

CONTEXTUAL EAR TRAINING

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The development of aural analytical skills is a must for anyone who desires a thorough understanding of musical form and structure. It is, of course, an integral part of that study we call music theory—it is the wedding of the aural experience to abstract musical constructs. As both a theorist and a theory teacher, I believe that to hear music is to analyze it and to analyze music is to understand it more fully. This I would, above all, like to impart to my students. Unfortunately, this is easier said than done. So what is the best way to approach an ear training, or aural skills class? I have pondered that for a long time, and as a result, have developed and implemented some new and more successful strategies that I would like to discuss here.

One vexing problem for many aural skills teachers is the study of intervals. Do students need to be proficient at identifying random intervals before they can move on to something else? No, I don't believe so.¹ Do they need to be proficient at hearing scale degrees and relationships within the context of a key? Most certainly. Many students do not do particularly well with random interval identification, but can do well with other aspects of aural analysis. Nevertheless, the identification of intervals seems to be a major component of many ear training and sight-singing texts, CAI music software, and presumably, most ear training programs. But at the same time, many aural skills teachers question their importance—or the value of the method by which they are most often taught. A similar situation exists with regard to triads. Is there more to the study of triads than recognizing the four qualities as isolated events and hearing which voice has the root? These are the questions and concerns I will address here, and I will argue for a contextually-based approach to teaching intervals and triads in an ear training program.

Over the past several years I have experimented with different strategies for teaching aural skills, all of which emanate from my basic beliefs about exactly what skills I am trying to teach, how to integrate them with written theory, and how to do it in the most efficient way.

What skills *am* I trying to teach? There are different opinions about the purposes and goals of sight-singing and ear training,² so aural skills teachers must decide which goals they are pursuing before developing a program of

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study. With that image in mind, all activities must be coordinated to work towards that end. My goal is to produce musicians who can hear and think about music equally well—musicians who can understand and see what they hear and hear and understand what they see. I am not trying to provide merely a service by producing better sight-readers for the choirs and ensembles. If improved sight reading is a consequence, so much the better—a felicitous by-product, but not the point of the exercise.

The underpinning of my approach to teaching aural skills is that nothing a student learns in written theory or aural skills exists in a vacuum, independent of anything else. Theory and ear training are flip sides of the same coin—every component works to reinforce every other one. Consequently, everything in theory and ear training should be as coordinated and interrelated as possible. It is unfortunate that as a practical matter, the written portion of a standard theory class progresses much more rapidly than the aural skills portion, so there is a lag between what one has learned in theory and what one is learning in aural skills at the same time. This is not to say that examples of whatever is currently being taught in theory should not be played in class: quite the contrary. This is one of the best ways to interrelate the two and reinforce for the students the idea that hearing, seeing, and understanding go hand in hand.

One caveat: the strategies I am proposing are without question biased towards tonal music. Since most of a music major's two year theory sequence (at least 1 1/2 years in most schools) concerns itself with music of the common-practice period (i.e., Baroque through Romantic), this bias seems justified. Also, in light of the fact that this music is still very much with us in the concert hall, as well as in the music school, and because I believe that later styles can profitably be studied as outgrowths of, or reactions to, the tonal system, this emphasis seems warranted.

Since I am proposing a "holistic" approach, the discussion of intervals and triads needs to be prefaced by a discussion of what I believe should be the goals of sightsinging, and how best to work towards that end. My goal, when teaching sightsinging, is for students to learn to hear the functional relationships between notes in a key: their relationships to each other, and their relationship to tonic. Ideally, scale degree numbers should be sung, but since that would be too cumbersome, especially when alterations are added (which I think are absolutely imperative—^b6, #4, etc.), the monosyllabic solfège system is a very happy compromise.

I believe practicing sightsinging is one of the best ways to practice ear training. To memorize what certain patterns sound like from singing is to recognize them when listening. Learning position within a key by singing with that in mind becomes a tool one can use in either the classroom setting (taking dictation), or, more importantly, in any analysis one embarks upon,

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wherein one begins by listening to the music in question. Thus, sightsinging is an extremely important facet of ear training—it is how one begins to learn to hear music analytically.

Since I am advocating sightsinging to teach students to hear and recognize scale degrees (a skill I believe to be far more important than learning to hear isolated intervals), then only one method of sightsinging will be appropriate: the moveable-*do*/tonic-*do* system (*do* is tonic for both major and minor keys). Moveable-*do* has as its goal the learning of the tonal system, unlike the fixed-*do* system, or the moveable-*do*/minor-*la* system. Fixed-*do* can work towards improving reading skills, since the same line or space on any given clef always has the same syllable. But it imparts no functional meaning or significance to any note. *La*-minor is an interval approach. It measures the distance between syllables: *ti* to *do* is always a half step, whether in a major key functioning as the all-important, key-defining leading-tone to tonic relationship; or in its relative minor key, functioning as the much less critical supertonic to mediant relationship. At best, this system requires learning two sets of syllables to signify the same functions: one set for the major key, and one for the minor key. At worst, this system encourages hearing all minor keys in relation to their relative majors, rather than as independent keys of equal stature and validity. A tonic *la* is in actuality heard as being two steps below *do*, as opposed to being heard as a tonic in its own right.

Beginning exercises in my sightsinging classes stress learning to hear and retain tonic. At first, everything is done from *do* to emphasize tonic as the reigning entity and to develop a sense of tonic retention and centeredness. For example, after learning to sing a major scale with syllables, students begin singing each note of the scale from *do*: *do-re-do*, *do-mi-do*, etc. One sightsinging text that correlates well with this approach is the Berkowitz/Frontrier/Kraft *A New Approach to Sight Singing*,³ the text we use at Butler University. It begins with stepwise major-key melodies, all of which start and end on *do*—again, developing a sense of the primacy of tonic. Next, the text introduces melodies with skips in the tonic triad. Thus, major and minor thirds, perfect fourths, perfect fifths and even major and minor sixths are introduced early on, as the residual intervals, or resultant distances, between notes of the tonic triad in its various guises, as opposed to being introduced as intervals for their own sake. In fact, one need not even refer to intervals at this point. Students are simply learning to sing from one note of a tonic triad to any other note of that same tonic triad. This skill is fundamental: to be able to recognize and sing a tonic triad in any of its presentations as soon as possible.

A different approach employed by some sightsinging and ear training texts is one in which melodies are categorized and presented according to

interval content.⁴ These books progress by adding melodies with successively larger intervals: seconds, thirds, fourths, etc. However, I contend that singing a third in a ii, IV or vi chord, for example, is much more difficult for a beginning sightsinging student than singing a third in a tonic chord. Why? Because a beginning aural skills student has not yet progressed to hear internally all those different harmonies within a tonal framework.

There is a critical distinction here that lies at the heart of my approach to teaching intervals and triads. A sightsinging program that progresses by interval reinforces the "interval" way of hearing tonal music, which I don't believe is the primary way most of us really process music.⁵ In tonal music, intervals have no meaning outside of the context of a harmony and/or key, and in this tonal context, like intervals can sound very different. The major third from *do* to *mi* (as part of a tonic harmony) is the epitome of stability, and should be experienced as such, whereas the major third from *sol* to *ti* (as part of a dominant harmony) is anything but stable. It is the antithesis of the tonic third and needs to resolve to tonic. The urgency of the upper note of this third, the leading-tone, to resolve up by half-step to tonic is palpable. This is not at all paralleled by the major third from *do* to *mi*. Or, to cite a different kind of example, think of the case of enharmonic intervals. Out of context there is no difference, but in a tonal context there is a world of difference between, say, an augmented sixth and a minor seventh. Similar examples abound in tonal music.⁶

So what is the purpose of teaching intervals *per se*? I would argue that we should instead be teaching students to hear the larger relationships: scale degrees, harmonies, and the affinities of notes for each other. Intervals should be taught and understood only as parts of harmonies, not as discrete units to be recognized in the absence of a tonal context. Clearly then, when practicing sightsinging with these harmonic goals in mind, one should progress not by interval, but by harmony. Consequently, after practicing melodies with skips in the tonic triad, one would proceed to melodies with skips in the dominant or subdominant triad, and so on.

Since I have, for a number of years, taught sightsinging in this manner, I realized that to be consistent, I needed to approach ear training and dictation in the same way: to wit, intervals are the distances between scale degrees, not isolated events. Moreover, since the same interval can have very different tendencies, and even different meanings, depending on the context and the scale degrees involved, I wanted to develop a method of practicing scale degrees and intervals that would make the students aware of and sensitive to these different tendencies. Interval practice therefore begins in ear training almost immediately, but, similar to sightsinging practice, without referring to intervals as such. It is only after intervals have been taught in written theory that they are referred to specifically in ear

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training. This approach therefore de-emphasizes intervals while stressing scale degrees, tendencies, and tonic retention.

Scale-degree exercises are done as follows: a key is established, generally by playing a short cadential pattern. Students are asked to sing *do*. Some other scale degree is then played, and students are asked either to sing from that scale degree up or down to *do*, or to sing *do* and then sing up or down to that scale degree. They then identify that scale degree (by syllable). In between each exercise, students are asked to sing tonic. Thus, not only are they learning scale degrees in relation to tonic, but they are also learning, through constant repetition, to retain tonic and to use it as a constant reference point. Naturally, the students are hearing and singing intervals (from tonic to scale degree “x”), but they are not yet labeling them as such.

This exercise also lays the foundation for the next one, another scale degree/interval exercise done without reference to intervals, at least at first. Now instead of hearing one scale degree in relation to tonic, students hear two scale degrees (one of which may still be tonic). For example, after establishing tonic, I may play *ti-re*. Students first sing *do*. They then sing the two pitches they heard, usually on a neutral syllable, and sing up or down from tonic until they find the two pitches, which they then sing on syllables. They are again singing an interval, but more importantly, they are learning the relationship of two scale degrees to each other, and to tonic. As students learn intervals in theory, we gradually add in the interval names for the scale degrees. At this point when students sing “*ti-re*,” they also sing “minor third”:

Figure 1.



Lastly, we listen for the interval's tendency to resolve, if there is one. In this case, the resolution is to tonic, so I would have the students sing tonic after they sing the interval.⁷

In addition, and I believe this to be a crucial point, I don't randomly choose any two scale degrees. I choose scale degree pairs where the corresponding interval is most often, or very often encountered. And, I might add, I don't choose them for the sake of the interval, but for the purpose of familiarizing students with important relationships in tonal music. So, for example, the ascending perfect fourth from *sol* to *do* is

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practiced frequently, because of its all important key-defining characteristic—the V to I relationship encountered so often in bass lines (whether as a primary relationship or a secondary relationship: *re-sol*, for example, is still *sol-do*, but on a secondary level). Conversely, I rarely practice perfect fourths from *ti* to *mi*, because that fourth has little or no significance, at least in terms of frequency. (Mediant chords in a major key are rare as it is, and a tonicized mediant is rarer still. The most typical usage is, of course, in a circle-of-fifths progression.)

The point I want to stress to my students is that even though most diatonic intervals can be found in several or many places in a key, certain intervals are encountered much more frequently in certain harmonies, or on certain scale degrees, than others. A minor seventh, for example, can be found diatonically in five different places, but its most important function is to define tonic, as part of a V7, from *sol* to *fa* (or acting as *sol* to *fa* on a secondary level).

Here, then, is a chart to illustrate the scale-degree pairs I use most often, along with their corresponding interval labels. (The scale-degree pairs that are starred get a bit more attention.)

Let me re-emphasize that I am not concerned with teaching intervals as discrete aural phenomena, but teaching important tonal patterns that can be given interval labels.

The next step in the process is to relate these intervals to triad types and harmonies. I begin this while students are learning about triads and harmonies in theory. Students first need to learn what syllables/scale degrees are in each diatonic triad. I, in fact, give written quizzes on this, to encourage them to learn these quickly. We then start talking about what harmony a particular scale degree pair most likely belongs to. So, for instance, after establishing tonic, I may play *ti-re*. The students sing back "*ti-re*, minor third." I then ask them what harmony this particular scale degree pair/interval most likely belongs to. The obvious answers are V and vii⁰. We also consider the possibility that two different harmonies may be involved. If I instead played *re-ti*, then ii-V becomes a possibility as well. My hope is that with this type of approach, the skills learned in ear training will transfer more directly to work in theory and performance: if the student sees, for instance, an ascending perfect fourth in the bass line of a Baroque composition, the student will think and hear *sol-do*, and recognize it as some kind of V-I relationship, whether primary or secondary.

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Figure 2.

I. Pairs used for ascending intervals found in major keys:

m2: *Ti-do, mi-fa	M2: *Do-re; re-mi, *fa-sol; sol-la
m3: *Ti-re; *re-fa; *mi-sol	M3: *Do-mi; *fa-la; *sol-ti
P4: *Sol-do; do-fa; re-sol	
P5: *Do-sol	
TT: *Ti-fa; *fa-ti	
m6: *Mi-do	M6: *Sol-mi
m7: *Sol-fa	M7: Do-ti; fa-mi

II. Pairs used for ascending intervals found in minor keys:

m2: Re-me; *sol-le	M2: Me-fa
m3: *Do-me; *fa-le	M3: *Me-sol
m6: *Sol-me	M6: *Me-do
d7: *Ti-le	

III. Pairs used for descending intervals found in major keys:

m2: *Do-ti; *fa-mi	M2: *Re-do; *mi-re; sol-fa
m3: *Re-ti; *fa-re; *sol-mi; do-la	M3: *Mi-do; *la-fa; *ti-sol
P4: *Do-sol; fa-do	
P5: *Sol-do	
m6: *Do-mi	M6: *Mi-sol
m7: *Fa-sol	M7: Ti-do

IV. Pairs used for descending intervals found in minor keys:

m2: Me-re; *le-sol	M2: Fa-me
m3: *Me-do; *le-fa	M3: *Sol-me
m6: *Me-sol	M6: *Mi-sol
d7: Le-ti	

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I approach the study of triads in the same way. While I believe that a certain amount of "triad quality" recognition should be present, especially at the beginning stages, quality alone is not sufficient. Just as it is with intervals, so it is with triads. Like-quality triads, in the context of a key, may not sound the same at all. For example, take the case of the ii chord, a minor triad in a major key. In context, whether in root position or first inversion, this chord does not to my ear sound nearly as "minor" as either a minor tonic or a minor subdominant in a minor key. I believe Rameau's assertion that a ii⁶/5 is really a subdominant chord with an added sixth, and by extension, that ii⁶ is a subdominant chord with a sixth replacing the fifth, and I really do experience it that way. Having the strong subdominant note in the bass with a major third above it gives this ii⁶ chord a quality somewhere between major and minor, and arguably closer to major. So very soon after introducing triads in theory and introducing the sound of major, minor, augmented, and diminished triads, we start identifying single triads in the context of a major or minor key. I again establish a key with a short cadence and have the students sing *do* frequently to keep that focal point in their inner ear. Then as a triad is arpeggiated, the students sing the syllables and identify the triad by Roman numeral, inversion, and type. Their beginning chord repertoire includes the following chords and inversions:

Figure 3.

I/i, I ⁶ /i ⁶ , I ⁶ ₄ /i ⁶ ₄	ii/ii ^o , ii ⁶ /ii ^{o6}	IV ⁶ ₄ /iv ⁶ ₄
V, V ⁶	vii ^o , vii ^{o6}	

I coordinate this harmony identification practice with their sight singing in several ways. One is by analyzing the melodies in their sight singing text before singing them, looking for any harmonies that they recognize. Another is by singing harmonic progressions, in the form of exercises I have given to the students on handouts.⁸ One handout is a melodically written out circle-of-fifths progression in both a major and a minor key. A Roman numeral is placed under each harmony:

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Figure 4.



The purpose is to make explicit the harmony students are singing when they sing a particular group of syllables. The emphasis is again on scale degrees and harmonies in context, not just quality of the triad or where the root is. An added benefit of this particular exercise is that it presents a good opportunity for students to see melodic lines as written-out chord progressions, or, stated another way, to see harmonies horizontalized. It helps reinforce the notion that, Bach chorales notwithstanding, most tonal melodies do not present a series of pitch classes to be harmonized individually, but rather successive groups of notes that belong to a single harmony. This type of harmonic practice has another benefit as well: it feeds right into the practice of taking harmonic dictation.

Given the type of scale-degree practice and triad/harmony practice that a student would have had up to this point, it makes sense to begin harmonic dictation as a logical extension of that practice. I introduce it when students are learning about harmonic progressions in their written theory (i.e., what chord successions are likely or unlikely in this style). We begin with bass lines. Students hear a short bass line, sing it back on syllables, and determine the most likely chord progression or progressions that would fit that bass line. We discuss the possibilities of, say, a *do-fa-sol* bass line.⁹ The most likely progressions are of course I-IV-V, or I-ii6-V. Without any further information, the second chord remains in question, but the first and third chords can reasonably be assumed to be I and V, respectively. The next step is to play the soprano. If *do* is the second note, then the second chord must be IV. If *re* is the second note, the second chord must be ii6.¹⁰

Students work for a while exclusively with bass and soprano lines as a way to learn typical tonal patterns or clichés that suggest certain chord progressions, and also as a way to learn to distinguish bass and soprano lines from each other, and from the other notes that will be present later in three- and four-voice chords. When only two voices are played, triad quality cannot be ascertained with 100% accuracy (i.e., is it IV or ii6 if *la* is in the soprano?), but students learn instead to concentrate on what the possible chord choices are, given a particular bass and soprano line and a tonal context, and they realize that the choices are limited indeed. Natu-

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rally, when other voices are added, chord quality becomes a factor, and provides additional information, but it is neither the only information nor the most important information to be processed. I discourage listening primarily for chord quality and location of the root since that encourages vertical listening and thinking, almost to the exclusion, it would seem, of hearing the individual lines in a musical texture. Rather, by combining the various pieces of information that the student has (bass and soprano notes, knowledge of typical tonal chord progressions, and the chord qualities), the student can make an informed decision that will be at worst, reasonably accurate.

Obviously, the more information students have, and the more they know about what to expect given this information, the more they will be able to recognize and understand what they have heard. Working in stages by playing just the bass line first, adding in the soprano next, adding in the complete chord last, and stressing the need to integrate this aural information with the information being taught in written theory helps students tremendously in working with chord dictation.

Without a systematic approach, such as the one I am proposing, students often feel frustrated and lost when trying to do chord dictation. They do not know where to begin or how to determine what any particular chord or chord progression might be. They often do not realize that in a typical, tonal 5-chord progression (e.g., I - ii⁶ - I⁶/4 - V - I), not every possible chord is a choice for each of the five chords. But knowing the bass and soprano note for every chord eliminates many of the possibilities, and knowing something about musical grammar and syntax narrows down the choices even further. What remains are reasonable choices. If *fa* is in the bass and *la* is in the soprano and the student still can not discern whether the chord is ii⁶ or IV, the error is not so egregious. Both would be equally likely and possible, and distinguishing between them is not nearly as crucial as between, say, a ii⁶ and a vi⁶/4, chords that are neither interchangeable nor equally likely to appear in any given context.

As a cautionary note, I would like to paraphrase Karpinski and point out that my goal when teaching harmonic dictation is not to produce musical shorthand takers.¹¹ It is to produce students who can hear a passage of music and recognize and understand what is happening harmonically. There is much to be gained by students through the working out of the solution to the harmonic progression they have heard. It is vitally important that students learn to use all the information they have when listening to music in order to know and understand what they are hearing. Probably more than any other exercise normally practiced in an ear training class, taking harmonic dictation forces students to integrate the aural information they are receiving with the theoretical information they al-

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ready have in order to come up with the correct answer (or at least a very plausible answer).

To illustrate, let's assume a student hears a harmonic progression and is unsure of chord #4. The student must first remember what was heard and then sing it back silently. Say in chord #4, the student heard *le* in the bass and *fi* in the soprano, and heard both notes move outward by half step to a dominant octave. Further, let's assume that the student knows that the defining characteristic of an augmented-sixth chord is the interval of an augmented sixth, which typically resolves outward to the dominant octave. Our student has a lot of information, both aural and theoretical, on which to base a decision. Bringing all that information to bear on this progression, our student can reasonably assume that the chord in question was an augmented sixth. On a subsequent playing the student will be expecting an augmented-sixth chord and will listen with that expectation and perhaps now hear at least two chords as a musical unit: the augmented sixth and the V to which it resolves, and which *ipso facto*, helps to hear the augmented sixth *as* an augmented sixth.

Summary

I have attempted to offer suggestions for some new strategies that I have found useful and successful in teaching ear training, especially regarding the thorny issue of how to teach intervals in ear training, if at all. In my own teaching, I have been particularly encouraged in my approach by students who have already had some high school or college level ear training, and who therefore have a basis for comparison. They comment that this type of systematic, contextual approach has been much more beneficial to them than the less methodical non-contextual approach they were exposed to previously. I continue to experiment and try out new strategies, and hope that the foregoing discussion will persuade others to do likewise.

NOTES

¹See, for example, William Thomson's "What is an Interval?". *JMTP* 2/2 (Fall 1988): 321-324; and Michael Rogers' "Beyond Intervals: the Teaching of Tonal Hearing," *Indiana Theory Review*, 6/3 (Spring 1983): 18-34.

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²I believe the label "ear training" encompasses all the activities that take place in an ear training, or aural skills class, including sightsinging. However, for the sake of clarity, my use of that term here will include all activities *but* sightsinging. I will always refer to sightsinging separately as such.

³Berkowitz, Sol, Frontrier, Gabriel and Kraft, Leo. *A New Approach to Sight Singing*, 3rd ed. (New York: W. W. Norton, 1986).

⁴For a review of recent sightsinging and ear training texts, see Gary Karpinski's "Five Recent Sight Singing Texts," *JMTP* 2/2 (Fall 1988): 275-296; and "Ear Training and Integrated Aural Skills: Three Recent Texts," *JMTP* 3/1 (Spring 1989): 127-149.

⁵This assertion would seem to be substantiated by, among other things, Gary Potter's experiment, detailed in his article "Identifying Successful Dictation Strategies," *JMTP* 4/1 (Spring 1990): 63-71.

⁶Michael Rogers, op. cit.

⁷This sense of instability/resolution is not only an aural phenomenon, but is, of course, dependent in part on a knowledge of tonal chord progression. At this point, however, since students will not yet have encountered that topic, the discussion of tendencies is limited for the most part to the 1/2 step phenomenon: *ti* has a strong tendency to go to *do*, *fa* has a tendency to go to *mi*, and together they have a very strong tendency to go to the *do-mi* major third.

⁸I would like to thank Michael Rogers for this idea.

⁹The students must at this point have learned what syllables are in each diatonic triad.

¹⁰I say "must" because I'm working at an elementary level. In doing this type of practice, I do limit the student's chord choices. I begin with a small repertoire of chords and inversions, and gradually add in new chords and inversions. I want students to be informed listeners, and so to that end I encourage students to make educated guesses, in keeping with the choices they have. Thus, neither *ii*⁶/₅ nor *vii*⁰₆/₄, for example, would be a possibility at this point. In addition, at these beginning stages, and even at a more advanced level, any time a new chord is introduced, I keep what I call a "determining" note in the soprano. By this I mean simply a note that makes clear what the chord is. If *fa* is in the bass, I will play *do* in the soprano for a IV chord, and *re* for a ii chord, making the chord choice unequivocal. *La* or *fa* in the soprano would not be an unequivocal choice, and so would not be used *initially*.

¹¹Karpinski, Gary, "A Model for Music Perception and its Implication in Melodic Dictation," *JMTP* 4/2 (Fall 1990): 191-229.