we call it a tonicization that is heard as a temporary departure from the true key area? In the first, we adopt the new key center as the true tonic; in the second, we retain an auditory sense of the old tonic even as we hear a new temporary tonic.

This question of how a melody establishes tonic and, as a result, how singers choose a starting syllable, warrants a digression. Some melodies are more ambiguous than the two to be discussed here. Consider, for example, the simple folk melody of Example 1. Using moveable *do* with *la*-based minor (*moveable tonic*), the sight singer could simply start singing; the opening syllables (as determined by the key signature) would be *ti*, *do*, *re*. The tonic turns out to be D, with the syllable *so*, making the mode Mixolydian.¹¹ Using *do*-based

¹⁰I realize that this is a big assumption for many young sight-singing students. A discussion of rhythm sight reading and syllables must wait.

¹¹"*La*-based minor" is therefore also *so*-based Mixolydian, *fa*-based Lydian, and so on.

tonic, we must determine the tonic before we can start singing. This either requires us to visually recognize tonal cues that point to D, or we must be able to scan the melody and *hear* where the tonic is. This, obviously, is a somewhat circular proposition: in order to determine the tonic so that we can know what syllables to use to sight sing the melody, we must first sight sing part of the melody. No doubt a well-trained musician should be able to perform such a task. Nonetheless, it does raise a paradoxical question: what do we want the solmization system to provide to us in order to facilitate sight singing, and what must we provide to the solmization system to make sight singing possible?

EXAMPLE 1. *Don't You Hear the Lambs?*



Consider another folk tune that presents an interesting challenge to the *do*-tonic sight singer (Ex. 2). A visual or aural scan of the first two measures seems to suggest a tonic of D, resulting in the use of the syllables *me*, *re*, and *do* on the first three notes (making the mode Dorian). The song might have continued as in the modified version of Example 3, confirming D as the tonic. However, the leap from D to G in the third measure of the real melody clearly points to G as the tonic, making the mode Mixolydian. The opening syllables must therefore be *te*, *la*, and *so*. Sight singers using moveable tonic would sing *fa*, *mi*, and *re*, discovering that the mode was Mixolydian when the tonic was sung with *so*; again, a

preliminary analysis was not necessary to begin singing. *Do*-tonic singers must therefore perform a double analysis: first, they must discover the true tonic, then they must interpret the notes of the melody in relation to the tonic in order to determine which notes receive inflected syllables; this is because the notation itself does not show inflections within a mode. In the Mixolydian examples above, the inflected syllable is *te*; in minor the inflected syllables are *me*, *le*, and *te*. A casual glance at the music does not reveal these inflections. Sight singers must have an understanding of the scale degree relationships in the various modes. Although this is not an unreasonable expectation for college music students, it requires an extra step in singing melodies at sight.

As a final digression, consider the beginning of *Sebben Crudele*, by Caldara (Ex. 4). Both the key signature and the first statements of the melody strongly suggest G major, complete with a strong authentic cadence in G in m. 22. The sight singer using *do*-tonic could easily start on *mi* and sing through the first phrase using G as *do*. Indeed, these are the syllables that the moveable tonic (*la*-based minor) singer would use. However, for *do*-tonic these syllables

EXAMPLE 2. Frog Went A-Courtin'



EXAMPLE 3. *Frog Went A-Courtin'*, modified



would be incorrect because the key is really E minor (made clear by the accompaniment, were it available), making E *do* and G *me*. Subsequent phrases would inform the singer of the mistake. The singer must either correctly guess the mode in the beginning or perform a fairly long-range analysis of the melody to discover the strong E minor phrases that follow. (A case could be made for an immediate, brief modulation to G major at the entrance of the vocal line; deciding on the correct solfège syllables in this case is still difficult, especially considering the accompaniment's insistent return to E minor after every vocal statement.) This song illustrates how easily a minor key can slip into and out of its relative major; *la-tonic* has a decided advantage in this case because it can follow the melodic line from minor to relative major without requiring an analytical decision about syllable shifting.

Returning to our Schubert songs, we find that *Der Schatzgräber* (Ex. 5) is the less complicated of the two. Line 1 shows the syllables for *la tonic*, and line 2 shows the syllables for *do tonic*. Because the

EXAMPLE 4. *Sebben Crudele*

The musical score for 'Sebben Crudele' is presented in five staves. The key signature is one sharp (F#), indicating E major. The time signature is 3/4. The score includes measure numbers 1, 13, 20, 29, and 36. The melody is written for a single voice part. The first staff (measures 1-12) shows a melodic line with a 4-measure rest at the beginning. The second staff (measures 13-19) continues the melody. The third staff (measures 20-28) includes another 4-measure rest. The fourth staff (measures 29-35) shows a more complex melodic line with many sixteenth notes. The fifth staff (measures 36-42) concludes the excerpt with a final melodic phrase.

EXAMPLE 5. Schubert, *Der Schatzgräber*, mm. 1-42

1. Moveable tonic (e.g. *La* minor, *Re* Dorian), no modulations
2. *Do* tonic, no modulations
3. Moveable tonic, modulating
4. *Do* tonic, modulating

1. mi do ti la fa re do ti ti ti mi mi re re do ti do ti mi di di re re
 2. so me re do le fa me re re re so so fa fa me re me re so mi mi fa fa
 (3.)
 (4.) 3. si si la la
 4. ti ti do do

mi mi fa re fa fa fa so fa mi re do te la so fa la fa re re mi fa
 so so le fa le le le te le so fa me ra do te le do le fa fa so le
 ti ti do la do do do re do ti la so fa mi re do mi do la la ti do
 re re me do do do do re do ti la so fa mi re do so me do do re me

so fa mi re re do do ti ti ti mi mi do ti la fa re do ti so fa mi re
 te le so fa fa me me re re re so so me re do le fa me re te le so fa
 re do ti
 fa me re

do ti la la fa re mi re do ti mi si la
 me re do do le fa so fa me re so ti do 1, 2. so mi redo la fa mi re

re re so so fa fa mi re mi re so mi mi fa fa so la so fa so la fa do fi so si
 3. so di re ri
 4. te mi fa fi

la la la la fa re re mi fa so fa mi fa fa la do ti ri fi mi mi
 mi mi mi do la la ti do re do ti [do do mi so] fi/mi si ti la la
 so so so so me do do re me fa me re [me me so te] la/so ti re do do

so mi re do la fa mi re so la so fa mi re do do la fa re fa la do mi re do

melody clearly begins in D minor, the sight singer should have no difficulty choosing tonic at the beginning. Likewise, the change of key signature and clear parallel structure of the melody make the move to D major in m. 24 obvious.

The passage in mm. 5-11 poses a small puzzle. The F-sharp in m. 5 suggests a move to G minor, which the melody in mm. 5-6 seems to support. The melody abruptly jumps into, and strongly cadences in, B-flat major with little warning in mm. 7-9, and then slips back into what is apparently G minor in mm. 10-11, returning to D minor in m. 12. What should modulating sight singers do here? The moves to G minor are weak but clear, and the cadence in B-flat is strong. Should the tonic syllable (*la* or *do*) be moved to G in m. 5? To B-flat in m. 7? Such shifts are shown in lines 3 (*la*-tonic) and 4 (*do*-tonic). Because these key areas are short and weak, singers are most likely to retain a sense of tonic on D throughout this passage. Even the strong B-flat cadence will be heard as a cadence on the submediant, rather than as its own key area. The syllables should probably not be shifted.

Assuming that the sight singers choose to retain D as tonic, and that both syllable systems are equally easy to sing in this passage, which system provides more theoretical insight? Singers using *la* as tonic will find themselves singing in the brief key area of *re*, cadencing on *fa*, which they may recognize as the subdominant and submediant, respectively. Singers using *do*-tonic (line 2) will find themselves in *fa* and *le*. A disadvantage of the moveable tonic (*la*-based minor) system is that it does not foster a strong sense of association between syllables and scale degrees. *Re* and *fa* could be any scale degrees, depending on mode. For *do* tonic singers, on the other hand, *fa* is always the subdominant, and *la* and its variant *le* are always the submediant. Singers using this system would easily and subconsciously recognize the passages in *fa* and the cadences on *le* and *la* as being in the subdominant and submediant, respectively. Such real-time, performance-based theoretical understanding is always advantageous. In either case, retaining the tonic on D is superior to chasing the fleeting tonicizations of G and B-flat.

The key change to D major in m. 24 forces a shift of tonic syllable for moveable tonic singers. *Do*-tonic offers an advantage at this point because the parallel melodic structures from minor to major

are reflected in the parallel syllables. What was *so, me, re, do* in m. 1 becomes *so, mi, re, do* in m. 24. The melody continues to parallel the minor melody through m. 29.

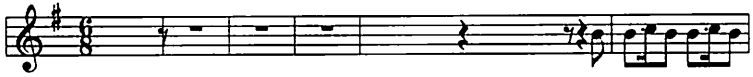
Measures 30-35 bring an interesting challenge for modulating singers. Although the analyst with the advantage of piano score at hand can easily recognize the half cadence in E minor in m. 31, can we expect singers to detect it? Sight singers should recognize E minor in m. 32, and may retrospectively realize that they should have adjusted the syllables to reflect the dominant of E minor in m. 31, but this is an awkward solution. The brief and surprising cadence on F# minor in m. 35 will certainly puzzle modulating singers. Should the syllable on C# be in E or F#? Retrospectively, singers may recognize the G major triad in m. 34 as a Neapolitan chord, leading to a C# triad—the dominant of F# minor—on beat 1 of m. 35, cadencing on F# on beat 3. In this case, the syllables for *do*-tonic (line 4) in mm. 34-35 should be *ra-ra-fa-le-so-ti-re-do-do*. Those for *la*-tonic (line 3) would be the more unusual *te-te-re-fa-mi-si-ti-la-la*. Surely we cannot expect sight singers to recognize these structures as they are singing. Probably the only reasonable syllables are those that leave the tonic on D throughout the D major section (line 1).¹² We need to recognize that the decision to modulate or not is hardly trivial; in fact, Schubert's complex, fleeting harmonic progressions demand a careful analysis. The vocal part alone often does not give the full picture.

Schäfers Klagelied (Ex. 6) is the more challenging of the two Schubert melodies because of several modulations that occur with little preparation. Sight singers using movable *do* must decide ahead of time how aggressive they will be in moving *do*. Failure to move *do* can yield extreme problems in solmization. Moving *do* too often can likewise lead to problems. Lines 1 and 2 show *la*- and *do*-based minor, respectively, with no shifts of tonic; lines 3 and 4 show these same systems with aggressive shifting of the tonic syllable.

The beginning of the vocal melody is clearly in E minor: it begins on the dominant, moves quickly to tonic, and contains early leading-

¹²Although singers will not recognize the Neapolitan from the syllables *fa*, *la*, and *do* themselves, singing is facilitated by not having to choose the "correct" syllables.

EXAMPLE 6. Schubert, *Schäfers Klagelied*, mm. 1-64



1. Moveable tonic, no modulations
2. Do tonic, no modulations
3. Moveable tonic, modulating
4. Do tonic, modulating

mi mi fa mi mi fa mi
so so le so so le so



la mi la si la ti la si la la la te la la fa fa so la mi so fa mi la la so fa mi re ti
do so do ti do re do ti do do do ra do do le le te do so te le so do do te le so fa me



la so so mi re do mi do la so mi re re mi fa so fa
do te so fa me fa me do te so fa fa so le te le

4. so so mi re do mi do la so ti re re mi fa so fa



mi so so mi re do re do la so so so mi ti la fi mi
so te te so fa me fa me do te te te so re do la so
mi so so mi re do re do la so b-minor do la mi re ti la



so la do fa la do fa te do te la fa la do fa la do fa
C-major/minor: te do me le do me le ra me ra do le do me le do me le
re mi so do mi so do fa so fa mi do mi so do mi so do
re mi so do mi so do fa so fa mi do mi so do mi so do



te so mi fa fa te fa fa fa te ra ra do do do do do do mi
ra te so le le ra fa fa fa ra ? ? me me me me me so
fa re ti do la re la la la re fa mi mi mi mi mi si
fa re ti do do fa do do do fa le le so so so so so so ti



fa le fa le fa le te do do fa le le me ra te so
le ? le ? re me me le ? se ? ra te
la la do la do re mi mi la do do so fa re ti
do do me do me fa so so do me me/do so fa re ti

(CONT)

EXAMPLE 6. CONTINUED

36
le ? le le te le so le so so fi fi fi so fi so le so fi
do do do re do ti do ti ti li/fi/n? li mi ri mi ? mi fi
do do re do ti do ti ti li/ti/fi? fi so fi so le so fi

41
so te so so mi re do re do la so mi re mi fa so fa
te le so so fa me fa me do te so fa so le te le
mi? so so mi re do re do la so mi re mi fa so fa
so so ti re do re do la so ti re ti fa so fa

46
mi so so mi re do mi do la so so ti la so fi la ri mi
so te so fa me fa me do te te re do te la do fi so
mi so so ti re do re do la so so mi re do ti re si la
mi so so me re do re do la so so so fa mi re fa ti do

51
mi mi fa mi mi fa mi la mi la si la ti la si la la la te la
so so le so so le so do so do ti do re do ti do do do ra do
mi mi fa mi mi fa mi la mi la si la ti la si la la la te la
so so le so so le so do so do ti do re do ti do do do re do

56
la fa so la mi la fa mi la la so fa mi so fa mi mi la te la la fa la te la
do le te do so te le so do do te le so te so so do ra do do le do ra do
la fa so la mi so fa mi la la so fo mi so fa mi mi la te la la fa la te la
do le te do so te le so do do te le so te so so do ra do do le do ra do

61
la fa re fa mi re do ti re do la
do le fa le so fa me re fa me do
la do re do mi re do ti re do la
do le fa le so fa me re fa me do

tone D-sharps. Singers using either *la*-based or *do*-based minor would have no difficulty with the first two phrases (mm. 6-14). In mm. 14-20, E minor slips into its relative major, forcing *do*-tonic singers to shift *do* to G (shown in line 4). Leaving *do* on E, with the tonic of the passage being *me* (line 2), is at best cumbersome. *La*-tonic singers need not shift syllables here. *La*-based minor again offers the advantage of a smooth shift to the relative major with no analytical preparation.

Singers using both systems with modulation are forced to make some difficult decisions in mm. 21-23, where the melody suddenly- and briefly- cadences in B-minor. These measures offer a good example of the important role played by the accompaniment in defining key areas. In m. 21 the tonic G major triad in the piano part becomes a G major-seventh chord on the first beat (assuming the dotted quarter as the beat), and then a German augmented sixth chord in B minor on the second beat of the measure. With these strong harmonic cues, the accompanied melody smoothly moves into the B minor cadence and is heard as a brief harmonic digression rather than a true modulation; without the accompaniment, however, the shift is abrupt.

The singer must decide whether to retain the old tonic or shift to this new, albeit sudden and brief, tonic. Given the brevity of the key area, the best course would probably be to retain the old tonic and add inflections to the syllables. In *la*-based minor (line 1), the resulting syllables yield a cadence on *mi*, which would suggest the dominant of the original key (line 1; remember that the *la*-tonic singer is comfortable with *mi* as the chord root of the dominant, odd though it may seem to *do*-tonic singers). The *do*-tonic singer who modulated in m. 14 will also cadence on *mi*, but this *mi* represents the mediant of the most recent key of G major (line 4). (The singer using *do*-tonic without modulation would cadence on *so*, as shown in line 2; this interpretation makes little sense because the key is functioning here as the mediant of G major, rather than as the dominant of E minor.)

Unbeknownst to the singer, the piano accompaniment returns to G in m. 24, now as a G7 chord that leads to C major in m. 25. Singers who are modulating aggressively will again be forced to modulate retrospectively (or analyze ahead). Line 3 shows the syllables in C major, which will be the same for both moveable *do* systems because of the major mode. Lines 1 and 2 show the unmodulating syllables in moveable tonic and *do*-based minor, respectively.

Aggressively modulating *la*-based minor (line 3) proves problematic in mm. 29-32, when the melody slips into C minor, the parallel minor of the previous key area. Suddenly, from one C to the next, the syllable must shift from *do* to *la*. *La*-tonic singers are now faced with the problem of retrospective modulation; without previous analysis, they cannot know the new key until after they are

into it. Modulating *do*-tonic (line 4) fits the move to the parallel minor well. Keeping *do* on E (line 2) starts to approach impossibility with the *fa*-flat (A-flat). Keeping *do* on G (line 1) allows straightforward syllable assignments throughout this modulatory section.

From the cadence in C minor in m. 32, the melody moves to C minor's relative major, E-flat, by m. 35. Singers who tried to leave *do* on E will now find it impossible to continue (line 2). The lack of syllables for *do*- and *fa*-flats rules out this approach. Singers using modulating *do*-tonic (line 4) are again likely to miss the moment of modulation in m. 35 because the material that precedes it seems to suggest a continuation in C minor. Singers using modulating *la*-tonic (line 3) can continue through the modulation without changing syllables, noting that the tonic has shifted to *do*, which indicates a move to the relative major. Singers using *la*-tonic who let E remain *la* (line 1) will now find themselves in "*le* major." These syllables clearly show that the key has moved far (in harmonic terms) from the original E minor (*la*) to E-flat major (*le*).

The melody continues briefly in E-flat in m. 37, but lands on a problematic C-sharp in m. 39. Is this note a harbinger of a modulation in the works? A logical guess would be that this note might serve as the leading tone to D (as indeed it does). The sight singer will not know this in advance. *Do*-tonic singers who have been in E-flat up to this point (line 4) would sing *li* on the C-sharps of mm. 40 and 41 until they figure out that this is an augmented sixth to dominant cadential formula in G, making the correct syllable *fi*. In the meantime, the singer must choose between *li* (if E-flat is tonic), *fi* (if G is tonic), or *ti* (if D is tonic). Modulating *la*-tonic singers (line 3) would have a similar problem. The C-sharp could either be *li*, *fi*, or *ri*. *Li* would be the syllable if the *do* remained E-flat from the previous key; *fi* would be the syllable if the new key were G major; *ri* would be the syllable if the new key were G minor (making *do* B-flat).

This is a problem for modulating *la*-tonic. Even though the passage in mm. 39-41 strongly suggests a continuation in G, it does not specify whether it will be major or minor. In the meantime, *la*-based minor singers have no way of knowing without analyzing ahead. Although both *do*- and *la*-tonic singers will have difficulty

choosing the correct syllables at this point, *la*-tonic singers will have the greatest difficulty.

It should be noted that *la*-based minor singers who have not modulated the syllable assignments (line 1) will find themselves singing the correct syllables without having to decide on the new key. Obviously, this is, in part, a happy accident; if the melody had continued in G minor, the syllables in line 1, mm. 39-41, would not have agreed with the new key. As it is, however, sight singers using the key signature to determine syllables will again be offered analytical insight (at least in retrospect) by this cadence on *so* (because *so* is the dominant of the relative major of the original key of E minor).

As the melody works its way back to E minor, it does so in a kind of a thematic and harmonic retrograde of previous material. The G major passage of mm. 42-50, which is the same as that in mm. 14-23 (with variation on the final cadence), leads to a repeat of the opening theme in E minor in mm. 51-59. We see, then, a symmetry of key areas, with E minor at the beginning of the song leading naturally to G major as the stepping stone for explorations of increasingly distant key areas, culminating in the arrival at E-flat major in m. 34. G major is then used to ease the key back to the original E minor for the song's conclusion; the relative major moves effortlessly to the minor, allowing a harmonically stress-free modulation.

It is desirable to have the syllables mirror this stress-free transition. Whereas some modulations require brute force (such as the shift from C major to C minor to E-flat major in mm. 24-36), other modulations can "sneak" in. Allowing the tonic to move from syllable to syllable as the syllables remain anchored within the diatonic set makes singing such subtle modulations easy. Sight singers who move the tonic syllable to agree with every modulation will inevitably be faced with a sticky analytical decision at points of brute-force modulation. But modulations to and from relative major and minor can be accomplished with ease if the syllables are allowed to stay fixed. It seems appropriate to make such distinctions between types of modulation. We see in line 1 of mm. 42-63 that singers who have kept the syllables anchored to the notes of the key signature (as well as those using modulating *la*-tonic, line 3) have an easy time with the ending of this song. The tonic easily slides from

do on G in mm. 42-50 to *la* on E in m. 51. Singers using *do*-based minor must again make a shift, this time from G-*do* to E-*do*.

We have now “sung” through the entire song using several solmization approaches. Line 1 contained the syllables that agreed with the key signature; among other things, this was *la*-tonic in E minor. The syllables in line 1 remained anchored to the notes of the diatonic set as specified by the key signature. Modulations were shown through inflections of the syllables only, rather than by moving the tonic syllable for each key area. Line 2 was the doomed attempt to keep *do* attached to the overall tonic of E. Lines 3 and 4 showed *la*-based and *do*-based minor interpretations, respectively, in which the tonic shifted with each modulation (which I called an aggressive approach). Which (if any) seemed most satisfactory? Which offered the greatest ease of singing? Which offered the most significant analytical insights? Did any offer both ease of singing and analytical insights?

It is only fair to confess my own biases before attempting an evaluation of the four approaches. Although I have taught using both *la*- and *do*-based minor, and I prefer *do*-tonic in the classroom when illustrating harmonic structures and melodic scale function, I tend to use *la*-tonic--or, more precisely, moveable tonic, in which the tonic can be any syllable--when I sing from sight using syllables because it allows me to hear interval relationships and scale functions most easily and because it requires no preliminary analysis. I share the concerns of fellow theorists that *la*-tonic conceals many structural features of minor; the inconsistencies between the syllables in major and minor are surely problematic for vocally illustrating and discussing harmonic and melodic structures in the classroom. For example, in teaching the augmented sixth chord leading to the dominant, it is very useful to have the syllables of the augmented sixth be *le* and *fi* leading to *so* in both major and minor. (In *la*-tonic the syllables would be *fa* and *ri* leading to the dominant *mi*.) Students will find it easier to identify augmented sixth chords if they can use the characteristic progression of syllables as a clue in both major and minor. Not having a common set of syllables to reinforce scale degree and harmonic associations common to both major and minor weakens the analytical utility of a

moveable tonic approach for such progressions. Nonetheless, I tend to use *la*-based minor (moveable tonic) when I sight sing.

We can assume that both systems facilitate singing non-modulating passages equally well for those accustomed to using them. I find the experience of singing such passages with the two systems to be equally easy, but quite different. With *la*-tonic I am aware of relationships within the diatonic set; I have a strong sense of where *mi-fa* and *ti-do* are, even though they are between scale degrees 5-6 and 2-3 respectively. Because there is no need to perform a scale-degree analysis to identify syllable assignments, I am much less aware of scale degrees and harmonic patterns. I focus my attention on the position of notes within the operative diatonic set (that is, the notes specified by the key signature). I do not think of all modes in terms of the major key; on the contrary, I think of all modes, including major, in terms of the available notes as determined by the key signature. Using *do* as tonic, on the other hand, I have a strong sense of scale degree and underlying harmonies because I must think in those terms to identify syllable assignments. I am less aware of the diatonic set and more aware of specific keys and harmonic functions. Both sight-singing experiences are valuable and informative for me.

In the two Schubert songs, the problems created by the frequent sudden modulations make both systems that require reassigning the tonic in a modulation difficult. Fluent performance of the melodies will be hindered by the need to change tonic “on the fly.” The simplest approach for the sight singer is to use *la*-tonic (or fixed *do*!) at the beginning and allow the syllables to remain fixed on the diatonic notes as determined by the key signature, applying chromatic inflections where needed. We saw that in Example 6 this yielded cadences on *mi*, *fa*, and *le*, but it did not complicate singing the melody; it may offer useful analytical insights because it shows that all modulations in this song are fleeting and do not warrant a full shift of the tonic.

Such a permanent assignment of the syllables to the diatonic set as indicated by the key signature, with no shift of the tonic syllable in modulations, may represent a compromise between fixed *do* and fully moveable *do*. It shares with fixed *do* the simplicity of not having

to analyze and make retrospective decisions about tonic mid-song; both are performance--rather than analysis--oriented. It shares with fully moveable *do* the emphasis on scale degree relationships (albeit with different syllables on the notes of the scale in the various modes), harmonic patterning, and diatonic intervals. The tonic of a diatonic major scale is always *do*; the tonic of a diatonic minor scale is always *la*. Half-steps always fall between *mi-fa* and *ti-do*. Chromatic inflections of notation are reflected in the inflected syllables. Furthermore, leaving the tonic syllable in place throughout a composition should reflect the experience of the listener as the harmonies move away from the original tonic to more distant keys. Modern theories of harmonic structure suggest that such departures are heard in the context of the original tonic; tension is generated by the implied eventual return to the tonic. It seems appropriate to have the syllables reflect this departure and return.

Examples 7-9 illustrate how such syllables might be applied to the development section of a sonata form movement, in this case a piano sonata by Haydn. The development section opens in the dominant (Ex. 7). Using moveable tonic that remains fixed to the key signature, the syllables make this "*so* major." Although this seems odd to those accustomed to *do*-tonic, a singer comfortable with moveable tonic would recognize *so-ti-re* as both the local tonic and the overall dominant. Obviously, using *do*-tonic here (with A as *do*) would work well. In a discussion of these measures (36-40), it would be easier to illuminate analytical structures with *do* on A; singing might also be easier within the key area. By m. 59, however, the key has moved to B minor, shown in Example 8 as *la* minor (that is, the submediant minor), an important key in Haydn development sections. This key leads back to the tonic (D major) by m. 71, in anticipation of the true recapitulation in m. 74.

Singing the themes of the development section would be difficult using fully moveable *do*; the nature of a development insures that many key areas will be touched on only briefly, often not recognized except in retrospect. If we could isolate each key area, singing the melodic material with the tonic of *do* would, no doubt, be easier because the scale degree/syllable associations would remain consistent, but it requires extensive analysis to determine where exactly one tonic leaves off and the next begins. This problem is

EXAMPLE 7. Haydn, *Piano Sonata in D Major, I*, mm. 36-40
(development)



EXAMPLE 8. Haydn, *Piano Sonata in D Major, I*, mm. 59-61
(development)



EXAMPLE 9. Haydn, *Piano Sonata in D Major, I*, mm. 67-71
(development)



often even more pronounced in transitional passages between tonic and dominant key areas.¹³ Leaving the syllables assigned to the notes of the key signature allows easy syllable assignment throughout the movement. For ease of singing (rather than analyzing), leaving the syllables anchored to the diatonic set as determined by the key signature (moveable tonic) might prove a better solution than trying to modulate aggressively.

Finally, Example 10 presents a more recent example of a digression to a remote key, here in the bridge section of "Skylark," by Hoagie Carmichael. The sudden move to G major, with its strong cadence in m. 26, in the middle of an E-flat major song is a challenge for singers. How do we want them to hear this key? I suggest that despite the strong G major feeling of *mi-(me)-re-do* in m. 26, we should hear this still in E-flat as *si-(so)-fi-mi*; that is, as a cadence in the major key of the mediant scale degree, or "*mi* major." Although we clearly hear the brief modulation as a departure to a remote key, we should not lose our sense of the home key; the effectiveness of the passage depends on keeping it in its original harmonic context. If we were teaching this song aurally (in any key), these syllables would simplify the process; transposing it on an instrument would also be simplified using the unmodulating syllables as a guide. In both cases, fixed *do* and modulating *do*-tonic do not offer such generalizability from key to key.

Modulation seems to be the issue that supporters of the various systems tend to focus on, especially when pointing out the weaknesses of other systems. Seldom do we take the issue beyond the abstract discussion of what the syllables should be at various static points in the melody to considering how the singer will handle the modulation as it occurs. Those who argue in favor of fully moveable *do* may be correct when they say that a new key area should have a new tonic syllable, but they do not give a good procedure for arriving at this new tonic. Where and when does the singer make the shift? How strong must the modulation be to warrant a shift? Do we expect our students to sing through such

¹³Furthermore, in sonata form movements that are in minor, the transition is often between the original key and its relative major, which is especially easy for those accustomed to *la*-tonic in minor.

EXAMPLE 10. Hoagy Carmichael, "Skylark," mm. 18-27 (bridge).

do mi so do do do re do ti te do mi te

la la la te la so fa mi re fa la te so fa re

la do re si do si ti di si mi di ti si so fi mi so la

Skylark

Words by Johnny Mercer

Music by Hoagy Carmichael

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modulations without stopping and resetting the tonic syllable? Unless we have good answers to these questions, fully moveable *do* will always be susceptible to criticism from other approaches.

Ultimately, we need to ask what our goals are for our students. Do we wish them to sing notated melodies fluently at sight, even if it means minimal analytical understanding of structures being sung? (What percentage of college students can learn to sing scores fluently at sight in four semesters?) Or are we less concerned with sung performance of scores and more concerned with expanding our students' theoretical understanding through the use of a syllable system that reinforces and illustrates analytical structures? I fear that we must make such a decision, given the limited amount of time and resources available to most of us in the typical undergraduate theory sequence. The decision between the two systems is neither obvious nor simple.

In any case, we should be careful that our arguments in favor of one system over another be based on the actual act of sight singing, and not on abstract theoretical principles or static analytical structures. Assuming that we want our students to be able to sing (and hear!) real scores (and not just short melodies in sight-singing texts) at sight, our system of choice should facilitate fluency; an effective sight-singing system will help the student sing a wide range of scores in a wide range of tonal styles. All arguments about theoretical consistency and validity, all our perceptions of how we sight sing, are irrelevant if our students do not acquire such fluency.