1-1-2019

Report on the 2019 Workshops in Music Theory Pedagogy at the University of Massachusetts Amherst

Emily Kenyon

Emily Schwitzgebel

Follow this and additional works at: https://digitalcollections.lipscomb.edu/jmtp

Report on the 2019 Workshops in Music Theory Pedagogy at the University of Massachusetts Amherst

EMILY KENYON AND EMILY SCHWITZGEBEL

Introduction

On June 24th, 2019, fifty-seven music theory aficionados gathered at the Fine Arts Center at the University of Massachusetts Amherst for the fifth triennial meeting of "Workshops in Music Theory Pedagogy." Participants ranged from college professors and high school teachers to students and prospective students, some traveling as far as 3,787 miles to attend the workshops. Workshop organizer and featured speaker Gary S. Karpinski arranged for four other prominent theorists to speak each day about pedagogy-related topics of their choice: Joseph Straus, Leigh VanHandel, Justin London, and Cynthia I. Gonzales. All distinguished authors and pedagogues, the guest speakers brought unique perspectives to the workshop and encouraged participants to think outside the realm of traditional pedagogy in their music theory classrooms.

The conference lasted five days, each day featuring five hour-long presentations given by the guest faculty members, special breakout sessions, and social and networking events in the evening. The atmosphere was lively and full of dialogue, with participants constantly bouncing ideas off of the panel and asking questions pertaining to the theory curricula at their respective institutions. While each speaker had a different area of expertise, several common themes linked the presentations over the course of the week: inclusivity in the field, an emphasis on literature, pedagogical approaches informed by music cognition research, aural skills pedagogy, and new approaches to post-tonal theory. Each topic was approached with an open-minded perspective meant to engage and meet the needs of the 21st-century music student.

Inclusivity and Accessibility

Student learning and success remained at the forefront of every conversation held throughout the conference, as participants and speakers alike raised questions about how to make their music classrooms more inclusive to all students. In a country more diverse than ever and a society that has become increasingly sensitive

towards physical and mental wellness, it is clear that educational accessibility should be of paramount concern to all teachers, regardless of discipline. Throughout their respective presentations and topics, many of the speakers tackled different angles of the question, "What can we do to make the disciplines of music theory and aural skills more inclusive towards and accessible to all students?"

During Monday's workshops, Joe Straus gave a presentation entitled "Disability and the Music Theory Classroom." The goal of the presentation was twofold: first, to suggest accommodations that can be made in the theory classroom for students with disabilities, and second, to discuss the ableist and normalizing discourse that permeates the discipline of music theory. Straus began his discussion by outlining the three models for conceptualizing disability: the medical model, which considers disability to be a defect that should be cured/normalized, the religious model, in which disability is a divine affliction, and the sociocultural model, in which disability is a difference to be celebrated. Straus urged the workshop participants to embrace the sociocultural mind frame in their teaching and treat student disability not as an affliction, but as a unique perspective that can enrich the classroom learning environment.

Straus recommended that instructors shift the burden of disability from the students to the classroom design, thus avoiding a "disabling" environment and curriculum that fail to accommodate different kinds of learners.[1] To avoid this issue, Straus advocated for using principles of Universal Design for Learning (UDL) to help shape music theory curricula. UDL is a system meant to make learning inclusive and accessible to all students, and while it can lessen the need for individual accommodations, its goal is to improve the learning experience for everyone. If a student with a disability requires a time extension, for example, an instructor using UDL would either give the entire class extra time or adjust the exam to make it easier to complete within the original timeframe.[2] When explaining his UDL-inspired curricula, Straus recommended introducing topics in a way that caters to a variety of different learning styles, including kinesthetic, visual, and aural components.

Straus concluded his seminar on Monday by critically examining the intrinsically "normalizing" discourse within the music theory discipline, and discussed the pedagogical implications of said discourse. He suggested that music theory is often aligned with the medical model of disability, designed to rationalize the "abnormal"

---

1 Quaglia (2015).

2 For more specific advice about implementing UDL in the music theory classroom, see Gillespie (2018).

elements of music with respect to "normal" ones. For example, when analyzing form, theorists often refer to atypical structures—usually those that deviate from Classical-era prototypes—as formal "deformations." The music theorist assumes the role of a medical practitioner in such a scenario, diagnosing the non-normative conditions of the music and correcting them with rationalizations about what should or shouldn't be prototypical. Assuming a standard of normalcy in music risks discrediting and misunderstanding the music that does not align with those standards—standards that are usually biased towards male, Caucasian, Western European composers and their works. Consequently, Straus urged the theory instructors at the conference to move away from the narrative of normalcy when discussing music in class, and instead, should learn to embrace the oddities of a piece, treat them autonomously, and use them as gateways into deeper discussions of the music. Straus referred to this perspective as "disablist" music theory, which aligns with the sociocultural model of disability.

Justin London pointed out that when designing lessons, it is important to take not only students' learning abilities into account, but also their personal backgrounds and interests as well. The majority of London's presentations concerned designing music theory classes for liberal arts students and non-music majors, drawing primarily from his experiences as a professor at Carleton College. Because his students at Carleton possess a wide array of academic/educational backgrounds and have varying degrees of musical expertise, London aims to make his theory classes as widely applicable and inclusive as possible. London urged the participants to take their student demographics and interests into account, and to avoid topics/practices that might exclude those that don't have a lot of musical expertise. Two such practices mentioned were the harmony and piano-centric approaches that dominate many theory curricula. Excessive emphasis on vertical harmony has a Western Classical bias, can make analysis seem dry, and often takes too much time away from other interesting topics (i.e. timbre, texture, rhythm, etc.), while too much emphasis on the piano can exclude and discourage those who are unfamiliar with the instrument. To avoid these exclusionary pitfalls and make classes more accessible, London suggested that instructors "move beyond the worksheet" and incorporate more creative writing, group-based, and project activities into the class.

As an introductory assignment for his first-year theory class, London poses the question, "What is a musical instrument?" From here, he addresses fundamental acoustic properties, encouraging students to understand how instruments work and how sound is created. London introduces the Hornbostel–Sachs system of classifying instruments, as well as the different parts of an instrument: the oscillator, resonator, and modifier. Once his students have been given sufficient information about how

an instrument functions, they are given the task of creating an original instrument from everyday objects. Finally, after the students have presented their own musical instruments, London uses the information learned during the unit as a stepping stone to listening to and analyzing music literature in the classroom.

In addition to including more hands-on and creative assignments in the curriculum, Cynthia Gonzales advocated for incorporating more technology in the theory class. Because technology is usually a familiar medium for students, using online programs and applications can help make the learning process easier and more accessible for them. Gonzales makes use of SmartMusic and instructional YouTube videos in her classes, and has her students practice skills and complete take-home assignments using both platforms. It is Gonzales's hope that this incorporation of technology will not only make the learning process more accessible to students, but more enjoyable as well.

Emphasizing Literature

Throughout the week, many of the speakers touched on the importance of using 'real' music, as opposed to acontextual exercises, to teach theoretical concepts. Cynthia Gonzales has successfully implemented this notion in her aural skills classroom, using the aforementioned YouTube videos for at-home student practice. These videos—with musical examples ranging from Mozart Masses to "Puff the Magic Dragon"—serve as a way for students to become familiar with solfege and chord function while listening to music of different genres and singing along with the harmonies. In Gonzales's classroom, the end-of-semester project is a culmination of students' at-home learning: they must choose any song and use solfege to arpeggiate the chords as the piece progresses. The freedom to select a piece of music from any genre allows students to understand and apply the concepts they have been learning all semester through a familiar medium.

Gonzales and VanHandel find it important to distinguish "compositional practice" from "rules" in music theory voice leading. VanHandel takes a scientific approach in her instruction, using the parameters of the auditory system to help students understand stylistic constraints of a particular composer and time period.[3] VanHandel noted that composers were following certain practices because of what sounded good to them, but "considering limits of parameters can help [students] to understand 'violations' of the guidelines." This approach can make traditional voice leading and

---

3 For more information about the perceptual principles behind voice leading, see Huron (2016).

counterpoint more meaningful to students, who are often frustrated by the long, seemingly arbitrary list of rules. Similarly, Gonzales selects Bach chorales to illustrate the compositional practices that underlie some of the limitations of part writing. She has students analyze the chorales, counting the intervals between bass notes and then between soprano notes. After completing a horizontal analysis of the music, students move on to a vertical analysis, observing the intervals between the bass and soprano, and tallying the number of consonances and dissonances. Using Bach's music as an example, Gonzales can then empirically analyze Bach's compositional choices, a notion which gives merit to the guidelines of SATB part writing. By placing specific composers and their stylistic practices at the forefront of teaching part writing, VanHandel and Gonzales give students a more concrete way to conceptualize the "rules" which guide music theory topics.

On the second day of the workshop, Straus gave the participants a preview of the forthcoming second edition of *Concise Introduction to Tonal Harmony.*[4] Each conference participant was given a copy of the uncorrected proofs for the post-tonal portion of the book. Straus, who defines post-tonal music as pitch-based music in the western classical tradition since 1900, recognizes many of the difficulties that surround teaching post-tonal music theory. Many of the tips he gives to those embarking on this journey involve talking less about theory and more about music. In their approach, Straus and Burstein implement these tips, creating a book with an expanded music repertoire and an emphasis on diagrams before text. All of the musical examples are taken from literature, and are selected to demonstrate post-tonal theory topics. Straus finds that teaching through real music is critical for student understanding. This is precisely the approach that Gary Karpinski takes in his aural skills classroom. Karpinski advocated for the inclusion of music literature in sight-singing exercises so that students are learning compositional practices from real composers. When given the opportunity to explore these historical contexts, students' comprehension of how music is composed and analyzed improves and they can apply analytical skills from one piece to the next. Karpinski's *Anthology for Sight-Singing* (2017) exemplifies this approach, exposing students to musical works from many different genres and eras at the very beginning of their music studies.

---

4 Burstein and Straus (2016).

Pedagogical Applications of Music Cognition Research

Over the course of the week, the rising field of music cognition was given special attention as a pedagogical tool in the theory classroom. Leigh VanHandel began by comparing basic mathematics to theory fundamentals; research suggests that the cognitive processes underlying both disciplines are similar, each requiring abstract and systematic thought. The disciplines of music and mathematics both make use of notational systems, require fluency with those systems, and encourage an understanding of meaningful patterns rather than disconnected knowledge. This level of understanding is put to the test when students must choose use different strategies to answer questions. VanHandel said, "Students need to be explicitly shown that another strategy is more effective and more efficient by presenting them with questions that exploit weaknesses in a lower-level strategy." When given these strategies, students gain a better conceptual understanding of fundamental topics and are able to retrieve information more quickly. So, why is mathematics pedagogy applicable to music theorists? As VanHandel explained, "the way that students learn math could help us to more effectively teach music theory." She has found success in using tasks like pattern matching, spatial rotation, and even the math SAT as early predictors for student performance in music theory fundamentals, hoping to pinpoint which students may need more individualized attention.

The role of working memory in music theory was another topic that emerged during the week. VanHandel started by defining working memory as the "capacity for holding and manipulating a small amount of information for a short period of time," a skill which may be taken for granted too often in the music theory classroom. Working memory has a large effect on things like reasoning, decision-making, and mathematics. Unfortunately, there are many factors that work to negatively influence students' working memory; it can be affected by genetics, sleep deprivation, threat or anxiety, and pain. Many students who struggle with working memory problems have difficulties following instructions, problems with activities that require storage and processing, and appear to be inattentive and distractible. VanHandel shared a variety of techniques to help struggling students, adding to the above list of ways to make music theory more inclusive towards and accessible to all students. One of the most effective ways to aid working memory is to reduce students' cognitive load: the less information they have to process, the more successful they can be in solving problems. VanHandel suggested to the participants that they can reduce their students' cognitive load by signaling essential information, formatting things in a straightforward

manner, and removing extraneous content from questions and activities. Additionally, it is important to encourage students to develop their schema by using adaptive strategies, and to promote the active recall and retrieval of information, rather than simply "restudying" the information.

In the case of aural skills, it is especially crucial that students develop chunking strategies to help reduce their working memory load. Gary Karpinski explained that chunking is an important skill for students taking melodic dictation, as the brain cannot always accurately remember all of the musical information it has received. Karpinski cited George Miller's "seven plus or minus two bits" as the limit to short-term memory, but explained that students should group notes into meaningful "chunks" in order to aid memory during dictation.[5] In using this strategy cognitive load is reduced, allowing working memory to function more successfully. In addition to chunking, Karpinski suggested encouraging students to use their "extractive memory," that is, to focus their attention on different parts of the dictation passage. This method differs from chunking because it requires students to focus on one specific section of the passage at a time rather than chunking all parts of passage. Using chunking and extractive listening strategies reduces the brain's cognitive load, and students are far more able to utilize their short-term and working memory to accurately transcribe a melodic dictation melody.

Later in the week Justin London spoke about how music cognition can be used in the theory classroom. Using Krumhansl and Kessler's 1982 probe tone experiment as a model, London explained how demonstrations of empirical or data-driven approaches to music can have many benefits. London conducted a version of this experiment in real time during his presentation, and analyzed the data to show participants how empirical data can be used to learn about or teach music theoretical concepts. In the experiment, all workshop participants listened to a tonic-establishing progression followed by a single tone, which they were prompted to rate on a scale from 1–7 based on how well they thought it fit into the key. This procedure was repeated multiple times based on different scale degrees. Example 1 shows Krumhansl and Kessler's results, which were replicated by pedagogy workshop participants.

---

5 Karpinski (1990, 201).
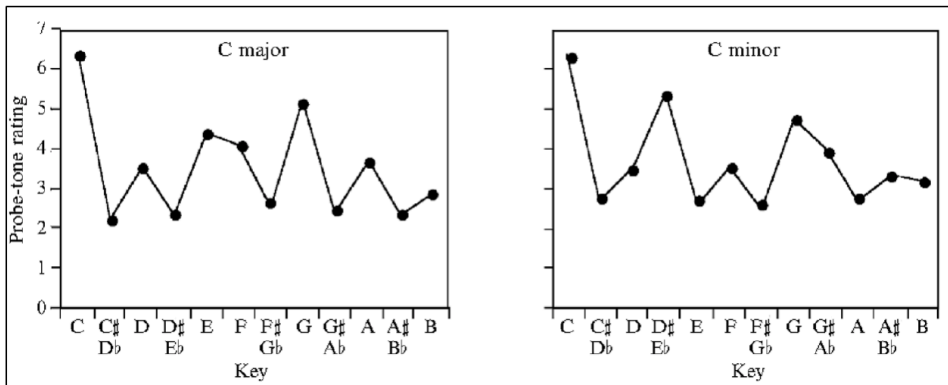
Example 1
Krumhansl and Kessler (1982) probe tone experiment results.

Empirical approaches to music theory can provide support for musical intuition, show how the study of music translates into "hard data," and aid in musical analysis. VanHandel illuminated some of the perceptual reasons for standard SATB voice-leading "rules," noting that "explaining how SATB part writing works within parameters of the auditory system may help students understand stylistic constraints." In her discussion, she used David Huron's *Voice Leading: The Science Behind a Musical Art* (2016) as a way of outlining the principles of Western tonal music. Though science can be a useful way to teach students about the subtleties of part-writing, VanHandel clarified that science is not justification or a value judgment—music that does not follow the rules of Western tonal music is not bad, but simply uses different principles to express other priorities.

Aural Skills Pedagogy

Of central importance to the week's proceedings were discussions about aural skills teaching and learning. These themes were particularly prevalent in the workshops conducted by Gary Karpinski and Cynthia Gonzales, both of whom spoke about recently emerging innovations and pedagogical strategies within the field. In keeping with the overarching themes of inclusivity and accessibility, the aural skills-centered workshops featured various methodologies for creating optimal classroom environments for various kinds of learners. While Karpinski's workshops featured perceptual approaches to dictation and sight-singing, Gonzales focused mainly on the concept of "harmonic listening" and spoke about ways of including technology in the classroom.

In the first session on Monday, Karpinski initiated discussion by polling the crowd about the goals of aural skills training, and questioned the participants about how those goals are brought to fruition in their curricula/institutions. Among the goals suggested (performance, intonation improvement, composition, etc.), the two that seemed to emerge as the most pertinent were the development of functional hearing and the improvement of musical memory. This de-emphasis of external product (singing/performing) and focus on internal process has been referred to by Bruce Benward as the development of the "hearing eye" and "seeing ear."[6] This discussion served not only as an entry point for Karpinski's later sessions about dictation and sight-singing, but also as an excellent framing topic for the entire conference—nearly all of the speakers' topics included issues of internalization and the mental processes involved in learning music theory. According to Karpinski, functional hearing is a skill that must be reinforced at every stage of aural skills acquisition, which, in his opinion, is best achieved with moveable-do solfege. Karpinski suggested that while each solmization system has its merits, a system such as moveable do allows students to assign functional meaning to each note, thus allowing them to understand larger tonal contexts.[7]

Functional listening skills, particularly the skill of establishing tonic, can be included in the preliminary steps of sight-singing and dictation training. For sight-singing, Karpinski suggested providing students with only the starting pitch (whether it be the tonic or not). Given this information, and after examining the key and structure of the excerpt, the student should be able to place the pitch in a tonal context, find the tonic, and audiate the whole passage with contextual understanding. For dictations, Karpinski suggested providing the students with only the clef, the name of the tonic, and the bottom number of the meter signature. After hearing the whole excerpt, Karpinski claims that the students should be able to identify tonic and contextualize each pitch accordingly in the key.

As an entry point to a freshman aural skills class, Karpinski suggested that instructors begin with the fundamentals of meter and pitch, both of which can be expressed with the "protonotation" system. Derived from the rhythmic theories of Lehrdal and Jackendoff (1983) and traditional moveable-do solfege, protonotation is a way for students to express their understanding of a piece's basic pitch and metric

---

6 Benward and Saker (2015, xi).

7 For Karpinski's breakdown of moveable vs. fixed solmization systems and their respective uses, see Karpinski (2000, 166-68).

properties without the burden of traditional notation.[8] When dictating or transcribing a piece of music using protonotation, students draw vertical lines to represent the main and secondary pulse layers, horizontal lines in between to represent the rhythms, and write moveable-do solfege syllables above each horizontal line to represent each pitch.[9]

Like Karpinski, Gonzales stressed the importance of sound-before-symbol in her discussion about harmonic singing and listening in the aural skills class. When commenting about students' initial difficulty when learning to use Roman Numerals, she explained, "We cannot call something by name when we do not know the name," implying that students need to form auditory and oral connection to the symbols in order to understand them visually. During her session on Monday, Gonzales shared some of her video homework assignments used to introduce Roman Numerals and harmonic progressions through singing exercises. In the exercises, students learn to sing common harmonic progressions using what she referred to as the "guide tone method." In this process, students listen for a single pitch within each given harmony (usually do, ti, or re), and then sing the arpeggiated chord in closed position on solfege.[10] Gonzales also suggested giving sing-along dictation quizzes, claiming singing through the underlying chord progressions will allow students to have an easier time contextualizing the melody.

Both Karpinski and Gonzales spoke extensively about the importance of error detection in the aural skills classroom and its relevance for music performers, educators, and students alike. As all of the workshop participants agreed, nearly every profession in the field of music necessitates the ability to identify, understand, and correct errors. Karpinski advocated that instructors should model real-world experiences as much as possible when devising error detection assignments—to model the experience of an instrumental teacher correcting a student's wrong note, for instance, an error detection activity should contain mistakes in the accompanying performance or audio file, not the notation. As Gonzales pointed out, error detection also plays an important role in self-assessment when sight-singing, which is often a difficult task for students. To make it easier for students to error detect when practicing at home, Gonzales suggested that aural skills instructors assign SmartMusic exercises, which provide immediate feedback about the students' pitch and rhythm accuracy.

---

8 This methodology is inspired by the concept of "sound before symbol," outlined in Gordon (2012).

9 For a written-out example of protonotation, see Example 3.15 in Karpinski (2000, 91).

10 All of Gonzales's harmonic singing exercises can be accessed with the following link: https://www.listen-sing.com/harmonic-listening.

Teaching Post-Tonal Music Theory

Joe Straus spent much of the week engaging workshop participants about topics in post-tonal music theory pedagogy. He explained that the student anxiety surrounding the genre necessitates careful pedagogical strategies, remarking, "Atonal music gets a really bad reputation, even more than tonal music theory." Straus shared 10 tips for teaching post-tonal theory: 1. Less theory, more music 2. Expand the repertoire 3. Talk less, do more 4. Hear the music 5. Analyze the music (within limits) 6. Compose (within limits) 7. Visualize 8. Make it real; keep it concrete 9. Relate to performance 10. Plunge right in.[11]

Straus speculated that the bad reputation of atonal theory is due to students' unfamiliarity with the genre and its stylistic parameters. To remedy this unfamiliarity, he suggested easing the students into the new material by relating it back to tonal music at every possible opportunity. This curricular scaffolding helps students to draw connections between genres and allows them to use familiar concepts to help navigate the new analytical terrain. As an example, Straus recommended having students analyze phrase syntax in post-tonal music by looking for resemblances of periods, sentences, and other structures characteristic of tonal music. Once the students are able to draw these connections, the music becomes significantly less ambiguous and the often-hidden principles of functionality and order become more apparent. Students are then able to have meaningful conversations about how structure in post tonal music *differs* from traditional periods and sentences, and can then learn about the kinds of structures that are idiomatic to the genre. Similarly, Straus suggested using familiar concepts—particularly scales and collections—to talk about more advanced concepts found in post-tonal musical language.

It becomes quite evident that the forthcoming second edition of Straus and Burstein's *Concise Introduction* embraces the connections between tonal and post-tonal music, particularly when examining the types of activities found in the accompanying workbook. Some of the most unique features of the workbook are the recomposition exercises, where students are prompted to recompose excerpts of post-tonal pieces to fit traditional tonal prototypes. During his presentations, Straus referenced examples from the *Concise Introduction* Workbook to clarify this activity. Example 2 shows an activity found in Chapter 42 of the *Concise Introduction* Workbook (teacher's edition with answer key). The top system is a harmonically ambiguous

---

11 Straus (2018).

excerpt from Stravinsky's Concerto for Piano and Winds, which the student is asked to recompose to fit a tonal prototype. The second system represents a possible student recomposition that transforms the excerpt into a traditional tonic expansion and ii–V–i cadential formula. Such activities help the student to uncover the compositional affects, intentions, and organizational principles of the music.

Example 2
From Bernstein and Straus *Concise Introduction* Workbook
(Uncorrected Proofs, p. 609), Stravinsky recomposition exercise.

In addition to their unfamiliarity with the repertoire, Straus noted that one of the main reasons why students struggle with post tonal theory is an over-emphasis on pitch class numbers. For many students, a numbers-based approach can make the analytical process seem cold, sterile, and removed from any kind of familiar music making process. As a solution, Straus recommended "de-mathifying" post tonal theory as much as possible, and suggested using traditional letter name terminology and symbology instead of numbers when applicable. For example, moving from letter names directly into pitch class numbers can be rather intimidating for a new post-

tonal theory student. A viable solution, Straus said, is to just continue using letter names and introduce pitch class numbers later in the class: "students may be less off-put when there are fewer numbers involved, and instead they still feel like they're still talking about music."

Conclusion

After a week of engaging presentations, hands-on activities, and lively discussions, participants left Amherst with new ideas to institute in their own classrooms and studies across the country. The workshops served as a forum for theorists of all backgrounds to exchange perspectives and questions, as well as an opportunity to build friendships and community within the field. As is director Gary Karpinski's goal, the conference provided participants with the opportunity to engage with scholars, students, and educators of all kinds in a uniquely intimate, fast-paced, and thoroughly enjoyable conference setting. On behalf of all the participants, the authors of this report wish to express their gratitude towards the esteemed guest speakers, and to the University of Massachusetts Amherst for hosting these workshops. We eagerly anticipate the next Workshops in Music Theory Pedagogy in the summer of 2022.

Works Cited

Benward, Bruce and Marilyn Saker. 2015. *Music in Theory and Practice*. Ninth ed. New York: McGraw Hill Education.

Burstein, Poundie L. and Joseph Nathan Straus. 2016. *Concise Introduction to Tonal Harmony*. New York: W. W. Norton & Company.

Gillespie, Jeffrey L. 2018. "Engaging First-Year Music Theory Students through UDL (Universal Design for Learning)." In *The Norton Guide to Teaching Music Theory*, ed. Rachel Lumsden and Jeffrey Swinken. New York: W. W. Norton & Company, 331-350.

Gordon, Edwin. 2012. *Learning Sequences in Music: Skill, Content, and Patterns*. Chicago: GIA Publications.

Huron, David. 2016. *Voice Leading: The Science Behind a Musical Art*. Cambridge, MA: MIT Press.

Karpinski, Gary S. 2000. *Aural Skills Acquisition*. New York: Oxford University Press.

Karpinski, Gary S. 2017. *Manual for Ear Training and Sight Singing*. Second ed. New York: W. W. Norton & Company.

Karpinski, Gary S. 1990. "A Model for Music Perception and its Implications in Melodic Dictation." *Journal of Music Theory Pedagogy* 4, (2): 191-229.

Krumhansl, Carol L. and Edward J. Kessler. 1982. "Tracing the Dynamic Changes in Perceived Tonal Organization in a Spatial Representation of Musical Keys." *Psychological Review* 89 (4): 334-368.

Lehrdal, Fred and Ray Jackendoff. 1983. *A Generative Theory of Tonal Music*. Cambridge, MA: MIT Press.

Quaglia, Bruce W. 2015. "Planning for Student Variability: Universal Design for Learning in the Music Theory Classroom and Curriculum." *Music Theory Online* 21 (1).

Straus, Joseph N. 2018. "Ten Tips for Teaching Post-Tonal Theory." In *The Norton Guide to Teaching Music Theory*, ed. Rachel Lumsden and Jeffrey Swinkin. New York: W. W. Norton & Company, 79–87.