"Notehead Shorthand": A Rhythmic Shorthand Method for Melodic Dictation Exercises

JENINE L. BROWN

Paney and Buonviri report that high school theory teachers struggle to get adequate results on the rhythmic aspect of melodic dictations, quoting one instructor who observes that students "don't know how to space the notes rhythmically, and they get flustered, and it ends up causing them to mess up some of the pitch parts" (2014, 405). In response to their call for improved pedagogy for rhythm, I summarize previous research on melodic dictation strategies and then introduce a new rhythmic shorthand method ("Notehead Shorthand"). Notehead Shorthand builds upon Karpinski's protonotation (2017) by asking students to mark note onsets (rather than durations), and it provides an improved way to notate subdivisions of the beat and syncopations. Moreover, compared to the well-known slash system of rhythmic shorthand, the proposed shorthand system looks more like actual notation, making it easier for inexperienced students to use and translate to the musical staff. The system provides a method for writing the rhythm of a melodic dictation in one hearing, minimizing cognitive load for students. While students of all ages and abilities can utilize this new method, it may be especially helpful to students within first-year aural skills courses and for those preparing for the melodic dictation tasks on the College Board's Advanced Placement Music Theory exam. I then describe pros and cons of the technique after implementing the method with undergraduate music students over the years, and I also share some modifications to the method that can be made depending upon the student's previous experience with dictation and the level of beat that the student is internally pulsing while taking dictation (i.e., the beat, the division, or the subdivision).

Introduction

Collegiate music students' aural skills vary widely. Whereas aural skills seem to come naturally to some musicians, even the most virtuosic performer has been known to struggle with training their musical ear. Like many teachers of aural skills, I have had heart-wrenching conversations with students upset about their self-perceived lack of musical skills. Often, students have binary notions of aural skills acquisition; that is, my students often convey the feeling that they either have the gift of being able to take melodic dictation, or do not. Indeed, even instructors can bring this notion

I wish to thank William Marvin and the anonymous reviewers for their helpful comments and guidance in preparing this manuscript. I am also grateful to my students at the Peabody Conservatory of the Johns Hopkins University for their willingness to use Notehead Shorthand to develop their dictation skills over the years.

into the classroom if not careful. Conversations students have with their classmates who have absolute pitch certainly do not help, and weaker students often come to me confused as to why a peer just seems to be able to succeed in the aural skills classroom, whereas they themselves cannot. Some students are not aware of the countless hours that another student has put into learning their craft, acquired in the practice room and/or due to musical training at an early age.

Anecdotes about the savant-like skills of composers throughout the Western canon can also contribute to a student's frustration in developing their aural skills. For example, Maynard Solomon writes that W. A. Mozart transcribed the score of Allegri's "Miserere" after hearing it performed in the Sistine Chapel when he was just 14 years old.[1] Similarly, Robert Schumann wrote, "a perfect musician should be able to picture a piece, at first hearing…as though he had the score in front of him."[2] While stories and advice from these composers are certainly inspiring, they can also do students a disservice. This is especially true for younger students first starting to develop their craft, as they may believe they should be able to hear a melody and instantly notate it (as if the correct notation would simply appear in their head).

Students should instead learn that the skill of taking melodic dictation (and the development of aural training in general) takes years of cultivation. It requires regular practice, similar to that required for mastering a musical instrument. To this end, this essay proposes some strategies I share with my students at the Peabody Conservatory for how to develop melodic dictation skills. Specifically, I describe a shorthand system that asks students first to attune to the meter and rhythm of what they hear. My shorthand method bears similarities to Gary Karpinski's "protonotation" and other dictation strategies, although some marked differences are described below.

1 Solomon (1995, 5).

2 Schumann (1967, 413). Translation in Karpinski (2000, 3).

Previous research on melodic dictation strategies

Previous research has addressed whether it is best for students to first attune to pitch, rhythm, or both simultaneously when taking melodic dictation. Karpinski argues that it is easier to remember both pitches and rhythms together than to remember pitches alone.[3] He also cites a series of empirical studies that suggest that notating rhythm first is most successful in melodic dictation exercises. For example, Christine Beckett finds that participants who tried to notate rhythms first (as opposed to the pitch alone) were more successful in a melodic dictation task.[4] After implementing an experiment that observed participants throughout the process of taking melodic dictation, Gary Potter makes a similar conclusion, writing "those able to place notes easily in a metric framework, succeed in comparison with those who identify pitches quite easily but do not always know where to put them. One subject's comment sums up the opinions of many: 'I don't like to write things down unless I know where they go.'"[5] The following shorthand strategies aim to help students determine the metrical placement of the rhythms they hear.

One cannot discuss musical shorthand systems without discussing Karpinski's "protonation," a well-known technique used in taking melodic dictation.[6] Karpinski would likely argue against calling it a shorthand, as he encourages students to listen while hearing the melody and only write after the melody has finished, thus increasing skills such as one's memory capacity. Nevertheless, students using Karpinski's protonotation do not write down notes; instead, they draw symbols to reflect what they hear, similar to a shorthand method. A brief summary of Karpinski's protonotation method follows: students hearing the melody illustrated in Example 1a would first determine its meter and draw a metrical grid reflecting simple meter, with large vertical lines representing bar lines and smaller ones representing the individual beats within the measure (Example 1b). Students then draw horizontal dashes to reflect the rhythm of the melody (Example 1c), and then write in the solfège syllables above each rhythm (Example 1d).

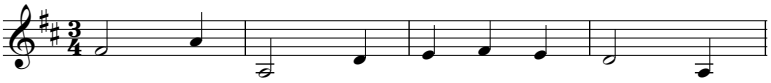
3 Karpinski (2000, 71).

4 Beckett (1997, 621).

5 Potter (1990, 66).

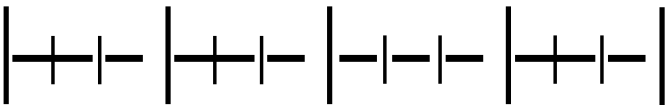
6 See Karpinski (1990, 202–206).

(A) The melody heard in the melodic dictation.

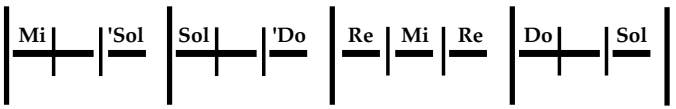


(B) The metrical grid of the melody in 1a, reflecting a 3/4 meter.

(C) The durations of the notes heard in Example 1a.



(D) Moveable-do solfège syllables are added above each rhythm.



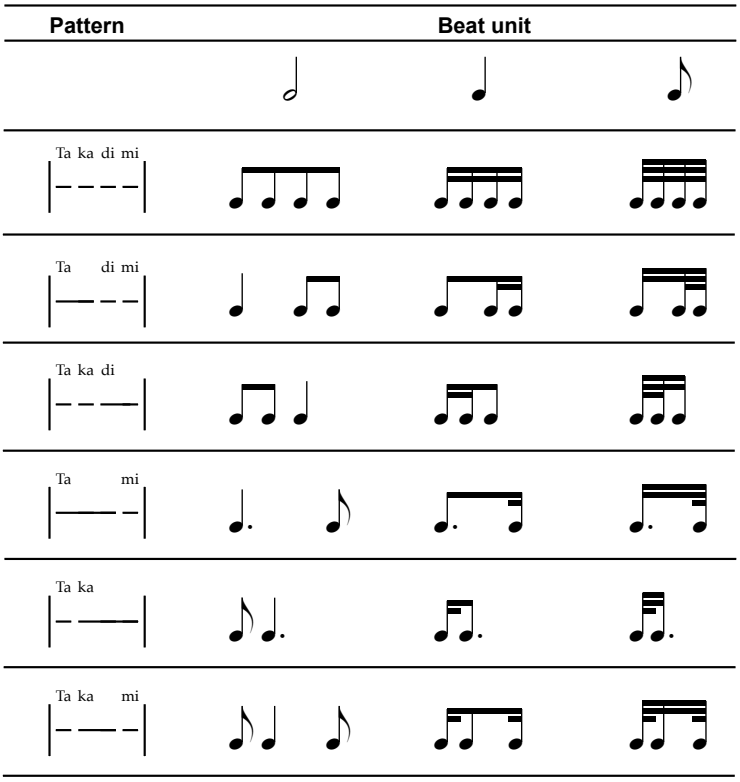
Example 1.
The process of protonotation, as introduced by Karpinski (1990).
Reproduced by permission of the author.

Protonotation is a powerful method because it encourages students to understand that they can express rhythm within a metrical structure away from the musical staff. It helps students to indicate what they hear without needing to know the beat value and/or key signature, and provides students graduated steps for taking dictation. However, one critique of Karpinski's protonotation is that the horizontal dashes of the rhythmic events could run into one another if there were lots of sixteenth notes in this melody (e.g., Example 2 illustrates Karpinski's proposed shorthand for subdivisions of the beat).[7] Another critique is that the metric grid does not explicitly reflect students' knowledge that the meter is simple (as opposed to compound), because the divisions of the beat are

7 Throughout, I use the term "division" to refer to a single division of the beat (i.e., eighth notes in 2/4 and 6/8 meter), whereas the term "subdivision" refers to double division of the beat (i.e., sixteenth notes in 2/4 and 6/8 meter).

Combining Parts of Quadruple Division

The four divisions of the beat may be combined in various groups of two and three to form six different patterns. The table below shows the patterns in protonotation, Takadimi, and rhythm notation for the three most common beat units. You must learn to auralize and recognize these six patterns as they appear in these different beat units.



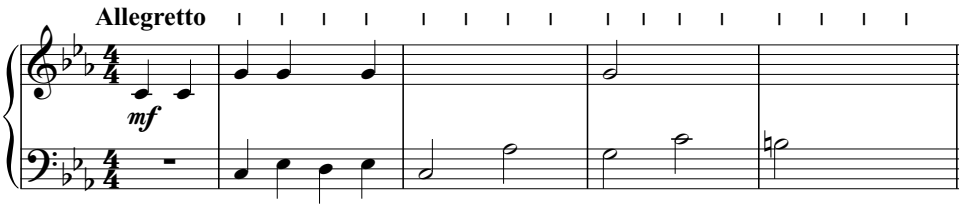
Rests in Place of Dots

Sometimes, a rest will take the place of a dot, so that the rest occupies the same duration as the extension the dot would create. Replacing the dot in this way doesn't affect the rhythmic location of each note's point of articulation. For example, the two notes in both this rhythm and this rhythm begin at the same times.

Example 2.
The leftmost column illustrates Karpinski's shorthand for subdivision of the beat rhythms in simple meter (2017, 106).

not drawn. Additionally, the horizontal dashes drawn on the beats could be misleading, because these dashes are drawn just to the right of the bar line, and this could be misinterpreted to mean that the note occurred just after the downbeat (rather than on it). Karpinski's notation also does not bear much similarity to actual rhythmic notation, and this may provide a significant challenge to some students when faced with the task of converting their shorthand into music notation. One final critique of the protonotation method is that by asking students to draw horizontal lines, they need to process both when a note occurs and also its duration at the same time, which may be too much for novice students. My shorthand method, described further below, seeks to alleviate some of these concerns.

Evan Jones, Matthew Shaftel, and Juan Chattah's text also provides advice on using a shorthand to notate rhythms.[8] In Example 3, students are asked to notate the upper voice of a two-voice dictation and the instructions suggest that students "may want to mark each beat with a tick mark (we have done this for you, just above the staff). In your first or second hearing, simply circle any tick mark where you hear a musical attack (the start of a new pitch). Then it will be easy to fill in the rhythm during the break between playings [*sic*]."[9] One critique is that this method does not give any advice for any more complicated rhythms involving subdivisions of the beat, and circling the attack points does not necessarily remind students as to what the rhythm will look like in actual notation.



Example 3.
Ticks added above the staff to aid a student in notating rhythms, as suggested by Jones, Shaftel, and Chattah (2014, 51).

8 Jones, Shaftel, and Chattah (2014).

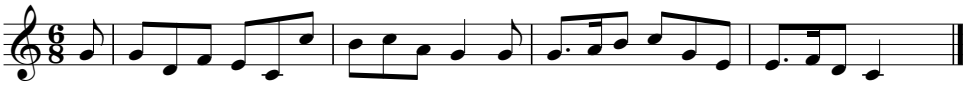
9 Ibid., 51.

David Code calls his shorthand dictation method "Alphabet Dictation," because prior to hearing a melody, students first write down all of the letters of the alphabet, where the succession of letters directly corresponds to the succession of notes in the melody.[10] After hearing the melody, students then use a variety of shorthand symbols to reflect what they know of it. For example, the melody in Example 4a is drawn in Code's shorthand in Example 4b. Vertical lines reflect bar lines, rhythmic lengths are indicated with "L" for long, "M" for medium, and "S" for short. A key to understanding some of the other symbols students could use is illustrated in Example 4c; strengths of the method include that students can quickly draw dots to refer to changes in pitch contour, triangles to indicate that the notes are member of the same triad, and slurs to mean that two notes are the same pitch. However, there are several drawbacks to this method. The learning curve is steep and could be prohibitive to students; the shorthand diverges from the look of actual music notation; and the shorthand in Example 4b does not translate directly from Example 4b to 4a (as there are many melodies that match the description in Example 4b). More recently, Code has developed a website in which students can type their shorthand directly into their web browser while taking dictation (for example, typing "ab/" produces an eighth note A-flat), and Code has designed the program so that the typed shorthand instantly creates a musical score. The shorthand can also be copied and shared with an instructor during dictation exams and there is a dictation interface that limits the number of playings.[11]

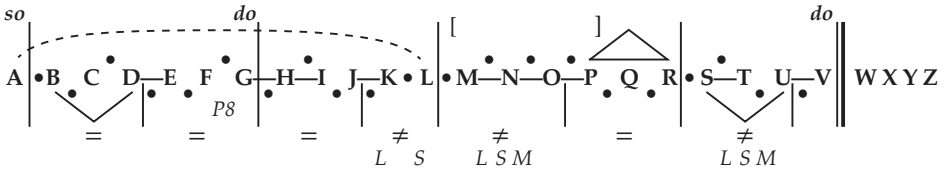
10 Code (1997).

11 Code (2020).

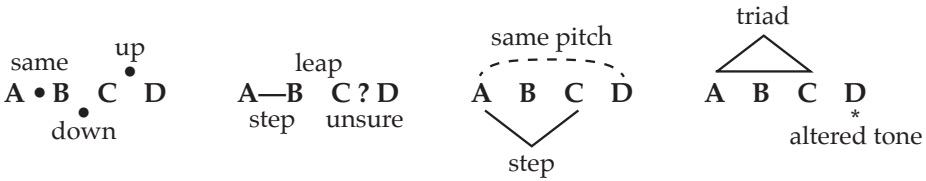
(A) The melody heard for the melodic dictation.



(B) Code's shorthand of the melody shown in Example 4a.



(C) A key that explains some of the shorthand symbols.

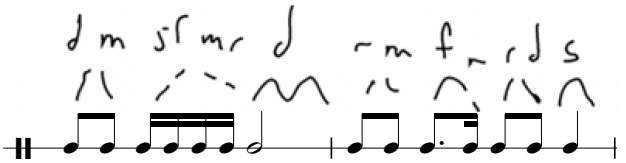


Example 4.
David Code's "Alphabet Dictation."
Reproduced by permission of the author.

Susan Piagentini has also recently published a "graphic tracking method" for rhythms in simple meter (Example 5a) and compound meter (Example 5b).[12] Unlike the methods described thus far, her method does not require students to write anything prior to hearing the melody (such as a metric grid), which could be a strength for more advanced students but a disadvantage to those who need to be taught to internalize the meter while taking dictation. Major strengths of the method include its ability to accommodate subdivisions of the beat easily, and the method's visually-intuitive design: beats are grouped together with the rise and fall of the shorthand system. Possible drawbacks of the method are that the shorthand does not resemble actual rhythmic notation, and weaker students may somehow conflate the rise and fall of the rhythmic shorthand with pitch.

12 Piagentini (2020, 454).

(A) Simple meter.



(B) Compound meter.

Example 5.
Piagentini's shorthand method for notating rhythms.
Reproduced by permission of the author.

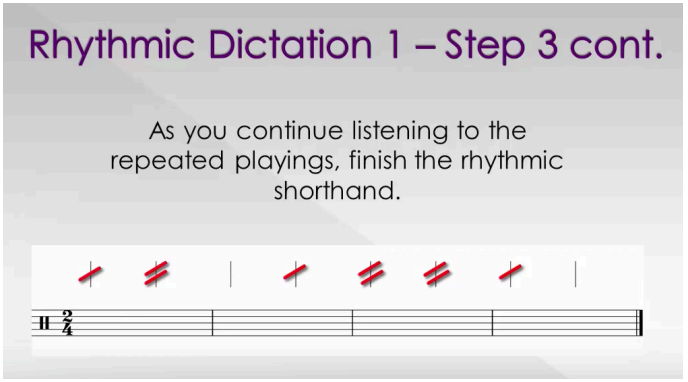
Rhythmic shorthand strategies can also be found relatively frequently online. Given the COVID-19 pandemic and the fact that students may be turning to online tools more than ever, I offer a summary and review of four representative approaches discovered through searching for melodic dictation strategies.

1. Deborah Smith's YouTube tutorial is one such example of a rhythmic shorthand method that can be found online.[13] In the video, students are given the time signature of a dictation exercise and are instructed to draw vertical lines above the staff to reflect the number of beats in each measure prior to hearing the stimulus. When the rhythm is played, students then draw diagonal hash marks to indicate the number of notes within any one beat.[14] Example 6 is a screenshot of the video tutorial; the hash marks are drawn in the color red. Subsequent hearings would be required to determine the exact rhythm within each of the beats. For example, two hash marks could be a variety of rhythms, such as two eighth notes, or a dotted eighth followed by a sixteenth, etc., and the shorthand does not provide for a way to differentiate these rhythms. Notating syncopations would also be a challenge with this method, even if additional vertical marks were drawn in to represent further divisions of the beat. Finally, this video does not address how this method would work in compound

13 Smith (2014).

14 A beat can both refer to a moment in time (corresponding to an ictus in a conducting pattern), or the span of time between two such successive points. In Smith's method, students first draw vertical lines that refer to the point in time that the beat occurs (the ictus), but then they draw the diagonal hash marks to represent how many events occur *within* any one beat; this conflates two different notions of "beat" and could be confusing to students.

meters; it would seem that drawing six vertical lines would be necessary in meters like 6/8 (each one representing an eighth note), rather than just drawing in two lines representing the beat, so as to best notate sixteenth notes.

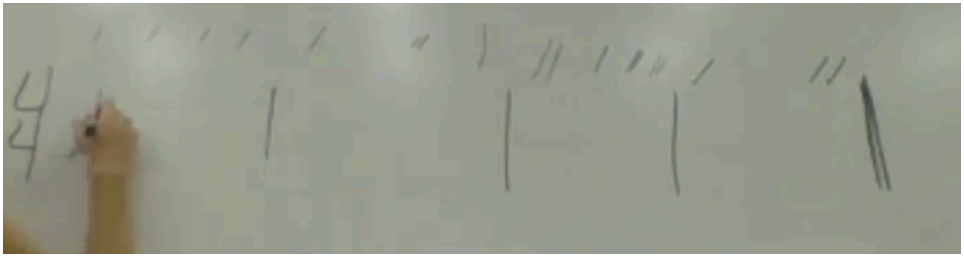


Example 6.
A screenshot of the rhythmic shorthand described in Smith (2014).
Used with permission from Deborah Smith Music: https://dsmusic.com.au/ from the video: https://youtu.be/7WL6JA_4mlo.

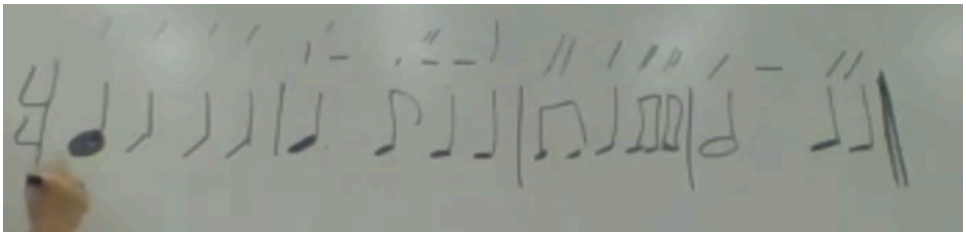
2. The tutorial presented by Melissa Holso on Josh Bartz's YouTube channel is another rhythmic shorthand tutorial that can be found online.[15] In this video, students are also given the time signature, but are instructed to not write anything further before hearing the aural stimulus. As students listen to the rhythm, they draw diagonal hash marks above the staff, where each hash mark reflects one note. A major strength of the method is that it asks students to draw their hash marks above its proper metrical placement within the measure. Example 7a illustrates these hash marks, and Example 7b is the correct answer to the dictation. Because students are not asked to draw a metrical grid to indicate the beats, the hash marks may be difficult to translate into the correct rhythms. For example, one interpretation of the lines drawn in measure 2 is a half note followed by two eighth notes and a quarter note. Shown in Example 7b, the correct answer is instead a dotted quarter, an eighth note, and then two quarter notes. Finally, this method would need modification when rhythms become more complex, as numerous drawn lines would have no hierarchy among them.

15 Bartz (2016).

(A) Rhythmic shorthand showing the instructor's hash marks for the rhythmic dictation.



(B) The correct answer to the rhythmic dictation.



Example 7.
Screenshots of rhythmic shorthand suggested by Bartz (2016).

3. Multiple online videos illustrate variants of the shorthand method described in Barbara Wallace's aural skills texts.[16] These videos advocate drawing diagonal slashes for notes occurring on a beat, dots after the slash when an eighth note occurs after a beat, and a slash followed by a horizontal dash when a note is held for longer than a beat.[17] A screenshot from one such video can be found in Example 8a, where students are given the time signature and they initially write vertical dashes to represent the number of beats in each measure before hearing the dictation.[18] When hearing the melody, the student would draw in diagonal/horizontal slashes and dots to represent the rhythms heard on top of the vertical lines, followed by solfège syllables beneath the staff. While this is an adequate method for rhythms in simple meter with one division of the beat, it does not provide for additional subdivisions of the beat, and these videos do not describe how the method would be applied to melodies in

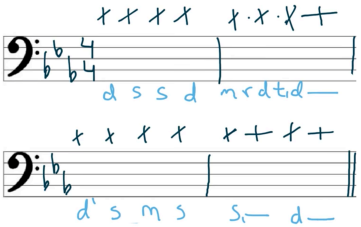
16 Wallace (2007).

17 Wallace's method is described well in Kelly Rodriguez's YouTube video (2015). Another example of the method can be viewed in Polkapaul (2012).

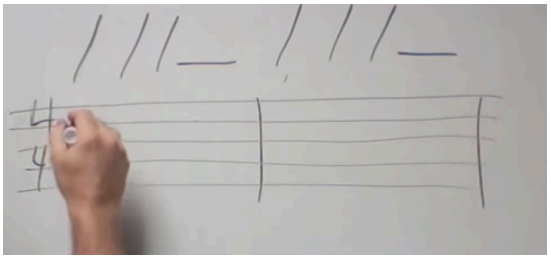
18 Rodriguez (2015).

compound meter. Depicted in Examples 8b and 8c, the screenshots from the video by Dan Cutchen illustrate a similar method, but the instructor does not describe writing in vertical lines to represent the beats prior to hearing the melody.[19] This may make the interpretation of the shorthand symbols more difficult; for example, the horizontal dash in Example 8b refers to a half note whereas the dash in Example 8c refers to a dotted quarter.

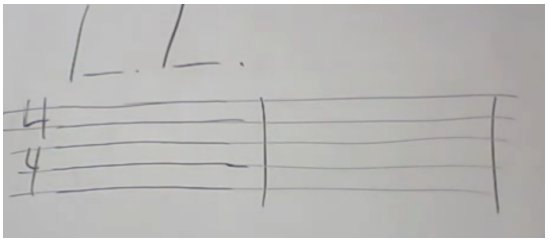
(A) A clear illustration of this shorthand technique found in the video by Rodriguez (2015).



(B) A screenshot from a video by Cutchen (2013) that teaches a similar technique. The shorthand in both measures translates to two quarter notes followed by a half note.



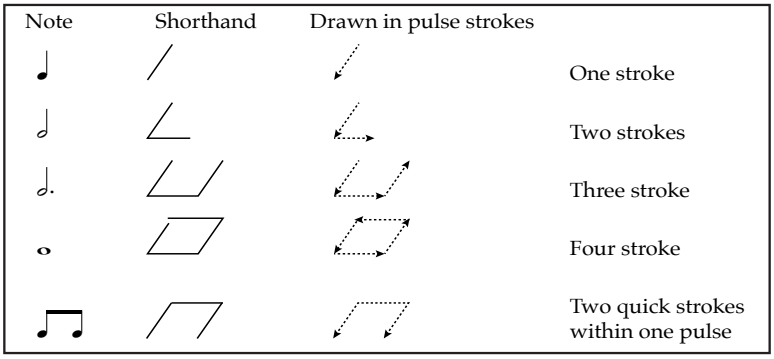
(C) The shorthand in m. 1 translates to a dotted quarter followed by an eighth note, as described in Cutchen (2013).



Example 8.
In these screenshots from different YouTube tutorials, diagonal slashes refer to notes occurring on the beat, horizontal dashes for notes longer than a beat, and dots for eighth notes.

19 Cutchen (2013).

4. Finally, Lynn Olson and Martha Hilley's method provides students with symbols to write for a note's duration, but like some of the tutorials above, it does not require a student to consider its metrical placement.[20] Shown in Example 9, the authors used arrows to instruct students in drawing pulse strokes based on note duration; this helpful graphic encourages students to move their pencil along with the beat, reinforcing metric entrainment. However, the method does not accommodate meters where the quarter note is anything other than one beat, and does not provide suggestions for how one might notate rhythms with sixteenth notes or other divisions of the beat, nor any advice about compound meter. Finally, there is a high degree of similarity between the symbol proposed for the dotted half and the symbol for two eighth notes, which may be confusing to students.



Example 9.
A rhythmic shorthand method proposed by Olson and Hilley (2012).
Reproduced by permission of the authors.

"Notehead Shorthand"

Like the methods above, my own shorthand method asks students to initially focus their listening on rhythm and meter, rather than pitch, for best success. Indeed, Karpinski writes, "beginning listeners—particularly those new to the process of dictation—usually flounder when trying to draw on too many stimuli at once. They find little success at taking dictation and—most seriously—do not develop important skills such as focused and extractive listening and short-term musical memory."[21] Separating the tasks of notating both rhythm and pitch decreases the demands on working memory in a melodic dictation exercise.

20 Olson and Hilley (2012).

21 Karpinski (2000, 103).

My rhythmic shorthand method, called "Notehead Shorthand," is inspired by and seeks to improve upon the methods described above. For example, one could argue that none of the methods described above adequately ask students to track the divisions of the beat, as most of the metric grids drawn above the staff ask students to draw in the beats, but rarely anything further. Notehead Shorthand explicitly requires students to know/feel the divisions of the beat, as I've found that students do better when they are thinking or moving to the division of the beat, rather than the beat itself. Another difference between my method and others is that I specifically ask students to attune to the onset of a note in relation to the meter, rather than its duration (that is, if a student does not know when a note begins within a measure, there is no real reason to consider its duration). Furthermore, some of the symbols in the methods above have ambiguous or multiple interpretations, which can be confusing to students. While it is true that this may not necessarily be a problem, I offer a rhythmic shorthand system that tries to capture all rhythmic details precisely.[22] Similarly, Notehead Shorthand more closely resembles actual rhythmic notation, making it easier for students to convert their shorthand onto the staff. Notehead Shorthand can be easily applied to more complicated rhythms and meters, such as compound meters, subdivisions of the beat, and syncopations (whereas some shorthand methods described above are best for simple meters with single division of the beat at most). Finally, Notehead Shorthand is malleable, as it can be used both by instructors who supply students with the time signature prior to hearing the melody, and those who do not (as well as by instructors who allow their students to write during the first hearing, and those who do not).[23]

22 Other shorthand methods that have symbols with multiple interpretations could be serving as a "first approximation," after which other tools (such as subdividing) could help to refine the picture upon a second hearing of the melody. In contrast to these, "Notehead Shorthand" offers students a way to notate rhythms in just one hearing.

23 There are ongoing debates between aural skills pedagogues on the topic of how much information to give students prior to hearing a melody in a melodic dictation task. My intention herein is not to weigh in on these issues. Pedagogues on either side can apply the dictation shorthand method proposed here, demonstrating the generalizability and strength of the method. For example, Karpinski advocates giving little information to students about the starting key signature, time signature, and melody length. David Damschroder's aural skills text, on the other hand, includes melodic dictation exercises that provide students with the key signature, time signature, starting note, and melody length, all before they ever hear the melody (1995, 406–7). Students taking the AP Music Theory exam are also provided with this full range of information. Pedagogues also differ on whether students should be allowed to write while hearing the aural stimulus. Karpinski, for example, warns against having students write while listening (1990, 199). Bruce Benward (1961) and Michael Rogers (2004) share similar pedagogical views. On the other side of the debate are Levin and Martin (1988), Paney

Notehead Shorthand helps students quickly notate the metric placement of notes, which most can do more easily than visualize rhythmic notation heard during dictation. Being able to count along with an aural stimulus, identify attack points of notes in relation to a meter, and visualize rhythmic notation are all related but different skills, and it may be pedagogically prudent for instructors to tease these apart; some of my incoming first-year students often do not have the ability to do one or more of these tasks. Notehead Shorthand therefore separates the task of dictation into smaller, more accessible steps: 1) the initial act of drawing in the metrical grid helps students consider how they will count along with the melody and how the meter will feel; 2) when hearing the melody, students initially need only attune to the note onsets (not duration), teaching them focused attention skills and divorcing the tasks of notating both onset and duration; 3) once determining a note's onset within the measure, the student then can take time in between hearings to translate their shorthand to actual rhythmic notation, making dictation more accessible to those who cannot visualize rhythms in real time; and finally when the rhythm of a melody has been determined, 4) students can then solely focus upon pitch and deduce solfège syllables,a task that is easier after hearing a melody a few times. (Anecdotally, I have found that my students at Peabody have a better memory for pitch than for rhythm.) Broadly, Notehead Shorthand is an attempt to answer Andrew Paney and Nathan Buonviri's call for better pedagogical methods for dictating rhythms.[24]

I teach the method to all students at the start of their first year, emphasizing that students may think of it first as a "training-wheel" tool that serves as an important role at the beginning stages of their developmental path to learning the art of melodic dictation; eventually, it serves as an accessible "bottom-up" tool that is complemented with "top-down" skills (such as the ability to access visual representations of rhythmic patterns or chunks). Thus, a note of caution should be made to those who employ Notehead Shorthand (or any other dictation shorthand method), as shorthand methods should also be used *in conjunction with* a curriculum that also teaches identifying common rhythmic patterns which builds aural chunking skills (e.g., Laurdella Foulkes-Levy or Daniel Kazez) and one that increases musical memory and selective attention

(2007), Pembrook (1987), and Potter (1990), who encourage students to write while hearing the melody. Nancy Scroggin describes a similar debate among AP Music Theory teachers, as one of the melodic dictations on the AP exam is only repeated three times and students thus feel pressured by this restriction to begin notating right away (2014, 450).

24 Paney and Buonviri (2014).

skills (e.g., Karpinski).[25] Below, I present my rhythmic shorthand method, illustrating how it can be used to dictate rhythms in a variety of meters, beginning with single division of the beat in simple meter, then single division of the beat in compound meter, followed by subdivision of the beat in simple meter, and finally subdivision of the beat in compound meter.[26] I then provide suggestions for how the method can be used within a curriculum that teaches students to visualize rhythmic notation in real time while taking dictation, which is, after all, the ultimate goal. In particular, I share curricular strategies for combining the bottom-up approach of a shorthand method with top-down approaches such as aural chunking at the end of this essay.

A. Single division of the beat in simple meter

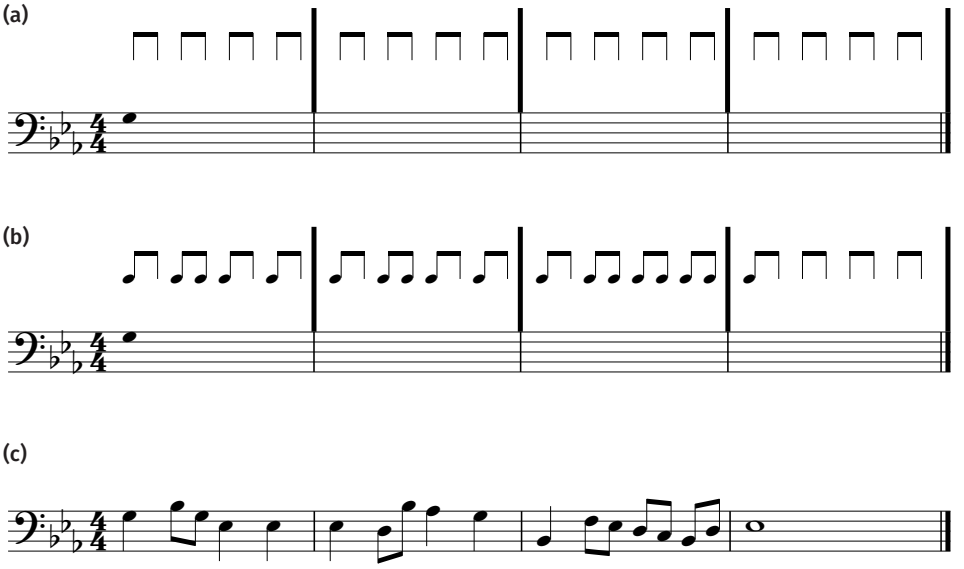
First-year students at the Peabody Conservatory initially learn to notate melodies in simple meter where the beat can only be divided into two parts at most. Once students determine that a melody is in simple meter (either because they are given the time signature or by listening), they write a "metrical grid" above the score (illustrated in Example 10a). They do this by determining the number of beats in each measure, and whether the beat is divided into two or three. This process encourages students to think how the meter feels, which is an important step in dictation. Because the melody in Example 10 is in 4/4, students draw stems and beams (*but not the noteheads*) for four sets of two eighth notes above each measure so as to indicate all of the possible attack points in simple meter with single division of the beat (Example 10a). Also shown in Example 10a, I also encourage students to extend bar lines above the staff, so as to break up the long line of eighth note "hurdles" they just wrote. Then, when students hear the melody, they simply draw noteheads onto their metrical grid, where each notehead corresponds to the onset of each note; Example 10b illustrates the noteheads that students would add to the metrical grid when hearing the melody from Example 10c. Students learn to interpret that one note on the downbeat of m. 4 of Example 10b, for example, must indicate a whole note.[27] At my institution, most first-year

25 See Foulkes-Levy (1997), Kazez (1997), and Karpinski (1990).

26 This progression follows the curriculum in Rogers and Ottman (2019), as opposed to other texts such as Jones, Shaftel, and Chattah (2014), which asks students to notate sixteenth notes in 4/4 meter as early as Chapter 1.

27 Like many other methods, Notehead Shorthand does not distinguish between sustained notes and attacks followed by rests, although one could indicate rests by drawing an "x" in the metric grid. This distinction may be underplayed due to the ubiquity of piano prompts for melodic dictation, which

students in the first half of the fall semester are able to use Notehead Shorthand to determine the correct rhythms of all four measures of the melody in Example 10c in just one hearing.

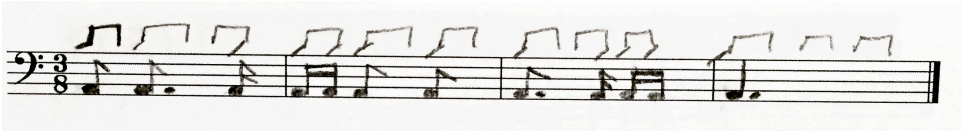


Example 10.
Using Notehead Shorthand to dictate melodies in simple meter with single division of the beat.

Notehead Shorthand is easily adaptable to simple meters where the beat is something other than a quarter note. Example 11 reproduces the work of a first-year student from the first quiz of the fall semester. It represents a rhythmic dictation where the eighth note receives the beat.[28] The student’s Notehead Shorthand suggests that they were feeling in 3/4 meter and then converted the note values to 3/8 when notating the actual rhythms on the musical staff. Alternatively, other students may instead draw sixteenth note “hurdles” in their metrical grid.

challenges our ability to distinguish between cutoffs and sustained notes.

28 Student work seen in this example (and throughout this article) was obtained ethically and approved by the Homewood Institution Review Board at the Johns Hopkins University.

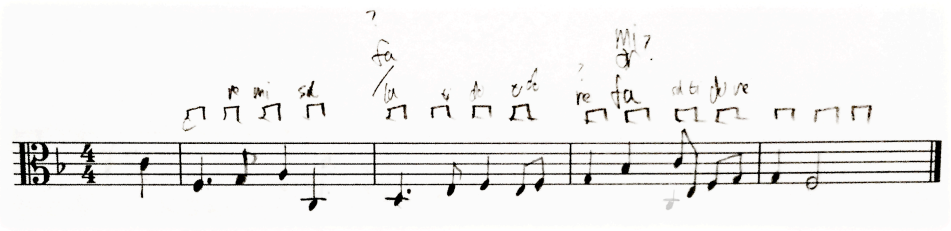


Example 11.
An illustration of Notehead Shorthand when notating rhythms in simple meter where rhythmic values other than the quarter note receive the beat.

Students should be encouraged to draw their metrical grid clearly, drawing stems and beams at 90-degree angles and noteheads on a diagonal so that they are legible. Whereas the noteheads drawn in Example 11 are purposeful and clear, drawn at a diagonal to contrast with the clear vertical stems and horizontal beams in the metrical grid, the noteheads drawn in Example 12 are not as crisp and are sometimes illegible. For example, the student in Example 12 was unable to read whether they put a notehead on the "and" of the 4th beat of m. 1, a byproduct of the fact that the stems and beams of their metrical grid are curved. This caused the student to write an extra incorrect note on the staff on the "and" of beat 4 in measure 1 that never occurred in the actual melody.

Example 12.
Sloppy Notehead Shorthand can contribute to a lower score.

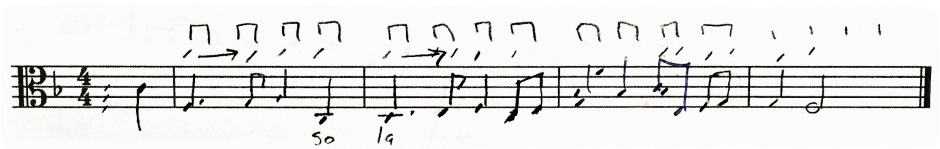
Although somewhat beyond the main thrust of this article, I also encourage my students to write moveable-do solfège syllables above the noteheads that they draw on their metrical grid, as shown in Example 13. In this example, the student debated between Fa versus La in the second measure, and Mi versus Fa in the third measure; this student was correct in their final decisions. The student would have benefited from using some contour when drawing their syllables. That is, it would have been useful to write the "Sol" slightly higher than the "Ti" in the third measure so as to indicate that the C was higher than the E. Indeed, the student nearly made an error in the third measure, as they erased a C_3 and then correctly notated C_4 in beat 3 of measure 3—the erasure is slightly visible in Example 13. (See the discussion below regarding Example 17c for a student who successfully wrote solfège syllables with some contour.)



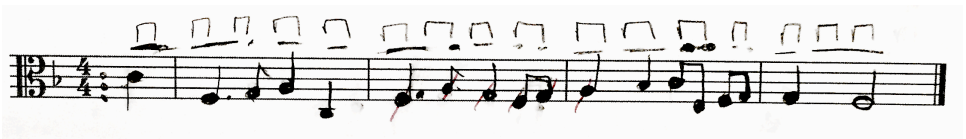
Example 13.
This student would have benefited from using some contour when drawing their syllables, so as to not make errors in register.

Students at the Peabody Conservatory at have modified Notehead Shorthand at the simple meter level to suit their own needs. Below are somewhat successful adaptations. Example 14 illustrates the work of two students who prefer to notate a note’s duration in addition to its onset. The student in Example 14a demonstrates knowledge of all of the correct rhythms, and draws arrows for dotted quarter notes. The student in Example 14b develops this method even further, where they do not draw in noteheads at all; instead, they draw dashes to represent how long a note lasts in relation to the metric grid.

(A)



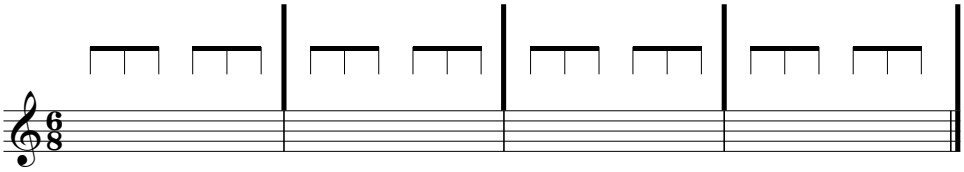
(B)



Example 14.
Modifications of the Notehead Shorthand method to include a note’s duration.

B. Single division of the beat in compound meter

When notating a melody in compound meter, students draw a metric grid above the staff to reflect that the beat is divided into three parts. In single division of the beat in compound meter, the metric grid illustrates that the maximum number of notes in each measure is six eighth notes. Example 15 provides an example of that drawn for a melody in 6/8 meter.



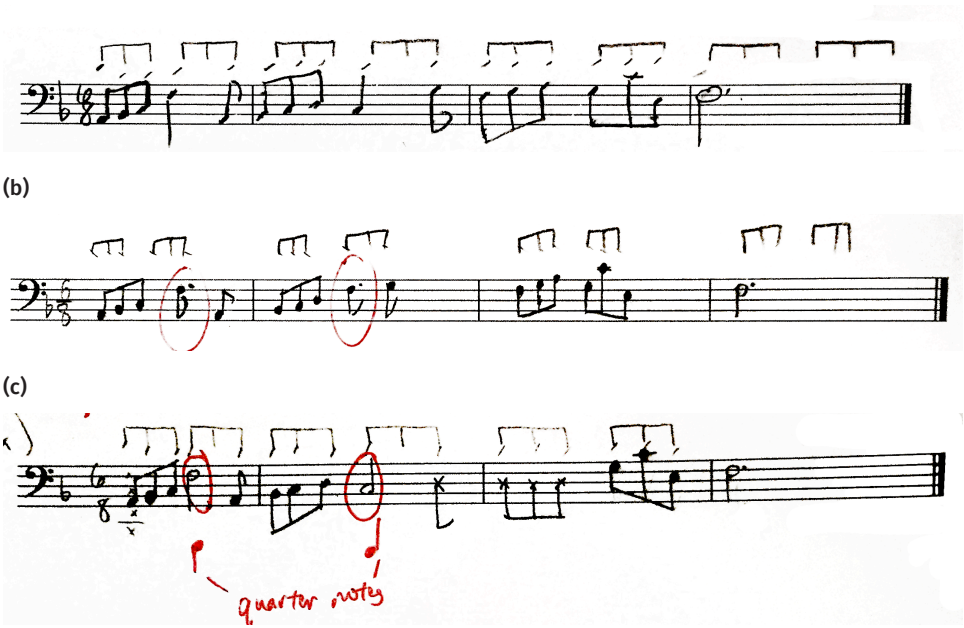
Example 15.
The metric grid students draw when hearing a melody in compound meter when using Notehead Shorthand.

Example 16 reproduces work by first-year students who performed relatively well on their first melodic dictation quiz in compound meter. The student in Example 16a dictated all notes and rhythms correctly. An analysis of the Notehead Shorthand in Example 16b indicates that the student identified all of the correct note onsets, but did not translate two notes into the proper rhythm, writing two notes as dotted eighths instead of quarter notes; these incorrect rhythms are circled in red. The student in Example 16c made a similar mistake, as their Notehead Shorthand reflects knowledge of how the rhythm sounds, but they notated half notes instead of quarter notes when translating onto the staff. This student also indicated that they knew the rhythmic value of some notes (drawing an "x" on the staff), but did not know their pitch.

(a)

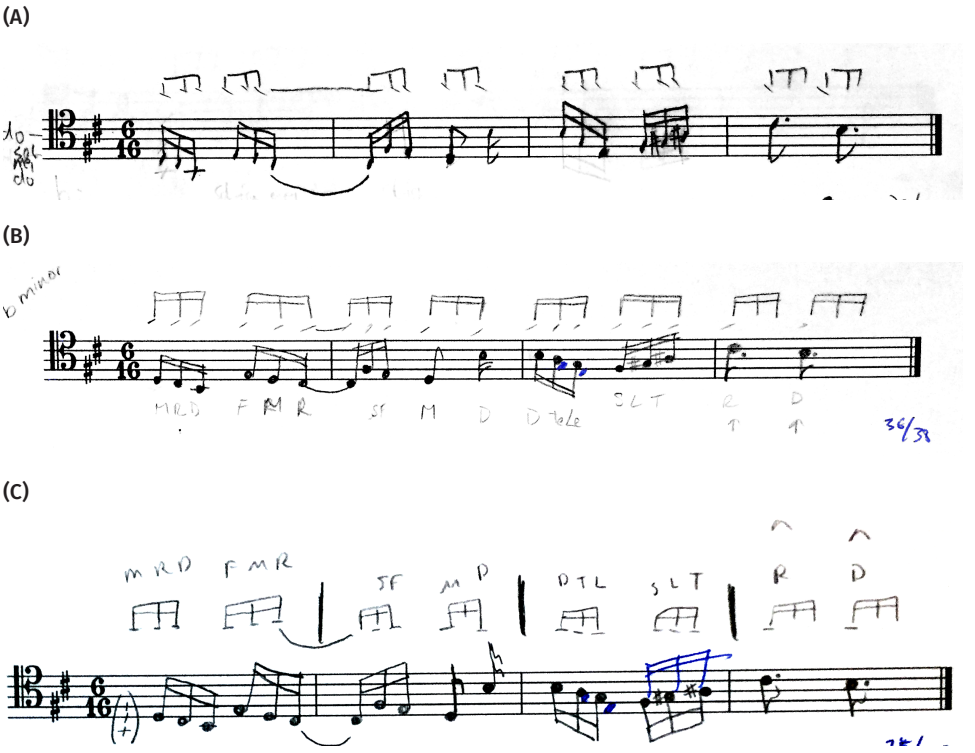
(b)

(c)



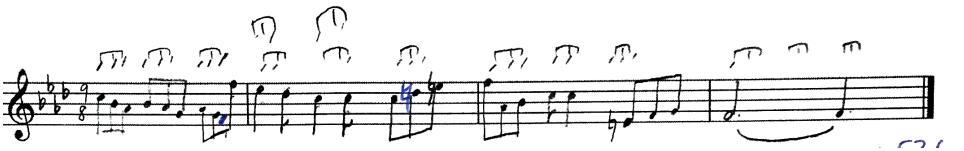
Example 16.
Three examples by first-year students who performed well on their first melodic dictation quiz in compound meter. Errors in rhythm are circled in red.

When students are asked to dictate melodies in compound meter where the lower number in the meter signature is something other than an eighth note, students vary in the way they utilize Notehead Shorthand. As illustrated in Example 17a, one student used the metric grid for 6/8 meter and then converted the rhythms to 6/16 when notating the melody. The students in Example 17b and 17c used a metric grid that reflects the 6/16 meter. The student in Example 17c even extended the bar lines into their metric grid so as to keep track of the downbeat. Note both students in Examples 17b and 17c wrote solfège syllables for what they were hearing and even added in some contour so that they knew where to place the notes. For example, the student in Example 17c notated “D” for Do higher than the “M” for Me, as there was a leap of a sixth from the notes D up to B in measure 2.



Example 17.
Students vary in their approach to using Notehead Shorthand for a melody in compound meter where the lower number in the time signature is something other than an eighth note.

Notehead Shorthand is easily adaptable for melodies in compound triple and compound quadruple meter. For example, Example 18 is an example of student work when notating in 9/8. The student drew three sets of three eighth notes above each measure, but they must have made a mistake when adding noteheads to their metric grid in measure two, as the student corrected their notation for two beats by writing the correct answer above their original shorthand. This might be a successful strategy to be shared with students, as I have found that students become confused if they try to erase noteheads already written.

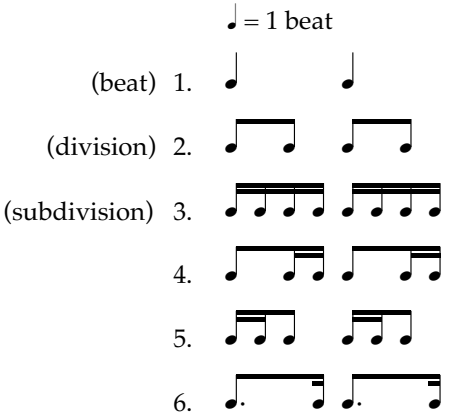


Example 18.
An example of the metric grid for compound triple meter.

C. Subdivision of the beat in simple meter

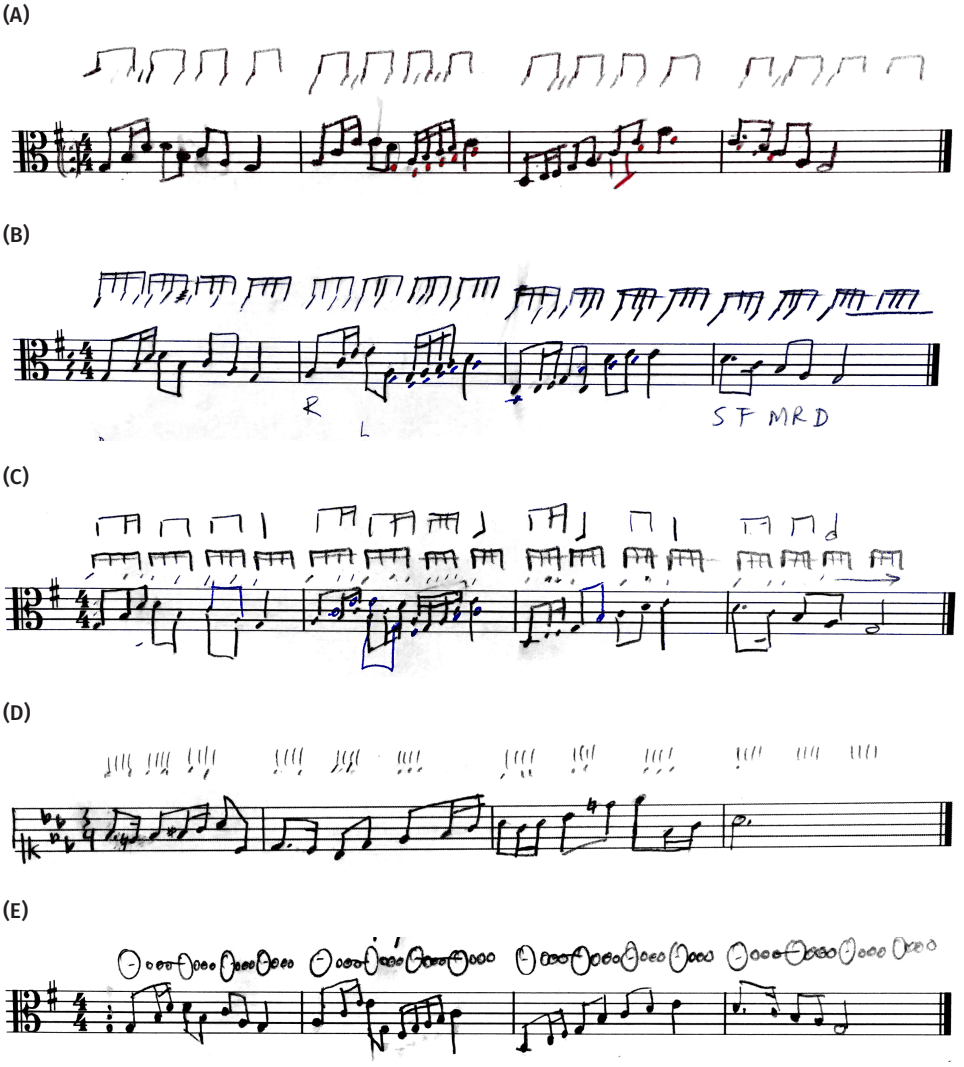
Once students demonstrate mastery of rhythms with single division of the beat in simple and compound meter, they then become familiar with the common rhythms containing subdivision of the beat in simple meter, such as those shown in Example 19. Before discussing how to adapt the shorthand learned with single division of the beat to these new rhythms, I recommend first exposing students to the new rhythms through sight-singing exercises and in-class rhythm games; I do this in an effort to developing students' visualization skills of rhythmic patterns common to the meter. During these in-class games, students are looking at a menu of the common rhythms with subdivision of the beat in simple meter (e.g., Example 19). One such game is "Bouncy Finger," where I point to different rhythms and students "ta" the rhythms aloud, all according to a steady beat.[29] "Echoes" is the name of another game, where one student performs two different rhythms (choosing two of the rhythms in Example 19), then the rest of the class echoes these rhythms aloud and calls out which lines were performed; this game is replicated where students are not looking at the common rhythms and are instead visualizing the rhythmic patterns for both the call and response.

29 The bouncy finger game is inspired by in-class games I observed in William Marvin's aural skills classes at the Eastman School of Music.



Example 19.
The common rhythms in simple meter with subdivision of the beat.

After a series of the rhythmic activities described above, we subsequently commence with dictation activities with these new rhythms. My students have adapted Notehead Shorthand for simple meters with subdivision of the beat in a variety of ways. Example 20 illustrates the varied approaches that students bring to the task and the flexibility of the Notehead Shorthand method. Example 20a shows a student who uses the same metric grid as when there is only single division of the beat, who adds floating noteheads as necessary to reflect the additional onset of a sixteenth note. While the red pen marks on this student's exam indicate that there were some errors in pitch, the student made no errors in rhythm. The student in Example 20b drew a metric grid above the staff showing all of the possible rhythmic onsets that could occur in each measure; the student made no errors in rhythm. The student in Example 20c did the same thing, but after drawing noteheads on the metric grid, they translated their shorthand to actual rhythms above the grid. Examples 20d and 20e provide some slight variations of the metric grid. In Example 20d, the student drew three sets of vertical lines to represent all of the sixteenth notes that could occur in 3/4 meter. The student then drew noteheads to represent the onset of notes heard in the melody. In Example 20e, the student's metric grid consists of large circles to represent the beats in the measure and small circles to represent the subdivisions of the beat. When hearing the melody, the student then drew a dot inside the circle if something started at that moment, and also drew dashes when numerous onsets occurred back-to-back. I do not encourage this latter method, as the tiny dots inside of the circles could be difficult for the student to see. Still, this method worked for this particular student.



Example 20.
Examples of Notehead Shorthand (and some variations of the method) used by students when hearing melodies in simple meter with subdivision of the beat.

The adaptations of Notehead Shorthand illustrated in Example 20 (especially Examples 20b, 20c, and 20d) help students notate any rhythm, even syncopations, at the subdivision level of simple meter. The metric grid above the staff shows students all of the possible note onsets and provides them with a way to determine the metric

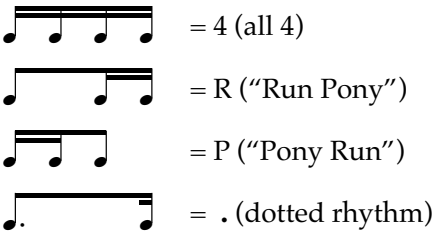
placement of the note within the measure. Notehead Shorthand provides an effective pedagogical method for students to notate heard rhythms quickly and accurately. Yet, one critique of the Notehead Shorthand applications illustrated in Example 20 is that they can be interpreted as a bottom-up approach to taking dictation, which by itself could be regarded as insufficient. While I have found that some students, especially those with less dictation experience prior to my course, excel when using the Notehead Shorthand approach, it may be too atomistic for others. Thus, it is important to *combine* the teaching of Notehead Shorthand with building the student's ability to quickly visualize the rhythm of entire beats in real time (i.e., employing aural chunking exercises for rhythms).

Therefore, some students may instead prefer to develop a shorthand method for entire beats. In this method, students write only one symbol to describe what occurs in an entire beat. Example 21 illustrates this method, which I call the "Run Pony Method," named for the common saying for an eighth note followed by two sixteenths often used by Suzuki teachers. In Example 21a, I teach students to write one symbol for each beat that contains that particular rhythm. If a beat were to contain all four sixteenth notes, a student would write a "4," to indicate that all four sixteenths occurred. Conversely, if a beat were to contain just one note on the beat, a student would write a "1." Examples 21b and 21c illustrate ways my students have incorporated this method, where the student in Example 21c combines Notehead Shorthand with the Run Pony Method. While the Run Pony Method does not lend itself to notating syncopated rhythms, it is sufficient for the most common subdivisions of the beat.

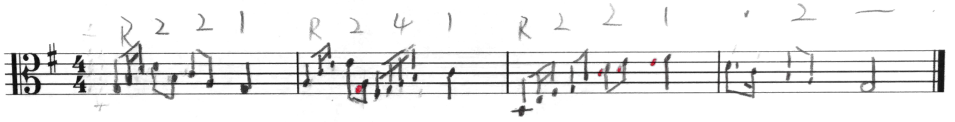
In my experience, the Run Pony Method is better suited for more advanced students who can already visualize rhythmic patterns, although it is important to encourage all students to develop their aural chunking skills. In-class games such as those described above can help students along this path. When introducing the Run Pony Method we play a game where I sing a melody and students call out (or write) the Run Pony symbol corresponding with the rhythm that they hear in real time (see Example 21a). In another, students improvise a short rhythmic phrase and a classmate repeats it directly afterwards and then adds to it, each student making the rhythm longer. These in-class games answer the recommendations of Laurdella Foulkes-Levy, who suggests that students should memorize common rhythmic (and melodic) patterns so that they will be able to instantly recognize them when they hear them in dictation tasks: "Teaching students to understand tonal hierarchy and the prevalence of common patterns can greatly facilitate the musicianship training of our talented students, whose abilities deserve to be developed to their highest

potential."[30] Nancy Scroggin's AP Music Theory test preparation text makes a similar recommendation, encouraging students to "plan ahead by thinking about and writing down what possible rhythms are going to be used. You can't write down every possible combination, but you can certainly *anticipate* the most often-used rhythms. With the rhythm menu in place, much of the guesswork is gone."[31]

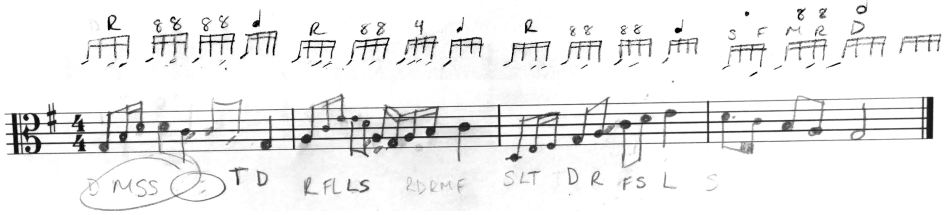
(A)



(B)



(C)



Example 21.
The "Run Pony Method" of aural chunking common subdivisions of the beat in simple meter.

I encourage students to use a rhythmic shorthand method that matches the level of the beat that they feel while hearing the aural stimulus. For example, more advanced students who feel/count the large beats and can easily visualize rhythmic patterns while hearing a melody should use the Run Pony Method. Students with less experience who prefer to count the sixteenth notes in 4/4 should use the Notehead

30 Foulkes-Levy (1998, 24).

31 Scroggin (2014, 244).

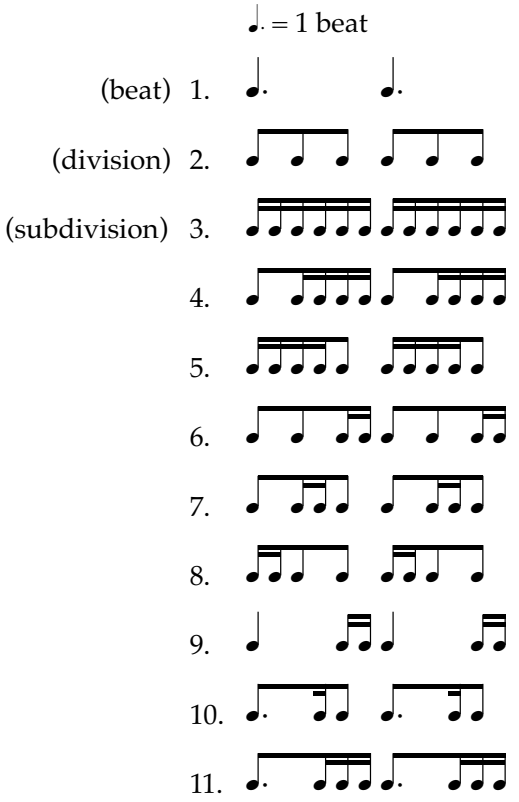
Shorthand method. Students who feel the eighth notes in 4/4 should use a method similar to that in Example 20a or the Notehead Shorthand method. It may also be that students can change shorthand methods over time as their level of experience and skill increases. Similarly, students may choose one method over another depending on the tempo of the aural stimulus. I encourage my students to first determine the level of the beat they are internally pulsing when hearing the aural stimulus; this helps them determine both the meter and shorthand method.

D. Subdivision of the beat in compound meter

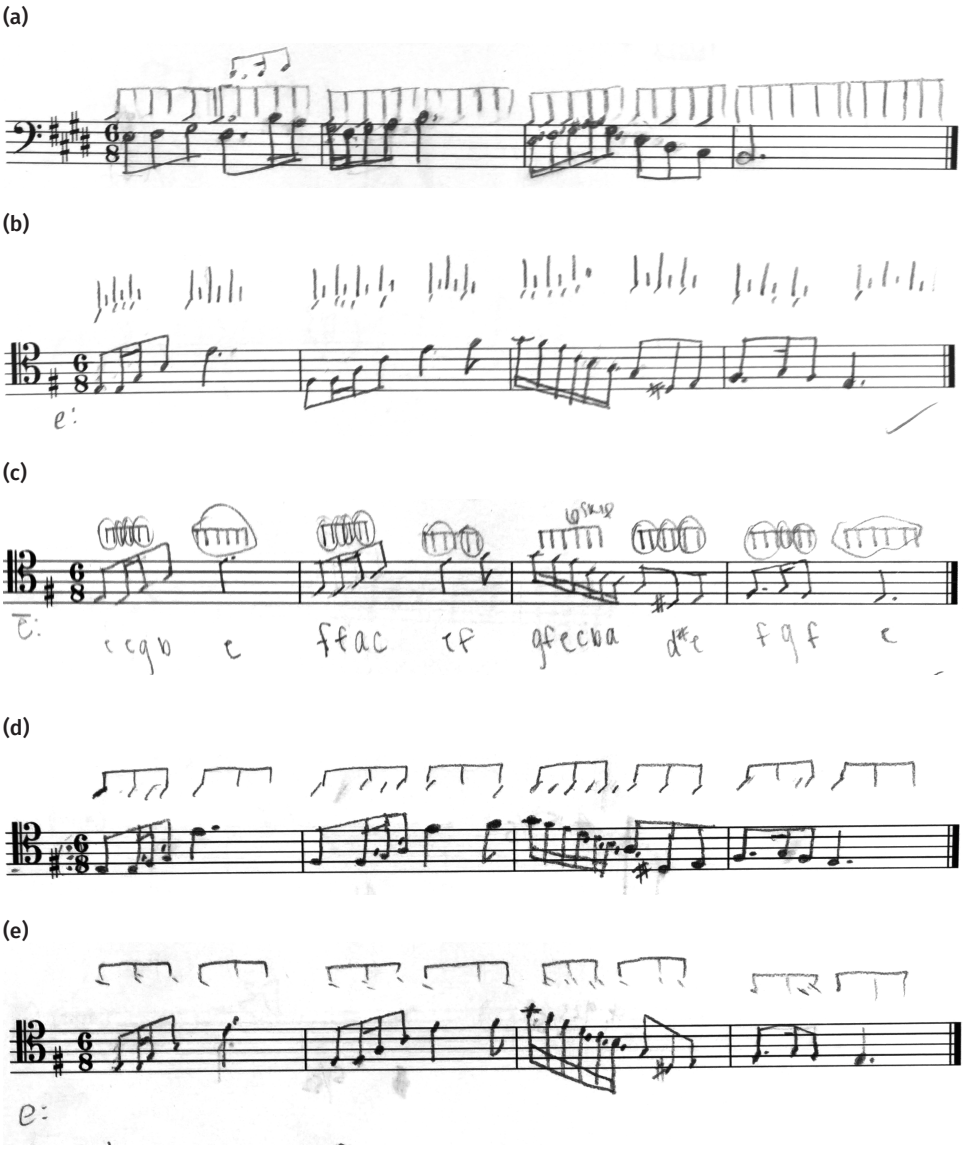
Similar to when students learn subdivisions of the beat in simple meter, my students are first familiarized with the common rhythms to subdivisions of the beat in compound meter (Example 22) through classroom games and sight singing, so as to build rhythmic chunking and visualization skills. When starting to notate these new rhythms, we then discuss possible shorthand symbols and strategies for notating subdivisions of the beat in compound meter, and students can select which strategy best suits how they were internalizing the rhythms when performing them. Example 23 illustrates some of the shorthand adaptations developed by my students at the Peabody Conservatory, where Examples 23a–23j run the gamut from bottom-up approaches to top-down strategies. Examples 23a–23c illustrate students who write all six possible subdivisions of the beat in their metric grid; they then add noteheads to indicate the onset of the notes (Examples 23a and 23b) or they circle the length of each note (Example 23c) after hearing the melody. The students in Examples 23d and 23e use the same metric grid as what is used when hearing single division of the beat and add in floating noteheads when notes occur in the other possible sixteenth positions. The students in Examples 23a–23e are usually pulsing/feeling/counting sixteenths or eighths in 6/8 meter.

The students in Examples 23f–22h are feeling the eighth-note level of 6/8 meter. In their shorthand method, they write in a metric grid used for compound meter above the staff, and then write in a “1” or a “2” to represent how many notes are present in the place of each eighth note in the meter. While these students vary in their ability to notate the pitches, they generally heard all of the rhythms correctly. However, whereas all of the adaptations developed in Examples 23a–23e can also reflect syncopations, those in Examples 23f–23h cannot, and thus this method is not as strong as Notehead Shorthand. These methods bear similarity to the method critiqued in Example 6, above.

The students in Examples 23i and 23j feel the beats, and did not initially write in a metric grid above the staff. They instead tried to develop a shorthand system with one (or two) symbols for an entire beat. For example, the student in Example 23j wrote a "6" on the downbeat of measure three to reflect that all sixteenth divisions occurred within beat one of that measure. This student made no errors in rhythm, but some in pitch.

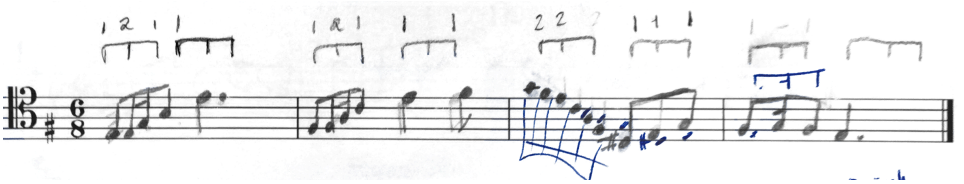


Example 22.
The common rhythms in compound meter with subdivision of the beat.

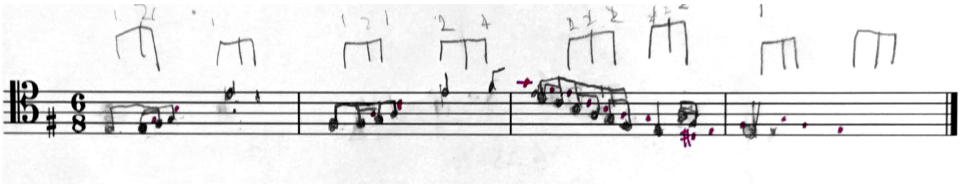


Example 23.
Examples of the rhythmic shorthand methods used by students when hearing melodies in compound meter with subdivision of the beat.

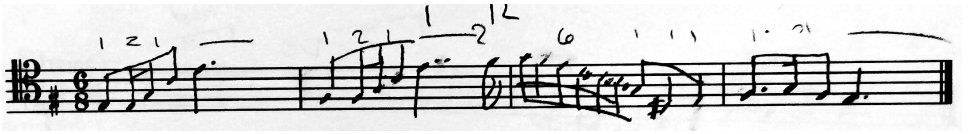
(f)



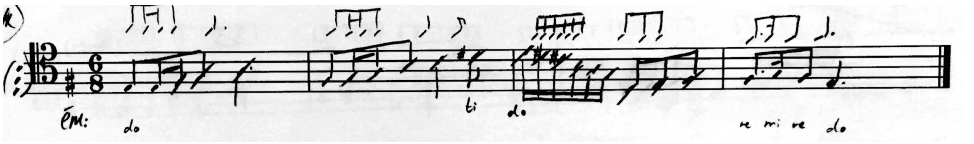
(g)



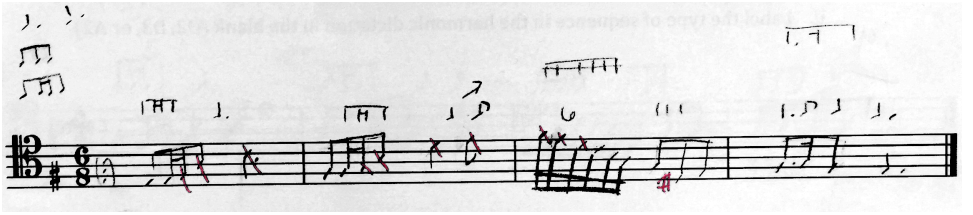
(h)



(i)



(j)



Example 23 (cont'd).
Examples of the rhythmic shorthand methods used by students when hearing melodies in compound meter with subdivision of the beat.

Situating Notehead Shorthand within the Aural Skills Curriculum

Many musical shorthands were shared in this article. No matter which shorthand method is used by students in the classroom, it is essential to use the method within an aural skills curriculum that also focuses on developing a student's ability to visualize rhythms/pitch notation while taking dictation, build contextual listening skills, develop musical expectation, etc. Aural skills texts by Jones, Shaftel, and Chattah (2014), Murphy, Phillips, Marvin, and Clendinning (2016), and Karpinski (2017) are just some of the many excellent texts one can use to develop these important skills in students. Instructors should discourage students from simply becoming "musical shorthand-takers, perhaps adept at getting the right thing on paper but lacking in skills such as focused attention, selective memory, and increased memory capacity."[32] I, too, have worried that use of a shorthand method has delayed some of my students in developing crucial rhythmic visualization skills. Furthermore, the metric grid does take time to set up (~15 seconds for a four-measure melody), which could be prohibitive to some students under a time constraint (such as those taking the AP Music Theory Exam, although test takers could write down their metrical grid while listening to directions.

Thus, it is important that aural skills instructors maintain a pedagogical model that combines the bottom-up approach of using a shorthand method with lessons that develop students' pattern recognition and mental visualization skills, and to oscillate between these approaches when any new concept is learned (and throughout the curriculum). While I proceed with this as my overall pedagogical strategy, I also believe that mastery of bottom-up skills is required to tackle top-down skills, and thus the first semester of students' collegiate ear-training curriculum at the Peabody Conservatory mostly emphasizes bottom-up Notehead Shorthand exercises (in this semester, we cover single division of the beat), whereas the second semester focuses upon rhythmic chunking skills (when I am teaching subdivision of the beat). While I always encourage students to advance beyond the bottom-up approach to taking dictation (e.g., to hear rhythmic chunks and visualize actual rhythmic notation), this path will be short for some and may require months of work for another. The developmental path for one student may be very different from the path of another student, and Notehead Shorthand offers flexibility to accommodate these variations.

Although there are possible shortcomings of using such an approach, I argue that

32 Karpinski (1990, 199).

a shorthand system *is* needed by students with limited musical experience, especially those who have difficulty visualizing rhythms while hearing melodies and/or those who have difficulty establishing metric entrainment while hearing melodies; I always have a few of these students in my classes each fall. My shorthand method separates the task of melodic dictation into multiple small, accessible steps. The method can also be used by more advanced students when tackling a new skills, such as notating syncopated rhythms. Indeed, I have found that my strongest students choose to use the Notehead Shorthand method at multiple times throughout the curriculum, which helps to destigmatize the method from being applicable only to the weakest students (i.e., no student would elect to use the method if they thought it categorized them as a student with weak aural skills, especially at the start of their first year when social relationships at college seem paramount). The method provides students of all levels with a path to succeed taking dictation, promoting inclusivity in the classroom. Thus, I offer Notehead Shorthand as a method that all students can add to their tool belt; one that students can use when they needs it. I recommend that my method be used similarly to Karpinski's protonotation, who writes, "readers will find that protonotation serves very well when addressing new skills and concepts, and when isolating notation from other stages in the listening process."[33]

Conclusion

Notehead Shorthand asks students to notate rhythm before pitch.[34] Paney and Buonviri, though, found that high school AP music theory teachers struggle to get adequate results on the rhythmic aspect of melodic dictations, quoting one instructor who observes that students "don't know how to space the notes rhythmically, and they get flustered, and it ends up causing them to mess up some of the pitch parts."[35] Notehead Shorthand provides a solution to this problem. It serves to improve other rhythmic shorthand strategies because it 1) explicitly requires students to know/feel the divisions of the beat, 2) more closely resembles actual rhythmic notation, making it easier for students to convert their shorthand onto the staff, 3) uses symbols with only one rhythmic interpretation, 4) can be easily applied to more complicated rhythms and meters (whereas other shorthand methods are best suited for simple

33 Karpinski (2017, xix).

34 See Beckett (1997), Karpinski (1990 and 2000), Potter (1990), Paney and Buonviri (2014).

35 Paney and Buonviri (2014, 405).

meters with one division of the beat), 5) teases apart the multiple steps required in a dictation task, and 6) helps students understand how notes are spaced in relation to the measure.

Notehead Shorthand is workable for any age/level, and may be especially useful for students preparing for the AP Music Theory students and college aural skills. In my own classrooms, both weak and strong students choose to use the method, as it is malleable and students can tailor it to what works best for them. Moreover, students should choose a metric grid that captures the level of the beat that they are internally counting when taking dictation; Notehead Shorthand can accommodate whether a student is pulsing the beats, divisions, or subdivisions of the beat. Notehead Shorthand can be used both by instructors who provide students with the time signature prior to hearing the melody (e.g., Damschroder; Jones, Shaftel, and Chattah) and those that do not (e.g., Karpinski).[36] In the latter situation, students not provided with the meter would spend their first hearing of the melody determining the meter (and perhaps mode) and then they would write down their metrical grid prior to the second hearing. Notehead Shorthand can also be used by teachers who do not allow their students to notate anything upon first hearing of the melody (as advocated in Karpinski and Rogers), as well as by those who allow students to begin notating right away (on the AP Music Theory Exam the melody for one melodic dictation is only repeated three times).[37] Notehead Shorthand can also be applied to old-fashioned melodic dictations, as well as in other contexts. For example, my students have used it when hearing two-voice dictations as well as when notating the vocal part of a *Lied*.

The strategy of writing the rhythm in one hearing and then focusing on pitch for the other hearings of a melodic dictation exercise minimizes cognitive load for students, which has important ramifications. Overall, my hope is that Notehead Shorthand provides students with a reliable tool to hone their skills in dictation, empowering them to attend a concert and, like Mozart, notate what they hear.

36 See Damschroder (1995, 406), Jones, Shaftel, and Chattah (2014, 173), and Karpinski (2017, 110).

37 Karpinski (2000); Rogers (2004).

Bibliography

Bartz, Josh. 2016. "Rhythmic Dictation Help 5-12-16." YouTube Video, 6:44 (May 12). https://www.youtube.com/watch?v=MIrimBBYxSU.

Beckett, Christine A. 1997. "Directing Student Attention During Two-Part Dictation." *Journal of Research in Music Education* 45 (4): 613–625.

Benward, Bruce. 1961. *Teacher's Dictation Manual in Ear Training*. Dubuque: Wm. C. Brown.

Code, David. L. 1997. "Alphabet Dictation: An Alternative Strategy for Ear Training." *Journal of Music Theory Pedagogy* 11: 59–74.

———. 2020. "tx2Mus." https://wmich.edu/mus-theo/tx2mus/.

Cutchen, Dan. 2013. "Rhythmic Shorthand 1 for Help in Writing Melodies." YouTube Video, 10:54 (January 29). https://www.youtube.com/watch?v=8F1rYp2s8_8&t=333s.

Damschroder, David. 1995. *Listen and Sing*. New York: Schirmer Books.

Foulkes-Levy, Laurdella. 1997. "Tonal Markers, Melodic Patterns, and Musicianship Training, Part I: Rhythm Reduction." *Journal of Music Theory Pedagogy* 11: 1–25.

———. 1998. "Tonal Markers, Melodic Patterns, and Musicianship Training, Part II: Contour Reduction." *Journal of Music Theory Pedagogy* 12: 1–24.

Jones, Evan, Matthew Shaftel, and Juan Chattah. 2014. *Aural Skills in Context*. Oxford and New York: Oxford University Press.

Karpinski, Gary S. 1990. "A Model for Music Perception and its Implications in Melodic Dictation." *Journal of Music Theory Pedagogy* 4: 191–229.

———. 2000. *Aural Skills Acquisition: The Development of Listening, Reading, and Performing Skills in College-Level Musicians*. Oxford: Oxford University Press.

———. 2017 [2006]. *Manual for Ear Training and Sight Singing*. Second ed. New York: W. W. Norton & Company.

Kazez, Daniel. 1997 [1989]. *Rhythm Reading Rhythm Reading: Elementary Through Advanced Training*. Second ed. New York, NY: W.W. Norton.

Levin, Robert D., and Louis Martin. 1998. *Sight Singing and Ear Training Through Literature*. Englewood Cliffs, NJ: Prentice Hall.

Murphy, Paul, Joel Phillips, Elizabeth West Marvin, and Jane Clendinning. 2016 [2005]. *The Musician's Guide to Aural Skills: Ear Training*. Third ed. New York: W. W. Norton & Company.

Olson, Lynn, and Martha F. Hilley. 2012. "Writing – Rhythmic Dictation." *Piano for Pleasure*. http://www.pfppiano.org/po87_rhythmshorthand.html.

Paney, Andrew. 2007. "Directing Attention in Melodic Dictation." Ph.D. diss., Texas Tech University.

Paney, Andrew, and Nathan Buonviri. 2014. "Teaching Melodic Dictation in Advanced Placement Music Theory." *Journal of Research in Music Education* 61 (4): 396–414.

Pembrook, Randall G. 1986. "Interference of the Transcription Process and other Selected Variables on Perception and Memory During Melodic Dictation." *Journal of Research in Music Education* 34 (4): 238–261.

———. 1987. "The Effect of Vocalization on Melodic Memory Conservation." *Journal of Research in*

Music Education 35 (3): 155–169.

Piagentini, Susan M. "Adapting the Aural Skills Curriculum: A Move Away From 'The' Right Answer." In *The Routledge Companion to Music Theory Pedagogy*, ed. Leigh VanHandel, 450–458. Abingdon: Routledge.

Polkapaul. 2012. "Rhythmic Dictation Exercises." YouTube Video, 6:55 (August 2). https://www.youtube.com/watch?v=Qu8p_6tJYcQ&t=28s.

Potter, Gary. 1990. "Identifying Successful Dictation Strategies." *Journal of Music Theory Pedagogy* 4 (1): 63–71.

Rogers, Michael R. 2004 [1984]. *Teaching Approaches in Music Theory: An Overview of Pedagogical Philosophies*. Second ed. Carbondale: Southern Illinois University Press.

Rogers, Nancy, and Richard Ottman. 2019 [1958]. *Music for Sight Singing*. Tenth ed. Upper Saddle River, New Jersey: Pearson.

Rodriguez, Kelly. 2015. "Melodic Dictation How To and Tips." YouTube Video, 19:06, (September 20). https://www.youtube.com/watch?v=r-gjryDx1nY&t=2s.

Schumann, Robert. 1967 [1848]. "Musikalische Haus- und Lebensregeln." In *Im eigenen Wort*, edited by Willi Reich, 400–414. Zurich: Manesse Verlag.

Scroggin, Nancy. 2014. *Barron's AP Music Theory*. Second ed. Joshua, Texas: Barron's.

Smith, Deborah. 2014. "Using Rhythmic Shorthand for Simple Time Rhythmic Dictations." YouTube Video, 8:00 (September 30). https://www.youtube.com/watch?v=7WL6JA_4mlo.

Solomon, Maynard. 1995. *Mozart: A Life*. New York: Harper Perennial.

Wallace, Barbara K. 2007. *Beginning Aural Skills: An Introduction to Ear Training and Sightsinging*. Vols. I, II, III, and IV. Garland, Texas: Kees Academic Press.