Inverting Bloom's Taxonomy: The Role of Affective Responses in Teaching and Learning

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A teacher's passion for a subject can be infectious—as Robert Leamnson observes, "One of the surest ways for a student to develop interest is to 'catch it' from a beloved teacher."[1] John Dewey, perhaps the most influential American commentator on teachers and teaching, asserted that "a genuine enthusiasm is an attitude that operates as an intellectual force;" teachers who are able to transfer their enthusiasm to their students have "done something that no amount of formalized method, no matter how correct, can accomplish."[2]

While the professor's passion for a subject can be a clear goal for teaching, the student's passion for a subject is not an easily articulated goal for learning. It is difficult if not impossible to assess student engagement objectively, and while teachers might be comfortable insisting that students learn content, they are likely not going to insist that students *like* that content. Yet the relationships between learning and emotions, or affect, have long been the subject of study by scholars. Researchers have applied a variety of methodological and theoretical approaches,[3] investigated learners of different ages, and defined "affect" and "emotion" differently.[4] Nevertheless, as the editors of a 2002

1. Robert Leamnson, *Thinking About Teaching and Learning* (Sterling, VA: Stylus, 1999), 75.

2. *The Collected Works of John Dewey, 1882–1953*, ed. Jo Ann Boydston (Carbondale and Edwardsville: Southern Illinois University Press, 1969–1991), *The Later Works* 13:345 and 8:137, cited in Douglas J. Simpson, Michael John Brierley Jackson, and Judy C. Aycock, *John Dewey and the Art of Teaching: Toward Reflective and Imaginative Practice* (Thousand Oaks, CA: SAGE, 2005), 33.

3. Paul A. Schutz and Jessica T. DeCuir ("Inquiry on Emotions in Education," *Educational Psychologist* 37, no. 2 [2002]: 125–34) delineate three approaches that educational psychologists have applied to the study of emotions in education: inquiry into variables; inquiry into process and meaning; and socio-historical inquiry.

4. For convenience I will use the terms "affect" and "affective" interchangeably with "emotion" and "emotional." Theoretical literature in both educational psychology and brain sciences generally (though with some exceptions, e.g., Pekrun) distinguishes emotion, a short episode or state, from affective trait, a more generalized mood. See Erika L. Rosenberg, "Levels of Analysis and the Organization of Affect," *Review of General Psychology* 2, no. 3

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special issue of *Educational Psychologist* devoted to emotions and learning noted, "in terms of our understanding of emotions in education, the game is just getting started."[5]

Most teachers do want their students to come away from their classes with some appreciation for, even love of, the subject matter, but that goal is often implicit; it is more a desideratum, a potential side benefit, than an explicit objective. A reluctance to actively engage students' affective reactions likely stems from a belief that it is too peripheral or too "soft" a goal to have in rigorous academic inquiry: teachers feel that students are in class to learn about music, not to discuss their personal preferences or have teachers shape them.

The most recent research in brain science challenges this notion. While it has been well over a century since constructivists such as Dewey, Piaget, and Montessori advocated for and created learning environments that eschew the archaic "empty vessel" or "transmission" idea of learning, research now demonstrates that the brain does not form new connections—which is to say, learn—in the absence of feelings.[6] To cite just one example: the hippocampus, the structure in the brain's temporal cortex that serves as the place where incoming information is formed into a memory, directs its signals not only back to the cortex that surrounds it, but also, it seems, to nearby basal structures that serve as the brain's pleasure centers and to the amygdala, which monitors for fear or danger. Thus there is more than just a metaphorical truth to statements like "That feels right," or "I know it in my gut." As Antonio Damasio proposes, it is in part through such somatic markers—low-intensity

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(1998): 247–70. An excellent overview of the state of the field is Elizabeth A. Linnenbrink, "Emotion Research in Education: Theoretical and Methodological Perspectives on the Integration of Affect, Motivation, and Cognition," *Educational Psychology Review* 18, no. 4 (2006): 307–14. Useful summaries of the scholarship include Anastasia Efklides and Simone Volet, "Emotional Experiences During Learning: Multiple, Situated and Dynamic," *Learning and Instruction* 15, no. 5 (2005): 377–80; and Paul A. Schutz and Reinhard Pekrun, *Emotion in Education* (Amsterdam: Elsevier, 2007). Paul Schutz et al., "Reflections on Investigating Emotion in Educational Activity Settings," *Educational Psychology Review* 18, no. 4 (2006): 343–60 provides a useful, if specialized and highly detailed, definition of "emotion."

5. Paul A. Schutz and Sonja L. Lanehart, "Introduction: Emotions in Education," *Educational Psychologist* 37 (2002): 68.

6. Useful introductions to the connections between brain science and learning include James P. Byrnes, *Minds, Brains, and Learning: Understanding the Psychological and Educational Relevance of Neuroscientific Research* (New York and London: The Guilford Press, 2001); James E. Zull, *The Art of Changing the Brain: Enriching Teaching by Exploring the Biology of Learning* (Sterling, VA: Stylus, 2002); *The Jossey-Bass Reader on The Brain and Learning* (San Francisco: Jossey-Bass, 2008); and Daniel T. Willingham, *Why Don't Students Like School?* (San Francisco: Jossey-Bass, 2009). The term "brain sciences" is a general one that encompasses several specialized areas, the principal four of which are neuroscience, cognitive neuroscience, neurology, and psychiatry. See Robert Sylwester, "Alphabetized Entries from *How to Explain a Brain*," in *Jossey-Bass Reader*, 22.

sensations in the body generated by certain experiences—that the brain makes feelings an integral part of rationality.[7]

Since cognitive neuroscience now has evidence that "the mechanisms of cognition and emotion appear to be intertwined at all stages of stimulus processing," teachers of music history need not—and indeed should not—treat affective reaction to music as a "soft" or peripheral goal but should, on the contrary, place it at the center of their teaching practice.[8] In this essay, I propose that reuniting the affective purposefully with the cognitive breaks down the false dichotomy between thinking and feeling and increases learning. This principle applies not only to students but to teachers as well. Teachers' affective responses to the music they teach—not simply enthusiasm for the subject matter in general, but genuine feelings, positive or negative, about the repertoire encountered in class—can and should play an important pedagogical role, one that fosters students' intellectual growth, as well as their appreciation for the music they are learning about.

There are four sections to this essay. The first part considers some of the strengths and shortcomings of Bloom's Taxonomy as a model for music history teachers, proposing that we re-imagine its top-level cognitive component, Evaluation, as the foundational level of a process that reconnects the cognitive with the affective. The second part examines the role of students' affective responses in their learning, presenting David Perkins's notions of "what awaits" and "what hides" as a way to understand, engage, and give language to those affective reactions, especially dismissive or negative ones. In the third section, I turn to the importance of teachers manifesting to students their own emotional reactions to the music they teach. The final section turns more concretely to classroom practice and proposes that teachers cultivate empathic listening, the re-creation within themselves of the experience of an apprentice audience like their students. This kind of listening helps to reinvigorate repertoire that has become too familiar through over-use, and to model for students the kind of engaged and articulate listeners we hope they will become. Ultimately, getting students to "language" their listening experiences—applying in a directed way the technical or historical material that we typically think of as the content of a course—increases not only the relevance and immediacy of the material to students but also the likelihood that they will come to like, even love, the repertoire. Teachers can, in short, use students' incipient affective responses to heighten the sophistication and degree of both their cognitive engagement and their ongoing affective connection.

7. Antonio Damasio, *Descartes' Error: Emotion, Reason, and the Human Brain* (New York: Harper, 1995), esp. ch. 8; and *The Feeling of What Happens: Body and Emotion in the Making of Consciousness* (New York: Harcourt, 1999).

8. Elizabeth A. Phelps, "Emotion and Cognition: Insights from Studies of the Human Amygdala," *Annual Review of Psychology* 57 (2006): 46.

Bloom's Taxonomy and Its Inversion

The perceived divide between knowledge and emotion, between fact and feeling, is particularly well represented by the familiar and influential heuristic known commonly as Bloom's Taxonomy.[9] This taxonomy, subtitled "The Cognitive Domain," was the first of three handbooks envisioned by Bloom's committee, a group of psychologists interested in achievement testing. (A simplified schematic appears as **Figure 1a**). The second, published in 1964, is subtitled "The Affective Domain" (**Figure 1b**), while the even less-well-known third domain covers psychomotor skills.[10] These three discrete taxonomies consequently imply that learning is a process that occurs in one of three domains, and they permit very little overlap among them. In the second handbook, Krathwohl and his co-authors acknowledge the artificial distinction when they ask "whether a human being ever does any thinking without feeling, acting without feeling, etc.;" but because they are interested principally in the "evaluation of the attainment of affective objectives," they are able quickly to dismiss the concern with the observation that "the relationship between these domains is too low to predict one type of response, effectively, from the other."[11]

Yet despite the variety of criticisms that have been leveled at Bloom's Taxonomy[12] since its first appearance over half a century ago—including the claim that it is not a true taxonomy[13]—it has remained a staple of thinking

9. None of the taxonomies was the work solely of Bloom; he was, however, head of the group of psychologists who devised them, and is listed as Editor on the title page of the cognitive domain taxonomy, the first, most influential, and best-known of the three. Benjamin S. Bloom, ed. et al., *Taxonomy of Educational Objectives: The Classification of Educational Goals, Handbook 1: Cognitive Domain* (New York: David McKay, 1956), cited hereafter as *Taxonomy 1*.

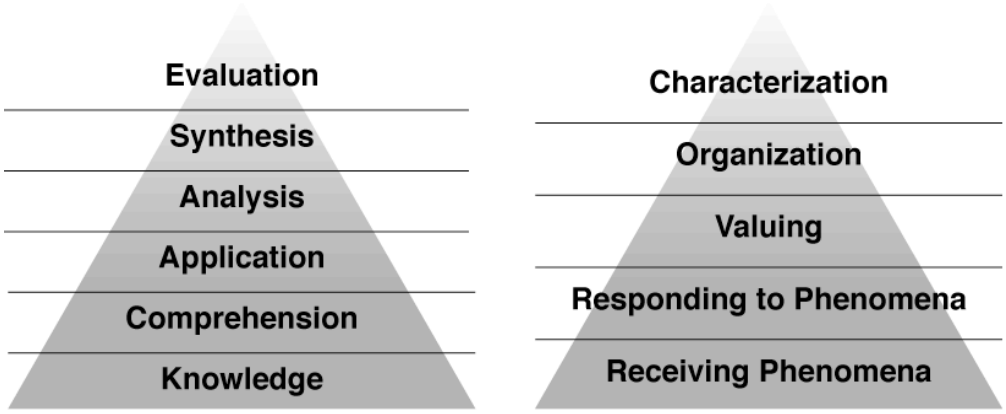
10. David R. Krathwohl, Benjamin S. Bloom, and Bertram B. Masia, *Taxonomy of Educational Objectives: The Classification of Educational Objectives, Book 2: Affective Domain* (New York: David McKay, 1964), cited hereafter as *Taxonomy 2*. No handbook for the psychomotor domain was published by the original group; as the 1956 volume summarized, "Although we recognize the existence of this domain, we find so little done about it in secondary schools or colleges, that we do not believe the development of a classification of these objectives would be very useful at present" (pp. 7–8). Since then, other authors have devised their own psychomotor domain handbooks to fill the gap, such as Anita J. Harrow, *A Taxonomy of the Psychomotor Domain: A Guide for Developing Behavioral Objectives* (New York: David McKay, 1972).

11. Krathwohl, Bloom, and Masia, *Taxonomy 2,* pp. 7, 15.

12. Following convention, I will use "Bloom's Taxonomy" to refer to the familiar cognitive domain heuristic. References to the affective domain model—the second of Bloom's committee's handbooks—will be clearly indicated as such.

13. The Affective Domain handbook acknowledged such criticisms, conceding that it "is still far from clear" whether the cognitive classification scheme "is a true taxonomy" (Krathwohl, Bloom, and Masia, *Taxonomy 2*, p. 11). For detailed criticisms, see C. P. Ormell,

Figure 1: Two domains of Bloom's taxonomy.
1a) Bloom's cognitive taxonomy. 1b) Bloom's affective taxonomy.



about teaching from K–12 through the post-secondary level, perhaps even more so than its 2001 revision.[14] Bloom's Taxonomy remains ubiquitous and enduring, a common language among educators across subjects and grade levels, even countries.[15]

Bloom's Taxonomy and its familiar pyramid as a model for thinking about learning and designing teaching strategies, however, bring with it the unfortunate consequence not only of divorcing thinking from feeling, but of

"Bloom's Taxonomy and the Objectives of Education," *Educational Research* 17, no. 1 (1974): 3–18; Edward J. Furst, "Bloom's Taxonomy: Philosophical and Educational Issues," *Review of Educational Research* 51, no. 4 (1981): 441–53, reprinted in *Bloom's Taxonomy: A Forty-Year Retrospective*, ed. Lorin W. Anderson and Lauren A. Sosniak (Chicago: National Society for the Study of Education, 1994), 28–40; A. E. Kreitzer and G. F. Madaus, "Empirical Investigations of the Hierarchical Structure of the Taxonomy," in Anderson and Sosniak, eds., pp. 64–81; and Robert J. Marzano, *Designing a New Taxonomy of Educational Objectives* (Thousand Oaks, CA: Corwin Press, 2000). Interestingly, Krathwohl ("Reflections on the Taxonomy: Its Past, Present, and Future," in Anderson and Sosniak, eds., pp. 181–202) posits that the word "taxonomy," as an "interesting and arresting name . . . seems likely to have been a contributing factor to its success," as the "use of this then unfamiliar term aroused curiosity among social scientists and educators who might otherwise have put the book aside" (p. 189).

14. Lorin W. Anderson et al., *A Taxonomy for Learning, Teaching, and Assessing: A Revision of Bloom's Taxonomy of Educational Objectives*, abridged ed. (New York: Longman, 2001).

15. As Dee Fink observes, "Any model that commands this kind of respect half a century later is extraordinary" (L. Dee Fink, *Creating Significant Learning Experiences* [San Francisco: Jossey-Bass, 2003], 29). The first handbook sold over a million copies and was translated into several languages. See, e.g., Arieh Lewy and Zoltán Báthory, "The Taxonomy of Educational Objectives in Continental Europe, the Mediterranean, and the Middle East," and Bom Mo Chung, "The Taxonomy in the Republic of Korea," both in *Bloom's Taxonomy: A Forty-Year Retrospective,* ed. Anderson and Sosniak, pp. 146–63 and 164–73. For a useful brief history of the legacy of Bloom's Taxonomy, see Marzano, *Designing,* pp. 2–4.

conceiving of learning as an orderly step-wise ascent that culminates in Evaluation.[16] Instead, we must heed the growing body of research that demonstrates a clear connection between emotions and learning. This connection is not news to teachers, of course. Joseph Schwab, a colleague of Benjamin Bloom at the University of Chicago, observed more than half a century ago that "Differentiation of the intellective, active, and aesthetic has its place in philosophical analysis and as a heuristic ground for psychological research, but it is a dangerous doctrine for the liberal educator."[17] Recent research in the brain sciences substantiates this intuition, concluding that "plasticity in the brain probably depends more on signals from the emotional centers than it does on new sensory input"—that is, emotions change the brain more readily than does information that the brain takes in through sight, hearing, and the other senses.[18] (A more extensive summary of the recent research on emotion and learning is found in Appendix A.)

Nevertheless, a review of the literature on emotion and learning reveals that little has been written explicitly connecting theories of affect and learning to what teachers do in their classrooms. Reinhard Pekrun and his colleagues have done considerable work on emotions and learning, but the classroom implications that they propose—improving the quality of instruction, giving students autonomy, etc.—are directed toward shaping students' emotions positively towards learning itself, not the subject matter.[19] Other research calls some attention to teachers' emotions, but it does so only in terms of a potential incongruity between emotions experienced and those that are pedagogically efficacious, such as when one's goals as a teacher do not match with one's

16. Marzano (*Designing*, p. 8) notes that such a hierarchical progression of learning is not supported by any research. In Anderson et al.'s revision of Bloom, Evaluation and Synthesis switch places so that Synthesis—renamed "Create"—is at the apex (pp. 84–8). This revised category embraces more kinds of tasks than did the original Synthesis, but it continues to comprise strictly cognitive processes (generating, planning, and producing). The authors do note (in a section titled "Unsolved Problems") that Bloom et al.'s division of educational objectives into three domains—cognitive, affective, and psychomotor—has been "justly criticized," since "nearly every cognitive objective has an affective component." Nonetheless, they concede that, with the exception of recognizing metacognition, their revision "ignores this problem" (pp. 258–59).

17. Joseph Schwab, "Eros and Education: A Discussion of One Aspect of Discussion," *The Journal of General Education* 8, no. 1 (1954): 52. The essay is reprinted in *Science, Curriculum, and Liberal Education: Selected Essays*, ed. Ian Westbury and Neil J. Wilkof (Chicago: University of Chicago Press, 1978), 105–32.

18. Zull, *The Art of Changing the Brain,* 225.

19. Reinhard Pekrun et al., "Academic Emotions in Students' Self-Regulated Learning and Achievement: A Program of Quantitative and Qualitative Research," *Educational Psychologist* 37, no. 2 (2002): 91–106; and Pekrun, "The Control-Value Theory of Achievement Emotions: Assumptions, Corollaries, and Implications for Educational Research and Practice," *Educational Psychology Review* 18, no. 4 (2006): 315–41.

perceived success in progressing toward them.[20] Even less research addresses these topics for post-secondary teachers. How, then, might we bring these connections between the affective and the cognitive to bear on the college-level music history classroom?

Dee Fink's "taxonomy of significant learning" provides an important starting point for integrating domains of learning.[21] (See **Figure 2.**) Several of its six categories are identical to or evocative of aspects of Bloom's cognitive taxonomy: "Foundational Knowledge," for example, includes a student's ability to recall basic facts, while "Application" asks students to take action. The category "Caring," meanwhile, is more clearly affective, representing students developing new feelings or values, such as caring more about ideas, other people, or learning itself.[22] At the same time, Fink's taxonomy also comprises "important kinds of learning that do not emerge easily" from any of the three domains that Bloom delineated, such as "leadership and interpersonal skills, ethics…tolerance, and the ability to adapt to change."[23]

Fink's model is significant for the attention it focuses on a fully integrated learning experience for students (though some teachers might question whether all college courses can plausibly be expected to integrate all six of its categories). As it is, quite reasonably, predicated on the notion of "backward design," in which delineating learning goals is the first step in course design, it views "Caring" as a learning goal.[24] There is no doubt that this is vital, a goal that we as teachers implicitly or explicitly strive to attain. But I would like to propose that music history teachers can and should view caring as much as a starting point as a final goal, since, in the music history classroom, caring is coterminous with both foundational knowledge and the application of that knowledge. (I will return to this idea below.) In short, we should focus less on integrating caring with knowledge and more on making more explicit use of the unity that is already present in our students.[25]

20. Paul Schutz et al., "Reflections on Investigating Emotion in Educational Activity Settings," *Educational Psychology Review* 18, no. 4 (2006): 343–60.

21. José Antonio Bowen discusses Fink's book in his "Six Books Every College Teacher Should Know," *Journal of Music History Pedagogy* 1, no. 2 (2011): 177–8; http://www.ams-net.org/ojs/index.php/jmhp/article/view/23/35.

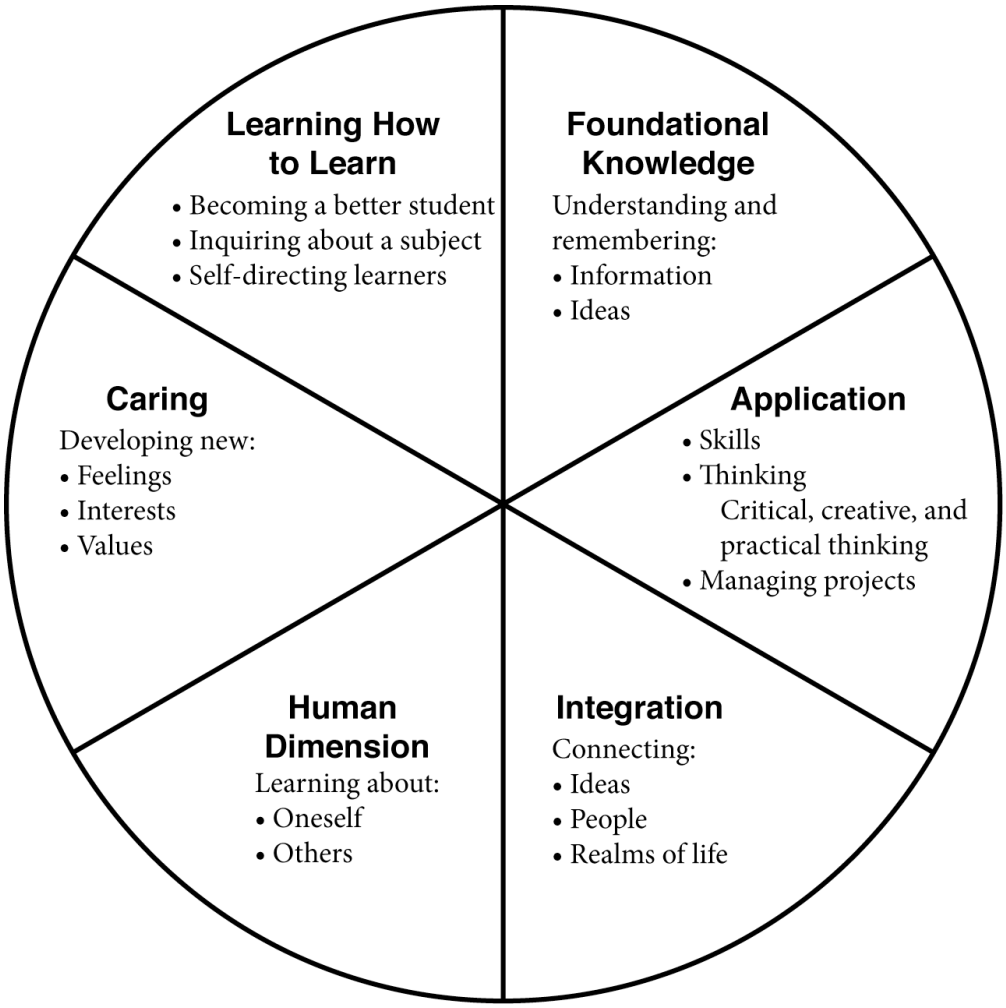
22. Fink, *Creating*, 48–9.

23. Fink, *Creating*, 29.

24. "Backward design" was coined in Grant Wiggins and Jay McTighe, *Understanding by Design*, expanded 2nd ed. (Alexandria, VA: Association for Supervision and Curriculum Development, 2005).

25. This unity is one of what Fink terms "situational factors," the examination of which is the first step in his plan for designing curricula.

Figure 2: Fink's taxonomy of significant learning.[26]



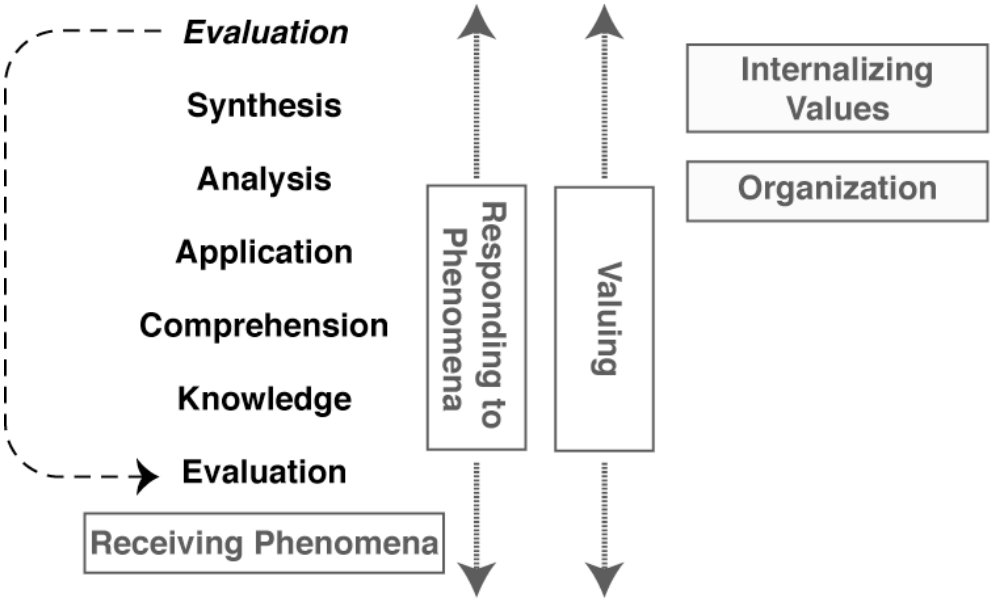
Bloom and his co-authors, as noted above, were aware of this unity, but it was considerably downplayed. The second handbook (the affective domain) notes the "Fundamental Unity of the Organism" and delineates ways in which the cognitive and affective domains overlap.[27] Unsurprisingly, however, the junctions occur at the same levels of the taxonomies: the highest level of the cognitive domain, Evaluation, overlaps with the highest levels of the affective domain, Organization and Characterization. What is more, the affective domain recognizes as a discrete step in the taxonomy a student who "[d]esires to evaluate works of art which are appreciated," but this is predicated on earlier levels in the hierarchy; the affective desire to evaluate works aesthetically

26. Fink, *Creating*, 30.
27. Krathwohl, Bloom, and Masia, *Taxonomy 2*, 45.

is thus seen as a step roughly halfway up the affective scaffolding.[28] The evaluative process itself remains at the apex of the cognitive model because it is "at a relatively late stage in a complex process which involves some combination of all the other behaviors" in the cognitive hierarchy.[29] *Wanting* to evaluate and *being able to* evaluate are mismatched tasks, it seems.

But music history classes offer ample opportunity to resolve the disjunction between wanting to evaluate and being able to evaluate by imagining an inversion of Bloom's taxonomic pyramid—or at the very least, a pyramid in which the upper story is moved to the foundation. (**Figure 3** illustrates this inversion and its union with the affective domain.) Building mechanisms for personal engagement into course structures helps to re-conceive the function and practice of the Evaluation level and thereby rescue it from its exile in the cognitive realm. After all, we hear and react—receive and respond—to music viscerally. Might we turn the inevitable and welcome affective act of responding to music into something we can harness to foster greater cognitive engagement?

Figure 3: Integration of cognitive and affective domains (affective domain elements in boxes).



28. Krathwohl, Bloom, and Masia, *Taxonomy 2*, 66.
29. Bloom et al., *Taxonomy 1*, 185.

Music History Students as Affective Learners

Designing classes with students' affective responses in mind helps at the outset by providing a ready-made object for student engagement. Teachers typically pique student interest in a topic in one of two ways. The first is by introducing unique or novel learning situations, such as a film clip or a performance. This is effective, but it is often difficult to sustain interest in the learning task that follows. Alternatively, teachers can strive to link the subject to students' individual interests; the obvious challenge, though, is that "there are as many individual interests as there are students."[30] However, students' affective responses to the music they encounter in music history classes—whether they listen to it in or out of class—can serve as the foundation for individual interest, especially if teachers make explicit to students that their reactions to the repertoire are important, that these responses are something that they should be aware of and will be a subject of class discussion.

If the affective responses of students pave the way for each one individually to be engaged with the same pieces of music, each student can then be called upon to use the same set of intellectual tools and information to articulate his or her own personal affective evaluation of the works. Such an approach validates the fact that all but the most disengaged listeners have *some* affective reaction to music; it pushes students beyond the affective tendency merely to "receive and respond" and instead joins it with a cognitive engagement with the material. In this way, it is a form of active learning, the now familiar premise that learners learn best when actively discovering material rather than passively absorbing (or, in many cases, not absorbing) it.[31] It is perhaps more than a happy coincidence that emotion is often defined as a "tendency to act."[32]

To compellingly articulate one's affective reaction to a particular musical moment, one needs a technical vocabulary and an understanding of the

30. Mary Ainley, "Connecting with Learning: Motivation, Affect and Cognition in Interest Processes," *Educational Psychology Review* 18 (2006): 401–2.

31. After appearing in a now-seminal list of "Seven Principles for Good Practice in Undergraduate Education" (Arthur Chickering and Zelda Gamson, *AAHE Bulletin* 39, no. 7 [March 1987]: 3–7), active learning was the focus of considerable research in the 1990s. Although the term has occasionally been misinterpreted to suggest that learners should be *behaviorally* active, Chickering and Gamson intended it to refer to *cognitive* activity. A wealth of research has confirmed that active strategies, in which students are "actively engaged in processing information in new and personally relevant ways and, in a very real sense, 'constructing' their own knowledge," are more effective than passive ones, such as most—but by no means all—lecturing. See Ernest T. Pascarella and Patrick T. Terenzini, *How College Affects Students, Volume 2: A Third Decade of Research* (San Francisco: Jossey-Bass, 2005), 101.

32. James Zull notes that the phrase "is found in discussions of emotion over the past century, possibly beginning with William James," and continues to show up in current scholarship (*From Brain to Mind* [Sterling, VA: Stylus, 2011], 78, n. 1).

work's historical context. (The level of sophistication and detail will of course vary with the level of the class.) For example, explaining the ominous intensity of "O Fortuna" from Carl Orff's *Carmina Burana* would likely require a discussion of ostinato; the surprising resolutions in early music invite a lesson on double leading-tone cadences; the opening of Richard Strauss's *Also Sprach Zarathustra* might lead to a diagram of the harmonic series, a discussion of Nietzsche, or both. Regardless of the level of the student, however, we foster learning when we predicate the application of terminology and research on the idea that speaking reflectively requires acknowledging, and then getting beyond, our first impressions. As Jeanette Winterson observes, "If the obvious direct emotional response is to have any meaning, the question 'Do I like this?' will have to be the opening question and not the final judgement."[33] The leap from "I don't like that" to "I don't like that *because* . . ." is a significant one.

David Perkins's work on the role of art in education provides a helpful framework to guide us in putting this theory into practice. Perkins's *Intelligent Eye: Learning to Think by Looking at Art* is concerned primarily with the visual arts, but the principles it espouses are readily applied to the study of music.[34] Like Howard Gardner, his colleague in the Harvard School of Education's Project Zero, Perkins is interested in different types of intelligence; unlike Gardner, however, Perkins eschews a complicated scheme of multiple intelligences in favor of a simple triad: neural intelligence, experiential intelligence, and reflective intelligence, with experiential and reflective intelligence serving as the basis of his work.[35]

Experiential intelligence consists of the intelligent behaviors that depend on "a rich repertoire of experience that fairly automatically and spontaneously guides us."[36] It is evident in the ease practiced drivers have navigating a busy highway, in expert chess players' ability to respond to dozens or hundreds of game scenarios, and in music historians' ability to identify with just a few seconds of music the century in which a piece was composed. We use our

33. Jeanette Winterson, *Art Objects: Essays on Ecstasy and Effrontery* (New York: Vintage, 1997), 14.

34. David N. Perkins, *The Intelligent Eye: Learning to Think by Looking at Art*, Getty Education Institute for the Arts Occasional Paper 4 (Los Angeles: J. Paul Getty Trust, 1994).

35. Though Gardner was not the first to compile a list of human abilities, it was his research and publications in the 1980s that generated substantial interest among educators. His most recent work on multiple intelligences is *Multiple Intelligences: New Horizons* (New York: Basic Books, 2006). Perkins's approach is concisely summarized in *The Intelligent Eye*. Neural intelligence, "the contribution of the efficiency and precision of the nervous system to intelligent behavior," is the kind of intelligence measured by traditional IQ tests. While neural intelligence "provides the substrate against which experiential intelligence and reflective intelligence play themselves out," experiential intelligence is "the bread and butter of our ongoing experience" (pp. 13–15).

36. Perkins, *Intelligent Eye*, 14.

experiential intelligence ninety percent of the time because it is an efficient way to respond to the familiar situations we encounter on a day-to-day basis.

The problem with experiential intelligence, however, is that it can lead us astray when we find ourselves in situations that find no parallel in the collective wisdom of our individual experiences, what Perkins calls intelligence traps. These four traps—ways of thinking that are misleading or insufficient—are those that are *hasty*, *narrow*, *fuzzy*, or *sprawling*. They are summarized in **Figure 4**.

Figure 4: Perkins's "intelligence traps."

Kind of Thinking	Description	Example
Hasty	Arrives at conclusions without appropriate deliberation; impulsive.	Concluding that atonal music consists of random pitches with no structure.
Narrow	Uses familiar or well-worn categories or tracks; ignores the possibility of other ways of understanding.	Difficulty understanding how a medieval motet might harness the secular in service of the sacred.
Fuzzy	Undiscriminating; fails to sort out details.	Concluding that all hip-hop is the same.
Sprawling	Jumps around haphazardly without a systematic inventory of the larger picture.	Drawing broad conclusions about symphonic form based on only one or two examples.

This view runs explicitly counter to the oft-heard assertion that "I don't know a lot about art (or music or dance), but I know what I like." In fact, Perkins would argue, such audiences do *not* know what they like because they do not know what they are looking at, or because they are looking at only the most superficial elements of an artwork in an un-nuanced way. As Perkins summarizes, "When we turn to works of art from other times or cultures, or from less familiar cultural enclaves within our own, we expect an easy entry for which we are ill-prepared. We often blame the work for obscurity when it is we who are uninformed."[37]

This is equally true of music. Students who have never heard Arnold Schoenberg's *Pierrot lunaire* before will provide post-listening assessments such as "I like it," "I don't like it," "It's boring," or "I don't get it," since knee-

37. Perkins, *Intelligent Eye*, 25–6.

jerk reactions like these are the very picture of hasty thinking; they are usually (but not always) evidence that listeners are not aware of what awaits and what hides. But dismissing affective reactions out of hand also dismisses two meaningful opportunities: the chance to acknowledge the students' affective, emotional engagement as a means of fostering a cognitive one; and the chance to lead students in practicing reflective intelligence.

Perkins's language, then, offers a way to articulate to students what it is teachers ask them to do when they listen to music: in order to respond to music in a way that is neither hasty, narrow, fuzzy, nor sprawling, students must have a significant and sophisticated understanding of "what awaits" and "what hides," and their ability to express those understandings will require a specialized vocabulary and critical tools. Just as Winterson describes the shock of finding out that she did not know "how to look at pictures, let alone how to like them,"[38] so too do students' affective responses become more sophisticated the more they know about the music they are hearing—as they learn how to listen—and they are likewise more motivated to deepen their understanding—they learn how to like—when it is driven by a desire to articulate their affective responses.

In my experience, music students readily latch on to the notions of "what awaits" and "what hides," and the terms become useful shorthand for forestalling responses that are hasty, narrow, fuzzy, or sprawling. A negative affective response does not necessarily imply a lack of thinking on the part of the listener, but it is not enough simply not to like a work (nor, conversely, merely to like it). Students may dislike *Pierrot lunaire*, but if they can describe in persuasive detail *why* they do not—identifying, for example, the *Sprechstimme* and comparing it to earlier uses by Schoenberg and Humperdinck, or relating the piece to Expressionist painters and poets—then the affective becomes the jumping-off point for cognition and reflection. What is more, the process of articulating in musical terms a description or rationale of that dislike will very often lead students to discover that they *do* like the piece, and, like Winterson, simply did not know "how to like" it before.

I am not suggesting that students need a fundamentally new or different way of listening. On the contrary, I am proposing that teachers harness students' listening experience to give form, shape, and purpose to their cognitive experience of examining the work. After all, our default way of hearing music is not one that focuses on formal structures, historical antecedents, or specific harmonic events. This affective response—what Perkins would call the "experiential"—is the very core of what it means to listen to music. When we can marry this emotional response to intellectual reflection, we provide a scaffold on which to hang the cognitive "content" of a course. The critical

38. Winterson, *Art Objects*, 10.

thinking—what Perkins would call "reflective"—becomes a way of cultivating genuine interest, because it is directed towards students' emotional responses. The *nature* of students' experiential listening will not fundamentally change (nor should we really want or expect it to); except in the rarest of cases, they will not, for example, discern sonata form or Schenkerian linear progressions of the deep middleground or background. But the *quality* of students' listening, as well as their interest in it, can be increased when we tie it purposefully to their affective responses.

To cite another example, listeners who hear Stravinsky's *Sacre du printemps* with no prior knowledge will most likely find it confusing, or cacophonous, or energetic, or wonderful. Knowing something of Stravinsky's compositional method, the incorporation of folk melodies, the piece's programmatic aspects, Nijinsky's choreography, or the legendary riot that accompanied its premiere helps to uncover some of "what hides." Repeated listenings will likewise start to disclose some of "what awaits." It is a commonplace for those who teach music history that the opening notes of Stravinsky's *Sacre*, high in the range of the bassoon and thus intentionally strained and off-putting, are noteworthy; to students unfamiliar with the piece, though, this may not be immediately apparent.

Our instinct as teachers is to short-circuit this process of uncovering "what hides" and "what awaits," jumping directly to delivering the fruits of such inquiry as the content of a lecture. This is understandable, to be sure, because we ourselves find it fascinating, because we routinely engage in this kind of analysis, and because it is simply more expedient to do so. But building space into our classes for our students to perform this process, with their initial affective reaction as a jumping-off point, can help to frame the process of learning the material in a way that makes it deeply relevant, without sacrificing the rigor of the intellectual inquiry. And because such inquiry helps students to "learn how to like" music that might otherwise be intimidating or challenging, we also help to build a passionate and engaged audience for the repertoire we teach.

Music History Teachers as Affective Teachers

Music history teachers' affective responses are just as crucial to learning as those of their students. First, teachers who manifest their own emotional connections present a vital model to students. Students accustomed only to popular music may have never witnessed an entirely different repertoire—whether that is Perotinus or Mozart, Mingus or Cage, string quartet or gamelan—provoking an emotional response in anyone, let alone evoking one in themselves. Teachers' genuine affective responses illustrate to students that an emotional engagement with the music is welcome and, moreover, expected.

This becomes crucial when teachers solicit students' affective responses as part of their classroom practice.

What is more, research demonstrates that such enthusiasm has a strong positive effect on classroom atmosphere and learning.[39] Those teachers who make clear their zeal for the music make strides towards what is perhaps the most sought-after effect among music historians: getting students to like the repertoire. As Robert Leamnson points out, we do not need our students to work hard in order to please us personally; what we really want is for students to "find out what it is that some teacher finds so interesting."[40] If music history teachers want students to respond affectively and develop a love of the music, then the teachers too must make their emotional responses manifest, or else risk being viewed as inauthentic or insincere. Revealing affective responses also demonstrates what Stephen Brookfield has termed "personhood"—"the perception students have that their teachers are flesh and blood human beings with lives and identities outside the classroom."[41] Teachers who enthusiastically engage with music on an emotional level—even if that engagement is more lukewarm with some works than with others—thereby acquire a credibility and authenticity that reinforces their authority in discussing music at all.

Indeed, this authority is a second important reason for teachers to manifest their affective reactions: doing so substantiates the idea that the music we teach in our classes (as distinct from the music that our students listen to on a day-to-day basis) is an object deserving of study and consideration. Most students probably do not listen regularly to the music that is the focus of their music history classes, but they are likely listening to music of some kind nearly all of the time. This means that teachers of music history are in a different position from the teachers of art history who are the subject of Perkins's work.

Put very simply, most students already care about music (even if they only ever listen to pop music written in the last decade). Music, much more so than other forms of artistic expression, is ever-present in students' day-to-day lives. It has become a particularly powerful marker of identity for college-age students, thanks in large part to portable music players that contain thousands of songs, the near-instantaneous availability of digital music, and the advent of services that aim to introduce users to new music based on their responses to recommendations. Liking certain artists and not others can signify something far more than a mere enjoyment of that artist's work, as genres and

39. For a summary of research on teacher enthusiasm, see Appendix A.

40. Leamnson, *Thinking*, 75.

41. Stephen D. Brookfield, *The Skillful Teacher: On Technique, Trust, and Responsiveness in the Classroom*, 2nd ed. (San Francisco: Jossey-Bass, 2006), 71–2.

artists each bear their own implications for their fans' musical, social, and even political identities.[42]

This is also true, to a degree, with Western art music, but for today's college students, having an affective response to a piece of music has come to be freighted with a significance far greater than what we might imagine. The music one listens to is a constituent part of oneself, of course, but in an environment with so many musical options competing for listenership, the converse is also true: through our listening and our enjoyment, we lend credibility and status to whatever it is we listen to. Thus, because tastes in music are so intimately tied to identity, teachers who fail to acknowledge any personal engagement with the works they teach risk sending to students the signal that the music is *important* but not necessarily *good*. When they allow their own enjoyment or disfavor to be manifest, on the other hand, they bestow authority and value on that repertoire purely by virtue of that response. They demonstrate that reacting to music on an emotional level does not in any way distance them from a cognitive, intellectual engagement with it.

This is especially important because students tend to believe that they already understand music. For music majors, in fact, musical aptitude is such a defining characteristic that "[a]ny perceived assault on their appearance as musicians is a threat to both their personal and communal identities,"[43] though the ubiquity of music (compared to, e.g., fine art and dance) means that this belief exists among non-majors as well. Teachers should capitalize on this situation, to be sure, keeping in mind that the misconceptions students bring into the classroom are often more of an impediment to learning than is mere lack of knowledge, since it takes considerable effort by both teacher and learner to undo existing neural pathways and then build new ones. Students who come to class expecting to approach, listen to, and discuss Western art music with the same tools and expectations with which they approach popular music are likely to be surprised, frustrated, or both; this is what can lead to hasty, narrow, fuzzy, or sprawling assessments like those Perkins describes.

This is a genuine concern if we want out students to leave our courses not only understanding the historical significance of the music we teach, but liking—even loving—it. When teachers approach repertoire in their courses,

42. See, e.g., David J. Hargreaves and Adrian C. North, "The Functions of Music in Everyday Life: Redefining the Social in Music Psychology," *Psychology of Music* 27, no. 1 (1999): 71–83 and Tia DeNora, "Music and Self-Identity," in *The Popular Music Studies Reader*, ed. Andy Bennett, Barry Shank, and Jason Toynbee (London and New York: Routledge, 2006), 141–47.

43. James A. Davis, "Classroom Discussion and the Community of Music Majors," *Journal of Music History Pedagogy* 1, no. 1 (2010): 10; http://www.ams-net.org/ojs/index.php/jmhp/article/view/8/6. Davis is here summarizing Bruno Nettl's conclusions in his ethnographic study of schools of music, *Heartland Excursions* (Champaign: University of Illinois Press, 1995).

they therefore need to make listening at once an activity students have never done in quite the same way without making it so strange that it is alienating. This is a fine line, to be sure. Teachers must avoid what Simon Frith calls the "error in high cultural attitudes toward low music," namely, "the condescending assumption that popular listening describes a quite different sort of experience" from listening to art music, while still making clear that, by and large, the context, expectations, and terminology used to describe the classical repertoire are typically quite different from those of popular music.[44] Students must know that their initial affective responses are valuable, but that those responses are necessarily provisional because they are still apprentice listeners (at least with this repertoire). Teachers therefore need to listen like a student *and* a teacher, crafting a classroom narrative in which they simultaneously empathize with—almost re-creating, in effect—the experience of a first-time listener, while still foregrounding the wisdom and insight that comes with years of experience.

It can be tricky to re-create the experience of a first-time listener, particularly if we are teaching a repertoire we do not especially care for, or—more likely—if our teaching repertoire has grown too familiar. Familiarity, while perhaps not always leading directly to contempt, can temper our enthusiasm in ways barely perceptible to us but perfectly evident, even if in only a sublimated way, to students. Canonizing a work of art, as Winterson observes, "is one way of killing" it, as "history, popularity, association all crowd in" and block out the work from its audience.[45] Winterson's remark likely resonates with anyone who has ever presented Monteverdi's *Cruda Amarilli* as an illustration of the *seconda prattica* or the prelude to *Tristan und Isolde* as a demonstration of chromatic harmony. There is an insidious process by which teachers may gradually start to view some music—likely the music presented most often in classes—principally as paradigmatic or emblematic of a concept, genre, or period, rather than as works of art that have an appeal on a purely emotional level.

If too great a sense of familiarity is, as Winterson suggests, one way of killing our interest in the canon we have created, then making the familiar unfamiliar, listening to and speaking of a piece of music as if we were encountering it for the very first time, is the way to reinvigorate those pieces and validate them as objects worthy of both deep admiration and study: they become both important *and* good. It is impossible, of course, to un-hear a piece of music; the "Surprise" Symphony surprises only once. But it is one thing to explain the surprise and then play a recording, another thing to play it, react to it, and then seek student responses. In fact, students' affective responses

44. Simon Frith, *Performing Rites: On the Value of Popular Music* (Cambridge: Harvard University Press, 1996), 252.

45. Winterson, *Art Objects*, 12.

can have an important benefit for teachers, reminding teachers how it is to hear the music as a first-time listener. Focusing on student responses makes teachers into more empathic listeners.

A music history classroom grounded in affective responses can thus achieve several desirable outcomes for both students and teacher by harnessing the inherent interest and emotion that music generates. When integrated purposefully and thoughtfully, students' affective responses can help to reinvigorate for teachers a well-worn piece and serve as a springboard for complex and in-depth discussion. Even if the class is a survey of plainchant or Indian music, in which the chronological and/or geographical focus is so distant from the here-and-now, teachers do not need to generate the experience of caring among their students as much as germinate it, bringing forward and harnessing that emotional connection. By making clear to students that they are not yet expert listeners, teachers build on students' natural affinity for music and ensure that the illusory certainties of apprentice listening—most typically a conviction that they do not like a piece—do not prematurely preclude the possibility that they will come to love the repertoire. Such an approach does not require that teachers re-envision their identity as educators, but it does necessitate re-thinking some of their teaching behaviors, such as the way they conduct discussions or craft a syllabus and assignments.

Teaching with Affective Responses

A classroom that purposefully strives to integrate students' emotions will use both teacher's and learners' affective responses as a scaffold to support the material of the course. The teacher's commitment to this principle should be laid out clearly early in the course. (A sample syllabus note appears as Appendix B.1.) Many students will have never experienced a teacher repeatedly asking them to limn in detail the feelings that a work of art evokes in them, so it is best to prepare students for this ongoing task early on. It is also important to insist that the mere act of having and describing an emotional response is not the main work of the course, but a crucial way of approaching the repertoire in a way that makes it more meaningful and more likely to create a new group of appreciative listeners. I have found it helpful to state outright that I want students to like the music, and that my asking them about how they feel is part of the process. At the same time, I insist that students' grades will be based ultimately only on externally observable acts—those represented by Bloom's cognitive taxonomy—and not on internal states that could only be self-reported. In a simple assignment that asks for affective responses (such as parts (a) and (b) of Appendix B.2), a grade would be assigned not on whether the affective response was "right," but instead on a student's clarity and effort in articulating it.

It might seem odd, initially, to make such "low-risk" assignments a central part of one's pedagogy; I cannot say that the feelings that Beethoven's "Moonlight" Sonata evokes in you are incorrect and thus subject to a lower grade than another person's "correct" response. But the point of incorporating emotion into the classroom is not to ensure lock-step conformity among listeners' reactions to music. It is to encourage, systematically, the kind of impassioned listening among students that teachers experience themselves. It generates for students an experience about which they want to talk, thus offering a rationale for grappling with the unfamiliar material that will permit them to describe and discuss the music with more sophisticated vocabulary, a greater understanding of historical context, and so on: the ostensible content of the course. The importance of this effort is reflected not by assignments that expect a specific affective response, but by assignments that expect diligent and genuine engagement on the part of students.

Thus the overarching framework for incorporating affect into a music history classroom consists of three principal acts: (1) teachers elicit students' affective responses to a given piece of music; (2) teachers foreground their own affective responses; and (3) teachers turn to technical and historical material as a way of helping students to "language" their listening. Each of these three components can unfold in a variety of ways and at a variety of levels, and they need not occur in the same order every time, nor in the order listed above.

Eliciting Student Responses

Since the content of students' affective responses is not subject to any formal assessment—that is, we are not going to judge or grade them—they offer a low-stakes way of starting a dialogue and of piquing student interest. Class discussions, brief response papers, and online discussion forums all offer opportunities for students to answer open-ended questions about the kinds of reactions they have to a piece; the sample assignments in Appendix B.2–B.5 each illustrate different ways of soliciting these responses. Depending on the course, the students enrolled, and the week of the term, the degree and kind of this response will differ. Compare, for example, the questions in B.2 (a) and (b), which are fairly simple and form the bulk of the assignment, with the first question in B.4, in which the emotional response is only the first step in a much longer inquiry.

We must keep in mind, of course, that depending on the work and the particular students in question, the responses might be indifferent or unsophisticated: "It's pretty," "I liked it," "It's okay," and so on. Teachers must resist the temptation to simply collate the responses and move on, or to tear out their hair in frustration at the lack of sophistication they seem to exhibit. For this reason, in-class discussion of these initial responses is important. This

discussion might follow up on a short out-of-class assignment such as Appendix B.2 or engage student responses offered on the spot. The dialogue gives the teacher the opportunity to push students on their affective descriptions (which, early on, are often not even affective at all, but instead more generic labels). Students might describe Bach's Brandenburg Concerto No. 1, on first listening, as "pretty," and while this might not be the most urbane description, it is a place to start. Instructors could pick up this adjective and elicit more specificity: what emotions does this "pretty" piece evoke? Does it elicit feelings of joy, reverie, elation, contentment, nostalgia? Does it trigger the same emotions as other "pretty" pieces, such as "Maria" from Bernstein's *West Side Story,* or Barber's *Adagio for Strings*, or The Beatles' "Yesterday"? (The specific points of comparison matter less than the fact that they evoke different affective responses, despite all being aptly described as "pretty.") The point of this discussion, once again, is to make clear to students that they can be open to the same potential emotional responses when listening to an unfamiliar repertoire as to a familiar one, and that their initial reactions, while genuine and real, nonetheless leave room for more detail and nuance. Those reactions may also change significantly over time.

Foregrounding a Teacher's Affective Responses

Teachers can foster an even more productive classroom when they do not simply moderate the dialogue but actively participate in it. When teachers provide a context and history of themselves as listeners, they make their personhood—and thus their credibility and authority—manifest. Moreover, teachers who embrace the opportunity to join in the dialogue with their students about affective reactions can better resist the feeling of "This piece again?" that can undermine their enthusiasm. Though teachers may play the same Haydn symphony one semester after another, and even though the students' responses might always be basically the same, the very act of soliciting those responses gives teachers the chance to witness new listeners responding. They develop empathic listening.

Empathic listening serves as an entry point for those students whose initial reaction to a piece of music is the dreaded, but common, "I don't like it" or "it's boring." Stravinsky's *Sacre* is an apt example. In my experience, students are not quite sure what to make of it after hearing it for the first time. They often seem to find it as scandalous as the Parisians of 1913, and I envy their not knowing, as I do, the precise placement of the accents in the famous rhythmic block chords of "Les augures printaniers" ("Augurs of Spring"). Students are rarely shy about sharing their affective experiences of listening to the *Sacre*, and they vary considerably: some are immediately put off, while others, perhaps perceiving it as edgy or subversive, are inclined to like it.

In any case, as the teacher I can reassure students that one can come to like, even love, a "difficult" piece, and I do this simply by sharing my own experience with the *Sacre*, which began with dismay and incredulity and gradually transformed into reverence. I do not want to make my experience central to the class, but if I take just a minute to offer this story I can help students know that their own listening "journeys" are not categorically different from my own. It also offers a point of contact between students and teachers who are striving to listen empathically, presenting opportunities for a shared experience. In my expereince, students like knowing that a particular passage evokes in me the same emotions that it does in them.

I am assuming here, of course, that our first encounters with "difficult" works, like those of our students, were not uniformly positive; but even if they were, it would still be incumbent on us to imagine empathically a first encounter that was more ambivalent or negative. Doing so recognizes that coming to love and appreciate music is a *process*, not a discrete event. It gradually erodes the viability of students claiming that their own dislike of, or lack of interest in, the material at hand is an immutable situation that therefore excuses their lack of engagement with it. What is more, teachers can insist through their own example—even exhortation—that students can and should try to like or love (not merely appreciate) the repertoire.

"Languaging"

Discussing affective responses necessarily involves language. It might seem so trivial as not to need mentioning, but re-creating with words the process of hearing a work is a crucial step for the novice listener, and can be a challenge even for an experienced ear. As Frank Sibley observes, "Grasping meaning more than superficially certainly means noticing a good deal of what goes on, not just, say, the melody. But we would hardly try to articulate or describe to ourselves everything we hear as it goes along."[46] Reflecting on and describing affective responses *after* listening, however, gives students, particularly novice listeners, a direct and concrete way to revisit a piece and put words to it. If learning is in the broadest sense a process of "languaging," as Postman and Weingartner have it, then describing one's affective responses is one of the few ways for the musical amateur, who lacks the technical vocabulary of music, to "language" a listening experience of their own, on their own terms.[47] The sample assignments in Appendix B each, in its own

46. Frank Sibley, "Making Music Our Own," in *The Interpretation of Music: Philosophical Essays*, ed. Michael Krausz (Oxford: Clarendon, 1993), 173. Although Sibley's essay is concerned with "descriptive language" rather than affective language, he notes that his "discussion is intended to apply equally" to feelings and emotions (p. 175).

47. Neil Postman and Charles Weingartner, *Teaching as a Subversive Activity* (New York: Dell, 1969), ch. 7, pp. 98–132.

way, asks students to perform this task, and teachers can readily do the same during in-class discussions. Pushing students to more clearly articulate their experience of hearing a piece gives them practice in nuance and subtlety, and provides opportunities to return to specific passages to hear them again. This process provides for students an immediacy—and thus importance—that catalyzes learning.

Once students have described their experiences on their own terms, teachers can then introduce and apply *their* own terms, as it were: the technical vocabulary, concepts, historical context, and so on, "the material" that forms the core of what music history classes focus on. This is where teachers can fold in Perkins's notion of reflective intelligence, for the ability of students to articulate the reasons for their individual affective reactions, whether positive, negative, or neutral, hinges on their skill in describing the inner workings of the music: that which awaits and that which is hidden. Teachers can easily anticipate some of the students' responses and be ready to link them to specific pieces of content.

The sample assignment in Appendix B.3 is designed to forestall the most un-reflective thinking by meeting it head-on. It directly asks students to generate hasty, narrow, fuzzy, and sprawling observations on a piece likely to generate such responses (in this case, Peter Maxwell Davies's *Eight Songs for a Mad King*). After students listen to the piece several more times and read some background material that addresses both context and structure ("what awaits" and "what hides"), they then generate rebuttals to their own un-reflective observations. In doing this, students practice moderating their tendency to react un-reflectively, and they do so quite self-consciously. After doing a few assignments such as this—not only in written form, but also as in-class discussions—students report to me that they find that they are more likely to catch themselves when they start to make a hasty or narrow judgment; this self-awareness even extends beyond the music history classroom to other subjects and to non-academic pursuits.

It is a happy coincidence that leading students through the process of languaging their affective responses will require listening to a piece (or portions of it) several times, since the changes in neural pathways that come from repeated exposure to a work help to reshape students' affective responses. The *Sacre* itself exemplifies this, as its public reception was transformed over the course of a quarter century from its scandalous premiere in 1913 to its inclusion in a popular classic, Disney's 1940 *Fantasia*. Yet even if we sympathize, as Winterson does, with the potential for death by canonization, that does not mean that we should view this process, as Jonah Lehrer does, as one in which an "intransigent" work becomes "just another musical classic, numbing

listeners with its beauty."[48] On the contrary, music historians should view this change in neural pathways as exhilarating: it represents an opportunity to heighten students' enthusiasm and passion for the music. Uncovering "what awaits" and "what hides" in the context of emotional reactions thus reunites the cognitive with the affective, increasing students' engagement with the intellectual content while also offering teachers ample opportunity to intensify students' love for music.

If teachers consistently apply this basic framework—seeking affective responses, foregrounding their own as necessary, then turning to technical and historical material as a way of helping students to "language" their listening—then students will have a clear sense of the learning trajectory. As students gradually become more discerning in their ability to describe why they like or do not like the music they are learning about, their affective evaluations will likewise become more nuanced and more embracing. Their analysis of the piece—discovering "what awaits" and "what hides"—addresses the content that needs to be covered, while their reactions to it reaffirm its status as a work of art. At the same time, teachers who value their own affective responses by cultivating empathic listening can come to respect the power and integrity of individual works anew.

Conclusion

Joseph Schwab's 1954 article "Eros and Education" was a prescient response, at least in part, to the work that Bloom and his other University of Chicago colleagues were undertaking. In it, he forcefully asserted that

> Education cannot, therefore, separate off the intellectual from feeling and action, whether in the interest of the one or of the other. Training of the intellect must take place ("must" in the sense of "unavoidably") in a milieu of feelings and must express itself in actions, either symbolic or actual. We may employ the emotional and active factors existent in student and teacher as means for intensifying and facilitating the process of intellectual education—or ignore them and suffer at the least a loss of them as effective aids, and possibly an alienation which places them in active opposition to our purposes.[49]

Bloom's Taxonomy, when it appeared in print two years later, seemed to prove Schwab's fears to be warranted, despite some rhetorical gestures to the contrary. While Bloom's cognitive domain builds from the recall of factual knowledge—an often dull exercise—up to *cognitive* evaluation, by starting discussions with a provisional attempt at *affective* evaluation and then adducing

48. Jonah Lehrer, *Proust Was a Neuroscientist* (New York: Houghton Mifflin, 2007), 143.
49. Joseph Schwab, "Eros and Education," 53 (p. 108 in the reprint edition).

the relevant factual and analytic material in the service of adding nuance to that appraisal, teachers generate a ready-made justification and goal for learning terminology, analyzing a score, and all of the other activities that typically find a place in the classroom. What is more, a recognition of the affective helps us become better, empathic listeners and thus better teachers, giving us a re-entry point into repertoire that is challenging or that needs revitalizing; and it allows us to model the kind of listeners we want our students to be, all the while legitimizing students' listening experience to music with which they may not be familiar or comfortable.

Students become more cognizant of using their reflective intelligence to forestall hasty, narrow, fuzzy, or sprawling assessments only when teachers insist that they do so, give them the intellectual and cognitive tools—the content, the material—with which to do it, and model the behavior themselves. Such students are more likely to form a deep and abiding connection to the material they are learning, and indeed to the act of learning itself. The precise physiological reasons for this remain, for the moment, obscure; as the editors of a 2006 special issue of *Educational Psychology Review* observe, "we still have much to learn about the affective experiences of students and teachers in academic contexts and how to integrate affect into existing models of motivation and learning."[50] Regardless of the precise mechanisms, however, "it should be clear that instruction is more likely to be effective if it can somehow enlist the help of student emotions."[51] Placing value on students' affective reactions to music serves as a means of framing the student learning experience, practicing reflective judgment, and fostering a personal connection to the material that will persist long after the final exam.

APPENDIX A: The Literature of Affective Responses and Learning

In the following pages, I trace a broad outline of the kinds of research into emotion and education that have thus far been undertaken, beginning first with educational psychology and then turning to the brain sciences. The principal areas of such research, which frequently overlap in various combinations, investigate relationships between affect on the one hand and motivation and cognition, including memory, on the other.

50. Linnenbrink, "Emotion Research," 307.
51. Byrnes, *Minds, Brains, and Learning*, 112.

Research in Educational Psychology

Affect has long been a part of theoretical models of motivation, both in and out of education.[52] The main avenues of inquiry in this literature involve student involvement and self-regulation.[53] As Meyer and Turner summarize, much of the early work viewed motivation as principally cognitive; emotion and volition were recognized as relevant, but subordinate.[54] Young, for example, posited in 1959 that affective processes "may be viewed as logical constructs which bring together in an orderly way a large body of facts."[55] A turning point came in 1980 when Robert Zajonc's seminal work turned such assumptions upside-down, arguing for the primacy of affect over cognition.[56] Although his assertions have not been universally accepted, the flurry of scholarship that ensued indicated that he had "uncovered an unresolved set of modern issues that apparently had lain dormant in the minds of many

52. See, e.g., Julian B. Rotter, "Generalized Expectancies of Internal Versus External Control of Reinforcements," *Psychological Monographs: General and Applied* 80, no. 1 (1966): 1–28; Abraham H. Maslow, *Motivation and Personality*, 2nd ed. (New York: Harper & Row, 1970); Albert Bandura, "Self-Efficacy: Toward a Unifying Theory of Behavioral Change," *Psychological Review* 84, no. 2 (1977): 191–215; and Edward L. Deci and Richard Flaste, *Why We Do What We Do: Understanding Self-Motivation* (New York: Penguin, 1996). Excellent summaries of the educational literature include Jere Brophy, "Research on Motivation in Education: Past, Present, and Future," in *Advances in Motivation and Achievement: The Role of Context*, vol. 11, ed. T. C. Urdan (Greenwich, Connecticut: JAI, 1999), 1–44; Jere Brophy, *Motivating Students to Learn*, 3rd ed. (New York: Routledge, 2010); and Dale H. Schunk, Paul R. Pintrich, and Judith Meece, *Motivation in Education: Theory, Research, and Applications*, 3rd ed. (Upper Saddle River, NJ: Prentice Hall, 2008).

53. See Bernard Weiner, "History of Motivational Research in Education," *Journal of Educational Psychology* 82, no. 4 (1990): 616–22; Monique Boekaerts, "Self-Regulated Learning: A New Concept Embraced by Researchers, Policy Makers, Educators, Teachers, and Students," *Learning and Instruction* 7, no. 2 (1997): 161–86; Monique Boekaerts, "Self-Regulated Learning: Where We Are Today," *International Journal of Educational Research* 31, no. 6 (1999): 445–57; Monique Boekaerts, "Understanding Students' Affective Processes in the Classroom," in Schutz and Pekrun, eds., *Emotion in Education*, 37–56; Martin Covington, "Goal Theory, Motivation, and School Achievement: An Integrative Review," *Annual Review of Psychology* 51 (2000): 171–200; and Schutz et al., "Reflections on Investigating."

54. Debra K. Meyer and Julianne C. Turner, "Discovering Emotion in Classroom Motivation Research," *Educational Psychologist* 37, no. 2 (2002): 107–14. A useful and thorough historical summary is Richard S. Lazarus, "The Cognition-Emotion Debate: A Bit of History," in *Handbook of Emotion and Cognition*, ed. Tim Dalgleish and Mick J. Power (New York: Wiley, 1999), 3–19.

55. Paul Thomas Young, "The Role of Affective Processes in Learning and Motivation," *Psychological Review* 66, no. 2 (1959): 104.

56. Robert B. Zajonc, "Feeling and Thinking: Preferences Need No Inferences," *American Psychologist* 35 (1980): 151–75. See too, more recently, Robert B. Zajonc, "Feeling and Thinking: Closing the Debate Over the Independence of Affect," in J. P. Forgas, ed., *Feeling and Thinking: The Role of Affect in Social Cognition* (Cambridge: Cambridge University Press, 2000), 31–58.

psychologists."[57] Accordingly, Meyer and Turner have more recently argued for models that treat emotions "as an integrated process, not as a precursor or outcome,"[58] and indeed recent research has taken just this direction.[59] Newer theories such as Academic Risk Taking,[60] Flow Theory,[61] Dynamic Systems Theory,[62] Control-Value Theory,[63] and Goal Theory[64] have helped to situate the interaction of student emotions with their classroom behaviors.

Other studies have investigated the influence of emotion on cognitive processes.[65] As with motivation, cognitive processes were until recently "studied in a vacuum, separately from the affective system, as if they were immune from such influence;" it is only in the last two decades or so that researchers have examined in detail the influence of the one on the other.[66] Some of the

57. Lazarus, "Cognition-Emotion Debate," 7.

58. Debra K. Meyer and Julianne C. Turner, "Re-conceptualizing Emotion and Motivation to Learn in Classroom Contexts," *Educational Psychology Review* 18, no. 4 (2006): 388.

59. See, e.g., Seth Duncan and Lisa Feldman Barrett, "Affect is a Form of Cognition: A Neurobiological Analysis," *Cognition and Emotion* 21 (2007): 1184–211; Justin Storbeck and Gerald L. Clore, "On the Interdependence of Cognition and Emotion," *Cognition and Emotion* 21 (2007): 1212–37.

60. Margaret M. Clifford, "Failure Tolerance and Academic Risk-Taking in Ten- to Twelve-year-old Students," *British Journal of Educational Psychology* 58, no. 1 (1988): 15–27; Margaret M. Clifford, "Risk Taking: Theoretical, Empirical, and Educational Considerations," *Educational Psychologist* 26, no. 3–4 (1991): 263–98; and Monique Boekaerts, "Being Concerned with Well-Being and with Learning," *Educational Psychologist* 28, no. 2 (1993): 149–67.

61. Mihaly Csikszentmihalyi, *Beyond Boredom and Anxiety: Experiencing Flow in Work and Play* (San Francisco: Jossey-Bass, 1975); Mihaly Csikszentmihalyi and Isabela Selega Csikszentmihalyi, *Optimal Experience: Psychological Studies of Flow in Consciousness* (Cambridge: Cambridge University Press, 1988); and Mihaly Csikszentmihalyi, Kevin Rathunde, and Samuel Whalen, *Talented Teenagers: The Roots of Success and Failure* (Cambridge: Cambridge University Press, 1993).

62. Marc D. Lewis and Isabela Granic, eds., *Emotion, Development, and Self-Organization: Dynamic Systems Approaches to Emotional Development* (Cambridge: Cambridge University Press, 2000).

63. Reinhard Pekrun et al., "Academic Emotions in Students' Self-regulated Learning and Achievement: A Program of Quantitative and Qualitative Research," *Educational Psychologist* 37, no. 2 (2002): 91–105 and Reinhard Pekrun, "The Control-Value Theory of Achievement Emotions: Assumptions, Corollaries, and Implications for Educational Research and Practice," *Educational Psychology Review* 18, no. 4 (2006): 315–41.

64. Martin E. Ford, *Motivating Humans: Goals, Emotions, and Personal Agency Beliefs* (Newbury Park, CA: Sage, 1992) and Elizabeth A. Linnenbrink and Paul R. Pintrich, "Achievement Goal Theory and Affect: An Asymmetrical Bidirectional Model," *Educational Psychologist* 37, no. 2 (2002): 69–78.

65. A recent summary of the state of the field is Jan De Houwer and Dirk Hermans, *Cognition and Emotion: Reviews of Current Research and Theories* (New York: Psychology Press, 2010).

66. Isabelle Blanchetee and Anne Richards, "The Influence of Affect on Higher Level Cognition: A Review of Research on Interpretation, Judgement, Decision Making and Reasoning," in De Houwer and Hermans, eds., 276.

potential implications have been far-reaching; Antonio Damasio, for example, posits that feelings lie at the heart of consciousness itself.[67] Much of the literature on emotion and learning, however, is more specific, and addresses ways in which negative emotions can hinder attention and learning, as with test anxiety.[68] A review of the literature between 1974 and 2000, in fact, shows more than 1200 studies that examined the connection between anxiety and achievement, while sixteen other emotions (joy, envy, etc.) were the subject of only one quarter (314) that many studies.[69] Ten studies that did consider a wider range of student emotions—including enjoyment, pride, hope, anger, and boredom—in both college and pre-college students, conclude, perhaps unsurprisingly, that self-reported feelings of positive emotions correlate strongly with student motivation and effort, and with academic achievement more broadly. What is more, the authors find that "positive academic emotions may in fact facilitate flexible, creative modes of thinking," though they also propose that such results might reflect that creative learning might itself be more enjoyable.[70]

A largely separate but related body of research investigates the effect of teachers' emotions on their students, demonstrating the importance of teachers' affective responses at the cognitive and interpersonal level; much of this research focuses on elementary and middle-school classrooms,[71] and typically

67. Damasio, *Descartes' Error*.

68. Chapter 4 of Isca Salzberger-Wittenberg, Gianna Williams, and Elsie Osborne, *The Emotional Experience of Learning and Teaching* (London: Routledge, 1983) is representative; titled "Emotional Aspects of Learning," it begins with a discussion of "Learning and Mental Pain." The section titled "Having an Emotional Experience" focuses on teachers developing empathy to the "fear, depression, confusion, etc." that students feel. On attention and anxiety, see Yair Bar Haim et al., "Threat-Related Attention Bias in Anxious and Nonanxious Individuals: A Meta-Analytic Study," *Psychological Bulletin* 133, no. 1 (2007): 1–24. For another take on negative emotions, see Jeannine E. Turner, Jenefer Husman, and Diane L. Schallert, "The Importance of Students' Goals in Their Emotional Experience of Academic Failure: Investigating the Precursors and Consequences of Shame," *Educational Psychologist* 37, no. 2 (2002): 79–89. On test anxiety, see Reinhard Pekrun, "Prüfungsangst und Schulleistung: Eine Längsschnittanalyse [Test Anxiety and Academic Achievement: A Longitudinal Analysis]," *Zeitschrift für Pädagogische Psychologie* 5, no. 2 (1991): 99–109; Moshe Zeidner, *Test Anxiety: The State of the Art* (New York: Plenum, 1998); Paul A. Schutz and Heather Davis, "Emotions and Self-Regulation During Test Taking," *Educational Psychologist* 35, no. 4 (2000): 243–55; and Jenny Yiend, "The Effects of Emotion on Attention: A Review of Attentional Processing of Emotional Information," in De Houwer and Hermans, eds., pp. 211–75.

69. Pekrun et al., "Academic Emotions," 91–2.

70. Pekrun et al., "Academic Emotions," 99.

71. See, e.g., Helen Patrick et al., "Teachers' Communication of Goal Orientations in Four Fifth-Grade Classrooms," *Elementary School Journal* 102, no. 1 (2001): 35–58; Ellen A. Skinner and Michael J. Belmont, "Motivation in the Classroom: Reciprocal Effects of Teacher Behavior and Student Engagement Across the School Year," *Journal of Educational Psychology* 85, no. 4 (1993): 571–81; and Paul A. Schutz et al., "Teacher Identities, Beliefs, and Goals

from the standpoint of developing ways for teachers to ameliorate negative emotions (such as anxiety) in their students and themselves.[72] While there has been much research on classroom practices that impair student achievement and motivation,[73] Patrick, Hinsley, and Kempler investigated teacher behaviors that promote student intrinsic motivation, finding, as Dewey suggested almost seventy-five years ago, that "when a teacher exhibits greater evidence of enthusiasm, students are more likely to be interested, energetic, curious, and excited about learning," though they take care to note that "the evidence does not suggest that a steady diet of teacher enthusiasm can act as a panacea for the motivational ills of students."[74] Indeed, teacher enthusiasm is the single characteristic most frequently investigated for its influence on student learning. Rosenshine's review of the research shows that high-inference studies of this connection—that is, those that rely on an observer's judgment about a teacher's level of enthusiasm—find that students whose teachers are described as "energetic" or "stimulating" display higher levels of achievement.[75] Low-inference studies, which have typically focused on K–12 populations, count the frequency of behaviors that are indicative of enthusiasm—vocal delivery, eye movements, gestures, and so on—and look for correlations with student achievement. With very few exceptions, the correlation is similarly clear.[76]

Related to Emotions in the Classroom," in Schutz and Pekrun, eds., *Emotion in Education*, 223–41.

72. See, e.g., Rosemary E. Sutton, "Teachers' Anger, Frustration, and Self-Regulation," in Schutz and Pekrun, eds., *Emotion in Education*, 259–74 and Meca Williams et al., "'There Are No Emotions in Math': How Teachers Approach Emotions in the Classroom," *Teachers College Record* 110, no. 8 (2008): 1574–610.

73. Edward Deci's work on the way external rewards diminish intrinsic motivation is a famous example. See Deci and Flaste; and Deci et al., "Motivation and Education: The Self-Determination Perspective," *Educational Psychologist* 26, no. 3–4 (1991): 325–46.

74. Brian C. Patrick, Jennifer Hisley, and Toni Kempler, "'What's Everybody So Excited About?': The Effects of Teacher Enthusiasm on Student Intrinsic Motivation and Vitality," *Journal of Experimental Education* 68, no. 3 (2000): 217–36, p. 233.

75. Barak Rosenshine, "Enthusiastic Teaching: A Research Review," *The School Review* 78, no. 4 (1970): 499–514, p. 500.

76. See, e.g., Rosenshine, "Enthusiastic Teaching;" Rosenshine and Norma Furst, "Research in Teacher Performance Criteria," in *Research in Teacher Education: A Symposium*, ed. B. O. Smith (Englewood Cliffs, NJ: Prentice Hall, 1971), 37–72; Edward M. Bettencourt et al., "Effects of Teacher Enthusiasm Training on Student On-Task Behavior and Achievement," *American Educational Research Journal* 20, no. 3 (1983): 435–50; Jere Brophy and Thomas C. Good, "Teacher Behavior and Student Achievement," in *Handbook of Research on Teaching*, 3rd ed., ed. M. C. Wittock (New York: McMillan, 1986), 328–75; Brenda B. Streeter, "The Effects of Training Experienced Teachers in Enthusiasm on Students' Attitudes Toward Reading," *Reading Psychology* 7, no. 4 (1986): 249–59; and Patrick, Hinsley, and Kempler, "'What's Everybody So Excited About?'"

Research in the Brain Sciences

The work of social scientists investigating memory and emotion is now being complemented by recent advances in the brain sciences, although this latter research has only recently begun in earnest—as Damasio points out, through "most of the twentieth century, emotion was not trusted in the laboratory," as it was too subjective, "too elusive and vague."[77] Psychological studies have found that affect has a strong influence on the way information is processed, stored, and retrieved.[78] In educational contexts, Bower likewise found a correlation between a reader's ability to recall a narrative and the similarity of the reader's mood with that of the narrative being memorized.[79] In other contexts, phenomena such as memory narrowing and tunnel memory—in which "memory is enhanced for central or core features of emotional events but memory for peripheral or background features is not enhanced and may even be impaired"—reveal the complex interplay between emotions and cognitive processing.[80] Brain scientists can now offer their own evidence that, overall, emotion makes memory better,[81] and that emotions "direct our choices, even when those choices are based on reasoning."[82] In one experiment, the auditory cortex of rats was found to respond to a high-pitched sound when their brains were induced to release acetylcholine, a neurotransmitter that marks specific brain activity as important.[83] Like other neurotransmitters, acetylcholine is associated with emotion, just as adrenaline is connected with excitement and serotonin with tranquility.

The many experiments similar to this one provide a biological explanation for the fact that we learn best those things that are important to us. There may therefore be less distinction than originally thought between explicit memory and implicit memory—the things we know we remember and those we do not know that we remember—and between semantic memory (facts, names) and episodic memory (stories and the feelings associated with events).[84] While it is intuitive that we might remember best that which is connected with a positive

77. Damasio, *The Feeling of What Happens,* 39.

78. See, e.g., Herbert Bless, "The Interplay of Affect and Cognition: The Mediating Role of General Knowledge Structures," in *Feeling and Thinking: The Role of Affect in Social Cognition*, ed. J. P. Forgas (Cambridge: Cambridge University Press, 2002), 201–22 and Henry C. Ellis and Brent A. Moore, "Mood and Memory," in Dalgleish and Power, eds., 196–210.

79. Gordon H. Bower, "Mood and Memory," *American Psychologist* 36, no. 2 (1981): 129–48.

80. Linda J. Levine and Robin S. Edelstein, "Emotion and Memory Narrowing: A Review and Goal-Relevance Approach," in de Houwer and Hermans, eds., 169.

81. Cara Laney, Friderike Heuer, and Daniel Reisberg, "Thematically Induced Arousal in Naturally Occurring Emotional Memories," *Applied Cognitive Psychology* 17, no. 8 (2003): 995–1004.

82. Zull, *From Brain to Mind*, 17.

83. Zull, *Changing the Brain*, 223–5.

84. Zull, *Changing the Brain*, 86.

emotional response, it is also the case that strong negative feelings can have a detrimental effect on memory and learning—we can remember things incorrectly, or uncontrollably[85]—while indifference may result in no change to the brain at all. In short, "emotional information is more likely than neutral information to hold attention and be rehearsed in working memory, increasing the likelihood that it will be stored in long-term memory."[86]

APPENDIX B: Sample Assignments

B.1: A sample syllabus note for music history classrooms incorporating affective responses

Note to Students: In this class, we will return frequently to the question of how various musical works make you feel—what affective responses they evoke in you (and me). I make no effort to hide the fact that I want you to like this music as much as I do. (Note, though, that you don't ultimately have to like any of the music to do well in this class! And conversely, loving it immensely is no guarantee of a good grade.) As we listen to each of the pieces on this syllabus, we will strive to answer these four questions, though not necessarily immediately or all at once:

1. What, if any, feelings or emotions does this work evoke in you? Although there is almost always a group consensus, there is genuinely no right or wrong answer to this question. Sometimes your responses to this question will be the subject of in-class discussion; at other times, I will ask you to write out a response either to turn in to me alone, or for public consumption (via our online forums). Assignments in which you respond to this question will not be graded based on whether you've experienced the "right" emotional state, but rather on the clarity with which you articulate that emotion.
2. What information helps you to better place this work in a broader context? What would you need to know about the composer, the era, etc., in order to make you the best possible audience for this work? (We will call this "what awaits" because it typically is not present in the music itself but must be sought out in other sources.)
3. What is happening in the music? That is, how would one describe this work using the technical vocabulary of musicology and music theory? Put another way, what is the "backstage machinery"? (We will call this "what hides" because it typically becomes apparent only through close analysis after listening closely several times and studying the score.)

85. Post-traumatic stress disorder is a well-known example of this phenomenon.
86. Levine and Edelstein, 173–74.

4. How, if at all, does your knowledge of "what awaits" and "what hides" change your emotional response to the music?

B.2: Online forum discussion questions for an introductory-level music appreciation class

Assignment: In class today we listened to different versions of two songs: *The Star-Spangled Banner* (TSSB) as arranged for military band as well as Jimi Hendrix's famous performance at Woodstock; and *Happy Birthday to You* as performed by a family at a birthday party (thank you, YouTube) and in Igor Stravinsky's *Greeting Prelude* (1955). Choose one of the songs and post brief responses to following questions (no more than 500 words total).

a. Which version of the song you chose do you prefer?
b. What feelings or emotions does it evoke? Does the other version of your chosen song evoke the same, similar, or different feelings?
c. Are there purely musical aspects of the versions that might contribute to this emotional response? While you likely have certain associations (memories, cultural connections) with one or both versions, focus as much as possible on the technical aspects of the music. For example, while you might prefer Hendrix's version of TSSB because you appreciate his virtuosity or his counter-cultural views, try to articulate your response in only technical terms, such as tempo, instrumentation, and so on.

B.3: Engaging and resisting intelligence traps

Assignment: Listen once or twice to the excerpt from Peter Maxwell Davies's *Eight Songs For a Mad King* (1969). Then engage, intentionally, in some non-reflective thinking.

First, formulate four responses to this work, each an example of thinking that is hasty, narrow, fuzzy, or sprawling (HNFS). In short, you are generating the kind of knee-jerk reactions we're ultimately trying to avoid in this class.

Second, listen to the excerpt three or four more times; watch the posted video of a live performance; and read the provided background material.

Finally, rebut your own initial responses; that is, engage in some reflective thinking. How would you answer the HNFS responses you just formulated in ways that are *not* HNFS? Put another way: what might we find in this work if we move beyond thinking in HNFS ways? You need not necessarily believe the rebuttals to the non-HNFS responses; I ask only that they are plausible, thoughtful, and articulate. Include with your reflective responses a brief summary of what led you to each reflective response; e.g., was it hearing something specific when you listened to it for the fourth time, reading something about it, something else?

B.4: Short response paper assignment for a lower-level class for majors and non-majors

Assignment: Listen several times to the first 5–6 measures of the Confutatis from Mozart's Requiem (i.e., ending just before the transition to C major). What feeling or sensation does this evoke? How does it do so? In a couple of pages, dissect the "backstage machinery" of these few measures. What's going on? Does the music achieve the emotional effect you describe through one technique or device? Several, deployed in series? Several, deployed simultaneously? If you're stuck, think about elements such as rhythm; counterpoint and imitation; melodic contour; instrumentation. Do a harmonic analysis. Label the intervals. Try singing along with the vocal lines and the instrumental lines. In short: take the music apart and report your findings.

B.5: Short online forum response

Assignment: Select one of the works assigned for class today: Perotinus's *Viderunt omnes* (1198); Arvo Pärt's *Cantus in Memory of Benjamin Britten* (1977); Gavin Bryars's *Jesus' Blood Never Failed Me Yet* (1971); and Terry Riley's *In C* (1964). Your task is to find a piece of music that, for you, elicits the same affective response. Bring a recording of that piece to class, as we will listen to and discuss several of them. Here is the tricky part: the piece you bring to class *cannot* be Western classical (or "art") music. Focus instead on popular music, jazz, world music, and so on. Before class, write an online forum response of about 300-350 words in which you (1) briefly explain what affective response both pieces (the in-class listening and your own discovery) elicit; and (2) propose what it is about "what hides"—the "backstage machinery"—in these two pieces that elicits the same affective response. If there's nothing you can home in on about "what hides," then consider "what awaits": what there is about the historical context, reception, etc., of these pieces that contributes to your experiencing them emotionally similarly. If there's really nothing you can identify that might link the ability of these two pieces to elicit the same emotion, then speculate as best you can about what *is* going on.

The Monochord in the Medieval and Modern Classrooms

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For Cecil Adkins

Throughout the Middle Ages, the monochord was a vehicle for turning abstract number ratios into empirical evidence perceptible by eye and ear, making musical concepts physically present for the student. A section on how to divide the monochord was a standard inclusion in the music theorist's treatise, and about 150 monochord divisions survive from the ninth through the fifteenth century.[1] Sometimes these discussions seem to be inserted into the medieval texts merely as an expected component, but in other treatises they are accompanied by instructions or insights suggesting that the theorist had a specific lesson plan in mind. Authors of the period had different pedagogical aims in the use of the monochord, which ranged from the pragmatic need to teach pitch and interval recognition, to the academic need for understanding the derivation of notes by ratio, on to the more esoteric realm of understanding the complex ratios that were at the heart of tuning and temperament.

The physicality and the presence of the monochord can play an important role in the modern music history classroom. Indeed, one of the challenges of teaching the music of the Middle Ages is a lack of presence—trying to talk about things that aren't fully there. This simple fact is highlighted in Richard Taruskin's decision to begin his five-volume *Oxford History of Western Music* with "Music from the Earliest Notations."[2] And in the condensed version of that series, designed for undergraduate teaching, the chapter subheadings highlight this ambiguity: "Historical *Imagination*," "Christian Beginnings, *as*

1. These divisions can be found in Christian Meyer, *Mensura monochordi: La division du monochorde, IX^e–XV^e siècles* (Paris: Publications de la Société française de musicologie, 1996).

2. Richard Taruskin, *Music from the Earliest Notations to the Sixteenth Century*, Volume 1 of The Oxford History of Western Music (Oxford: Oxford University Press, 2005).

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Far as We Know Them," and "The *Legend* of St. Gregory" (authors' emphasis).[3] A half-millennium of chant can only be conjectured upon for its lack of notation.

Matters don't markedly improve even when we have written music. For pragmatic reasons, we primarily teach from modern editions and recordings and the students struggle to untangle the musical text from its edition or performance. If they hear an added drone or instrumental doubling, or even the rhythmic realization of a verse's implied meter, they view it as an integral part of the piece itself, and no amount of reminders can fully shake them of this view.

All of this is compounded by the central role of memory in the learning, the performance, and the composition of music.[4] Young clerics memorized entire bodies of chant. Students of early counterpoint took instruction set to verse and etched it in their memory along with enormous numbers of contrapuntal formulas and useful melismas, to the point that when we show students a piece of early polyphony we can only hint at the multitude of other realizations that once existed. In short, much of what we deal with is absent, highly mediated, or a stand-in for a larger, lost body of music.

To counteract this, material objects can play an important role in our classrooms, and these objects can provide critical insight for our students. For example, facsimile editions can teach a great deal merely by their physicality. Students may learn a great deal from viewing facsimile images of Notre Dame polyphony in their text, but until they can see (and hold) a page in its actual size, they will not realize how different it is from the "choral score" they are used to. From this, they can intuit that these are pieces sung largely from memory and only preserved in the small manuscript for the purpose of learning.[5] But for the most part, these remain objects, and seldom become agents—that is, objects that allow students to partially enter the world that they are studying. If, on the other hand, we could have the students sing examples from facsimile editions—struggling with the process of notation and rhythmic coordination—they would gain an experiential knowledge of the material, knowledge that can serve to lock in specific concepts by pairing them with concrete experience. But this approach takes advanced skills and far more

3. Richard Taruskin and Christopher H. Gibbs, *The Oxford History of Western Music*, college edition (New York: Oxford University Press, 2013).

4. The elements outlined here are covered in detail in Anna Maria Busse Berger, *Medieval Music and the Art of Memory* (Berkeley: University of California Press, 2005).

5. The smallest of these *Magnus liber organi* sources (the Madrid manuscript) is a mere 16.5 cm x 11.5 cm—smaller than a paperback novel. Available facsimiles of the primary Notre Dame sources reproduce this size, though we can't assume this in all facsimile editions we might use. Lacking access to a facsimile edition, it is easy enough to make a photocopy scaled to size for the students to examine.

time than most instructors can provide in the classroom. There are, however, some objects that can quickly and easily provide the concrete involvement that leads to an immediate and deeper understanding. One of these is the monochord.

Teaching musical ratios with the monochord allows the student, medieval or modern, to explore the physical representation of the abstract numerical concepts. In the modern classroom, using the monochord has another important purpose—it allows modern students to share experiences with the medieval students. For the time that they are in the classroom, they are not only learning about the concept, but are also are experiencing the pedagogical world of the medieval classroom, bringing a deeper reality to an otherwise abstract series of concepts.

Our essay comprises three parts. The first section provides an overview of how the monochord was used by medieval theorists. While many of the sources cited will be familiar to readers from the source readings of Weiss and Taruskin or Strunk, this summary will highlight the monochord's use as a pedagogical instrument and introduce the reader to the techniques the authors use in class. The second section applies these concepts and techniques in a single course module in which the students will follow Guido's instructions to create a Pythagorean division of the monochord.[6] The final section suggests ways in which students and teachers can go beyond the basic division of the monochord to explore other concepts.

I. The Monochord in the Medieval Classroom: Sources and Pedagogy

As with so many other aspects of early music theory, Boethius was responsible for preserving Greek divisions of the monochord for his medieval followers. He provided three systems: one of placing a bridge at a specified place beneath a string to compare the sounds of the two lengths of string; a second of dividing the monochord by length to demonstrate the three genere of tetrachords (which starts with the somewhat impractical division of the string into 9,216 equal units); and a third of manually dividing the string by ratios to

6. Most of the divisions we will discuss, as well as most that survive in the sources, result in identical Pythagorean tunings. Pythagorean tuning was the predominant tuning system used throughout the Middle Ages. Attributed to the Greek philosopher Pythagoras (6th century BCE), the system is based on simple ratios using the numbers 1, 2, 3, and 4 to create consonant intervals. The system has pure unisons (1:1), octaves, (2:1), fifths (3:2), and fourths (4:3), as well as ratios that can be derived from these numbers, such as the pure major second (9:8). However, major thirds are not pure (5:4), but made up of two pure major seconds (9:8 + 9:8, or 81:64).

create a scale (to use modern terminology). This final, manual division was overwhelmingly adopted by medieval theorists.[7]

One of the earliest post-Boethian descriptions of the monochord is in the *Dialogus de musica* (10th century) by the so-called Pseudo-Odo.[8] He provides a physical description of the instrument as well as instructions on how to use it. For Pseudo-Odo, the monochord was fundamental to his teaching of music:

> (Disciple) What is music?
> (Master) The science of singing truly and the easy road to perfection in singing.
> (D) How so?
> (M) As the teacher first shows you all the letters on a slate, so the musician introduces all the sounds of melody on the monochord.
> (D) What is the monochord?
> (M) It is a long rectangular wooden chest, hollow within like a cithara; upon it is mounted a string, by the sounding of which you easily understand the varieties of sounds.
> (D) How is the string itself mounted?
> (M) A straight line is drawn down the middle of the chest, lengthwise, and points are marked on the line at a distance of one inch from each end. In the spaces outside these points two end-pieces are set, which hold the string so suspended above the line that the line beneath the string is of the same length as the string between the two end-pieces.
> (D) How does one string produce many different sounds?
> (M) The letters, or notes, used by musicians are placed in order on the line beneath the string, and when the bridge is moved between the line and the string, shortening or lengthening it, the string marvelously reproduces any chant by means of these letters.[9]

So that his student may use the monochord to sound out chant, the teacher proceeds to give instructions on how to mark the gamut on the monochord. This is achieved though a process of dividing the string into equal segments. As his instructions are clear and easy to follow, it is a simple matter to reproduce his method using a piece of paper two or three feet long (a piece of receipt paper works well), and a set of dividers or compass.

7. For a more detailed discussion of Boethius's divisions, see Cecil Adkins, "The Theory and Practice of the Monochord" (PhD dissertation, University of Iowa, 1963), 95–105, and Meyer, xxvi-xxix.

8. A transcription of the *Dialogus* can be found in *Scriptores ecclesiastici de musica sacra potissimum*, 3 vols., ed. Martin Gerbert (St. Blaisen: Typis San-Blasianus, 1784; reprint ed., Hildesheim: Olms, 1963), 1:265–84. A new edition is currently being prepared by Karl-Werner Gümpel. A translation of portions of the work is found in Oliver Strunk, *Source Readings in Music History*, revised edition, Leo Treitler, general editor (New York, W. W. Norton, 1998), 198–210.

9. Strunk, 200–1.

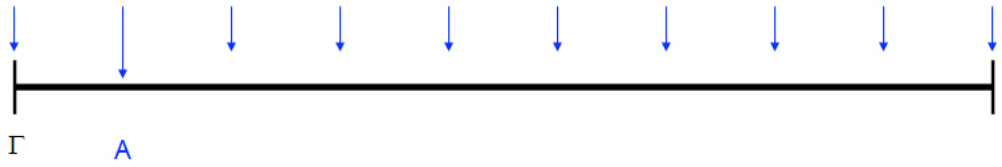
A straight line drawn down the center of the paper represents the string. The author begins:

> At the first end-piece of the monochord . . . place the letter Γ, that is, a Greek G[10] . . . . Carefully divide the distance from Γ to the point placed at the other end into nine parts.[11]

Starting at one end of the line, swing the dividers down the line, aiming to reach the other end in nine swings. Through trial and error (as the medieval student did) the modern student will arrive at the proper width. After finding the correct measurement, you can continue with Pseudo-Odo's instructions: "where the first ninth from Γ ends, write the letter A; we shall call this the first step."[12]

This creates a ratio between the length of the whole string and the length of the stopped string. The whole string is nine units long, and the stopped string is eight units long, making the ratio 9:8 (see **Figure 1**).

Figure 1: Pseudo-Odo's first division to find A.



To continue with Pseudo-Odo: "Then, similarly, divide the distance from the first letter, A, to the end into nine, and at the first ninth, place the letter B for the second step."[13] Now you must shorten your dividers slightly to find the new measurement. The same ratio 9:8 is created by taking the shorter length of string, from A to the end, dividing it into nine units, and marking the next note at eight of those units (see **Figure 2**).

At this point two Pythagorean whole tones have been created by using a ratio 9:8. Pseudo-Odo follows with the semitone from B to C. Finding this half step in the same manner would involve creating a ratio of 256:243. While medieval theorists knew this ratio, the authors have found only one treatise that suggests measuring this interval.[14] The more practical approach is to go

10. Here we are using Guido's pitch nomenclature: Γ A B C D E F G a b/b♭ c d e f g a' b'/b♭' c' d' e'.

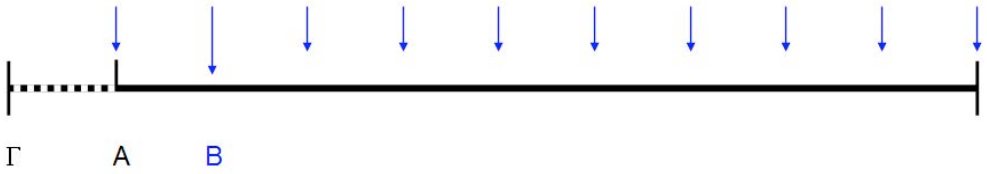
11. Strunk, 201.

12. Ibid.

13. Ibid.

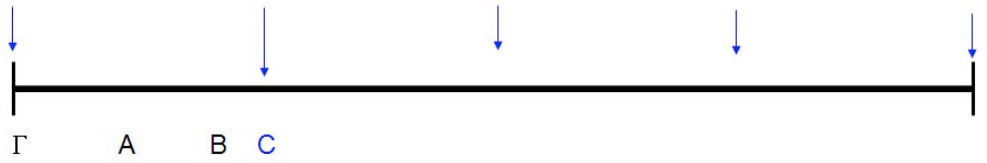
14. The procedure is found in an anonymous fifteenth-century manuscript, transcribed in Meyer, 132–33. It is done by dividing the distance from B to the end into two parts, and

Figure 2: Pseudo-Odo's second division to find B.



back to Γ and find C by the ratio of a fourth, 4:3, creating the complicated semitone ratio simply by leaving it as a remainder. This is just what Pseudo-Odo does: "Then return to the beginning, divide by four from Γ, and for the third step write the letter C" (see **Figure 3**).[15] He continues by moving up by fourths from these initial notes: finding D from A, E from B, and F from C (see **Figure 4**). He concludes the gamut by finding b♭ from F, and then dividing the string in half from each lower note to find the higher octave.

Figure 3: Pseudo-Odo's third division to find C.



The student of the dialogue, surveying his finished monochord, notices that even though the ratio 9:8 is only used to find the first two whole steps, every other whole step, say from C to D, is also a ratio of 9:8. The master agrees that there are multiple ways to find each note: for instance, D can be found as a 4:3 ratio from A, a 3:2 ratio from G, or a 9:8 ratio from C (see **Figure 5**). Because of this redundancy, identical Pythagorean tunings can be found in myriad ways, as we shall see. The choices made by the theorist about how to present his division can reveal his motives about how he intends the student to use the knowledge.

For Pseudo-Odo, the first intent was to introduce the gamut in an intuitive way, for he found the notes in ascending order. Once the student understands the gamut and has a marked monochord, he can use it to learn music: "When the boys mark some antiphon with these letters, they learn it better and

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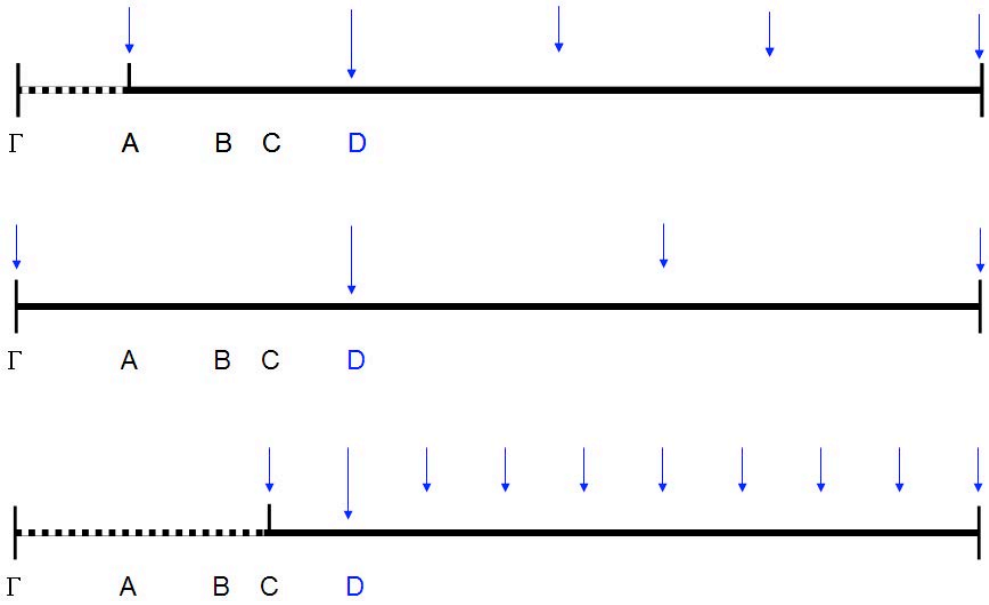
then continuing the process, bisecting each subsequent division (i.e., 2, 4, 8, 16, 32, 64, 128, 256), and then measuring off 13 of those segments to find C.

15. Strunk, 201. Standard dividers are likely too small to measure one quarter of the length. In such cases, you must convert to eighths, so that 8:6 would substitute for 4:3. This will be clearer when we discuss Guido's division below.

Figure 4: Pseudo-Odo's divisions to find D, E, and F.

Figure 5: Redundancy in Pythagorean tuning.



more easily from the string than if they heard some one sing it; and they are able after a few months' training to discard the string and sing by sight alone, without hesitation, music that they have never heard."[16] The rest of the *Dialogus* contains a discussion of consonances and modes, in a manner that Claude Palisca hails as "the clearest exposition so far" because he can refer to the notes of the gamut created on his monochord.[17]

Guido of Arezzo is the next theorist to contribute significantly to the use of the monochord. While his initial intent is much the same as Pseudo-Odo's, he applies the monochord to some of his new teaching techniques in order to help the student learn chant by hearing the pitches, and eventually leaves even that behind for more efficient methods. In his earliest surviving writing, the *Micrologus* (c. 1025), he provides two monochord divisions. The first is along the same lines as Pseudo-Odo's, wherein the notes are found in order with as few types of ratios as possible. His second tuning, however, is designed to be quicker, and is more pragmatic than didactic in its approach. It allows the student to complete the division rapidly in order that he might have more time to use the monochord as a pitch producing tool.

Guido begins his second division begins like this: "You make nine steps, that is [equal] segments, from Γ to the other end. The first step will end at A."[18] Thus far, he is following his first division. But now, instead of resetting the dividers to find B from A, he finds more notes in the A and D pitch classes using this same setting. If A to the end is eight units long, then D can be found as 8:6, the octave a at 8:4, and so forth. To return to Guido: "The first step will end at A, the second will have no letter, the third will end at D, the fourth will be unlettered, the fifth will end at a, the sixth at d, the seventh at [a'], and the others will be unlettered" (see **Figure 6**, top line).[19]

Only now do you return to A, resetting your dividers into ninths, and finding all of notes in the pitches classes for B and E in a similar manner. Next, going back to Γ and dividing the whole string into four, you can find not only C, but the next two G's as well. Dividing C to the end into four yields F and two more C's, and finally dividing F to the end into four produces b♭ and f. The gamut has been found using only five settings of the dividers (see

16. Strunk, 200–1.

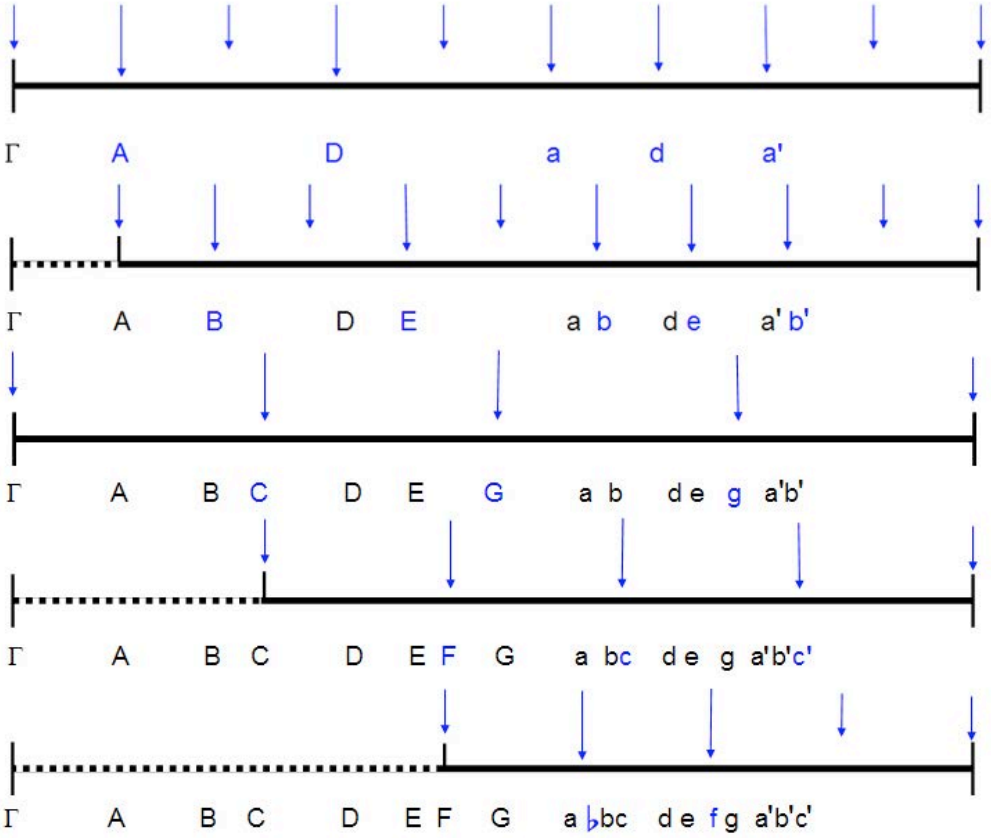
17. Claude V. Palisca and Ian D. Bent, "Theory, theorists, §5: Early Middle Ages," in *Grove Music Online*. *Oxford Music Online*, http://www.oxfordmusiconline.com/subscriber/article/grove/music/44944 (accessed February 22, 2012).

18. Warren Babb, *Hucbald, Guido, and John on Music: Three Medieval Treatises* (New Haven: Yale University Press, 1978), 60. Babb based his translation on Guido Aretinus. *Micrologus*, ed. Jos Smits van Waesberghe, Corpus Scriptorum de Musica 4 ([Rome]: American Institute of Musicology, 1955).

19. Babb, 60.

Figure 6).[20] However, it is not as intuitive as the previous division. Rather than finding the notes in ascending order with only a few kinds of ratios, this scheme locates them in seemingly random order across the entire gamut, using a constantly changing series of ratios. But at the same time, following the process provides a satisfying sense of completion as the last missing letters are filled in.

Figure 6: Guido's five-step system.



For Guido, this would be a practitioner's monochord. This division is for someone who knows all about the gamut and the ratios (or has no interest in that aspect), and wants simply to quickly create a marked monochord so he can use it to produce pitches. Guido presents multiple applications for the monochord. Later in the *Micrologus*, he proposes a precursor to his

20. Guido does not include e' in the *Micrologus*, and b♭' and d' are lacking from this division. In different sources for the *Micrologus*, Guido handles the lack of b♭' and d' differently—providing a quick way of finding one or both, or ignoring the issue altogether as he does in the sources used in van Waesberghe's edition.

solmization system, and gives directions on how to use it with a monochord: "Let us take these five vowels. Perhaps, because they bring such euphony to words, they will offer no less harmony to the neumes. Let them be placed in succession beneath the letters of the monochord, and since they are only five, let them be repeated until beneath each note its particular vowel is written."[21] Now students can make the connection between pitch and vowel sound, or later the solmization, for that syllable.

Guido also applies the monochord to his staff notation:

> And in order that you may understand to which lines or spaces each sound belongs, certain letters of the monochord are written at the beginning of the lines or spaces. And the lines are also gone over in colors . . . We use two colors, namely yellow and red, and by means of them I teach you a very useful rule that will enable you to know readily to what tone and to what letter of the monochord every neume and any sound belongs; that is, if—as is greatly convenient—you make frequent use of the monochord and of the formulas of the modes.[22]

Thus Guido has provided students with a quick way to divide their monochord, and instructions on how to use it in sight singing and reading. However, he recognizes that students should not always be dependent on their monochord, and should eventually leave it behind as they continue with other more sophisticated tools for note reading and sight singing. In his later *Epistle*, in which he explains the use of his fully-developed solmization system, he advises: "You sound on the monochord the letters belonging to each neume, and by listening you will be able to learn the melody as if from hearing it sung by a teacher. But this procedure is childish, good indeed for beginners, but very bad for pupils who have made some progress."[23] Instead, they should gain experiential knowledge of the relationships of the pitches to each other, thus enabling them to sing a new piece of chant in tune and in the correct mode.[24]

Even though Guido had developed more efficient methods for learning chant, theorists continued to include monochord divisions in their writings. This suggests that the monochord was more than a pitch-producing machine; it was valued for its ability to demonstrate the relationship between

21. Babb, 74.

22. Guido of Arezzo, *Prologus in antiphonarium*, in Strunk, 213–14.

23. Guido, *Epistola de ignoto cantu*, in Strunk, 216.

24. For more on Guido's methods, see Dolores Pesce, "Guido d'Arezzo, *Ut queant laxis*, and Musical Understanding," in Russell E. Murray, Jr., Susan F. Wiess, and Cynthia J. Cyrus, *Music Education in the Middle Ages and the Renaissance* (Bloomington: Indiana University Press, 2010), 25–36.

mathematics and sound. It served as a touchstone for the theorist to confirm the Pythagorean dictum that all truth can be represented by numbers.

In the fourteenth century, a new style of obtaining a Pythagorean monochord division became popular. Previously, many manuscripts contained copies of Pseudo-Odo's division, wherein the notes are found in order, or Guido's fast division, which allows the student to mark the monochord quickly. Instead, the style of division used by Ars Nova theorists emphasizes even more the understanding of ratios.

Jean de Muris was primarily an astronomer and mathematician. His *Musica speculativa* (1323) discusses the relationship between number and sound by discussing the ratios of the consonances. He concludes the treatise with a monochord division that does not find the notes in order, but presents the ratios in order. In fact, he doesn't even bother with note names, but talks about points on the string by the letters a through v, and identifies intervals by their Greek names. Starting with the 2:1 ratio, he works through 3:2, 4:3, and finally 9:8:

> If the chord a.b. is divided into two equal parts at point i., there will be a.i. to a.b. a diapason [octave]. Likewise, if a.i is divided equally at q., there will be a.q. to a.b. a bisdiapason [double octave]. Therefore if anyone divides a.q. equally, there rises up the third octave.[25]

After showing that any time you divide a string in half you get a note one octave higher, he moves on to the 3:2 ratio. Here he notes that by dividing the entire string in thirds you find a note (D) that is a diapente (fifth) away from the open string, but also a diatesseron (fourth) away from the G at the center of the string. Moving on to the 4:3 ratio, he notes that the note C is a diatesseron (fourth) away from Γ. Only after introducing these ratios does he move on to 9:8 and find A, which as we have seen is the first step in most divisions. From here he completes the gamut by repeating these four basic ratios.

Thus for Muris, the primary purpose of his monochord is not as a sight singing aid, but as a further way to demonstrate the mathematical principles involved in sound.[26] However, his division is rather tedious to actually create on a monochord, particularly when compared to Guido's fast method. In this way it is similar to the monochord division in the *Ars nova* treatise that has been attributed to Philippe de Vitry. Cecil Adkins speculates that, as these two treatises were widely copied and used, their lengthy divisions may have

25. Adkins, 151.

26. Interestingly, he also proposes a nineteen-stringed instrument, wherein each string corresponds by length to the string of the divided monochord, so it is possible to hear the intervals simultaneously.

contributed to the decline of the monochord as a useful instrument.[27] True, the cumbersome divisions would have made it increasingly frustrating for a student who wanted to use it in the traditional manner of a sight singing aid. However, the monochord was still useful as a mathematical tool, particularly as a tool to hear ratios as pitches. As such, it sometimes took a central role when theorists were exploring and writing about just tunings.

As a final example, we would like to consider the monochord division of Ramis de Pereia given in *Musica practica* (1482), which excited a great deal of fervor in its day. Like many others, Ramis recognized that the Pythagorean ditone (two intervals of 9:8, or 81:64, as is found from G to B) is much wider than a pure major third (5:4), sounding dissonant to the ear. Ramis designed a tuning that would include some pure thirds in addition to the pure fifths achieved in Pythagorean tuning, but as must happen, would have to have some non-pure fifths to compensate. The vehicle for presenting his new tuning was the monochord:

> The regular monochord is accurately divided by Boethius with numbers and measurement. Although it is agreeable and useful for theorists, it is laborious and difficult for singers to understand. Truly, since we have promised to satisfy both [the theorists and the singers], we will render an extremely easy division of the regular monochord.[28]

Thus Ramis's stated goal is to present a monochord division that is easy to execute as well as useful to practicing musicians and theorists. To do so was not easy, he says:

> Let no one think that we came upon it with ordinary labor, inasmuch as we devised it with hard work during many sleepless nights, reading and rereading the precepts of the ancients and avoiding the error of the modern theorists. Anyone even moderately educated will be able to easily understand it.[29]

What sets Ramis's approach apart? He sets the pitch of the monochord to A, which hearkens back to Boethius rather than the Γ that Pseudo-Odo introduced. He divides the string in half to find a, then divides the length from A to a in half to find D. This is actually no different than dividing the string in fourths to find D. However, the critical step follows: he divides D to a in half to find F (see **Figure 7**). This is in fact a fairly simple operation with dividers. Instead of swinging your dividers up to nine times to see how far off you are,

27. Adkins, 152–54.

28. Luanne Fose, "The *Musica practica* of Bartolomeo Ramos de Pareia: A Critical Translation and Commentary" (PhD dissertation, University of North Texas, 1992), 202.

29. Ibid.

then making adjustments, all you do is swing it twice. In doing this, however, he has created a pure minor third (6:5) between D and F, and a pure major third (5:4) between F and a. You can check it by counting the units from a to the end, four, and adding a fifth unit downward to find F, or 5:4. Adding one more equal unit creates the 6:5 of the pure minor third between D and F (see **Figure 8**).

Figure 7: Ramis finding a, D, and F.

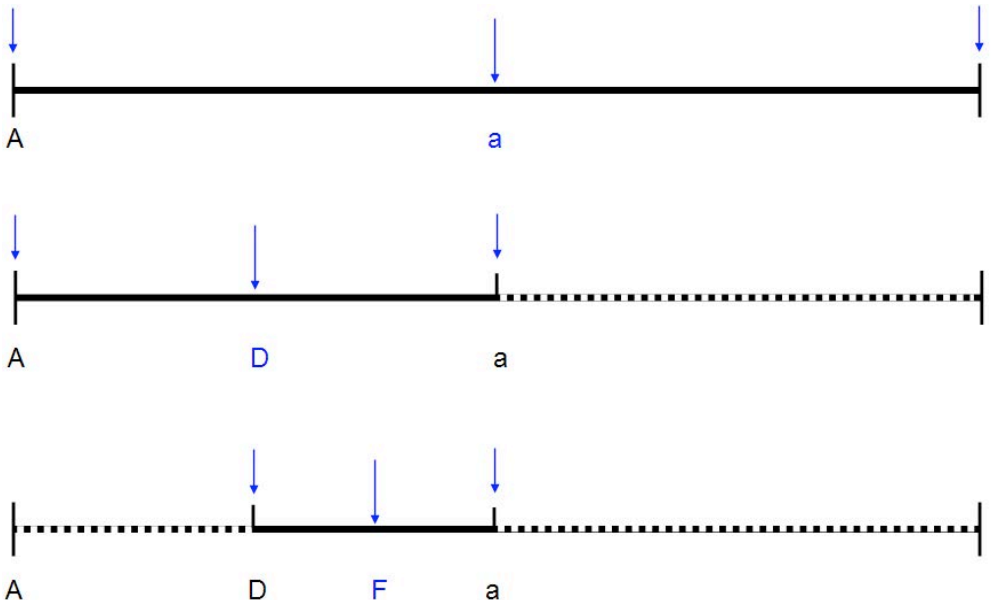
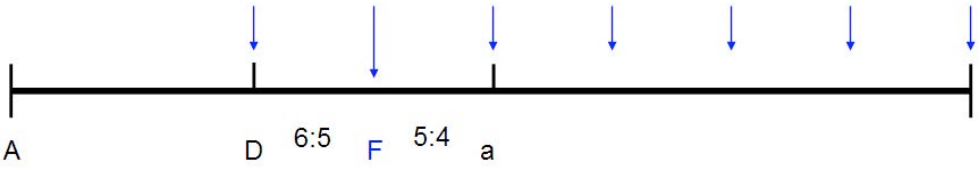


Figure 8: Pure thirds in Ramis's divisions.



Ramis then works around by pure fifths from A to find E and B, then finds a pure triad A-C-E, the same as D-F-A. This achieves some pure thirds and some pure fifths, but has an unusably tight fifth between G and D.

In his monochord division, Ramis is never explicit in his use of the pure thirds ratios, he just sneaks them in by doing what is admittedly an easier manual division. The result, of course, was radically different from the standard Pythagorean tuning. Ramis excited criticism for his "wrong" monochord division, as well as for proposing a new eight-syllable system to replace the Guidonean solmization hexachords.

Thus the monochord, central in medieval music theory, was the preeminent tool for exploring the relationship between number and sound. It was also a useful tool for sight singing, playing an important role in the introduction of the staff, solmization, and other early advances. It served theorists as an empirical tool, allowing students to get their hands on something physical and learn by doing. As such, it can do the same today.

II. The Monochord in the Modern Classroom

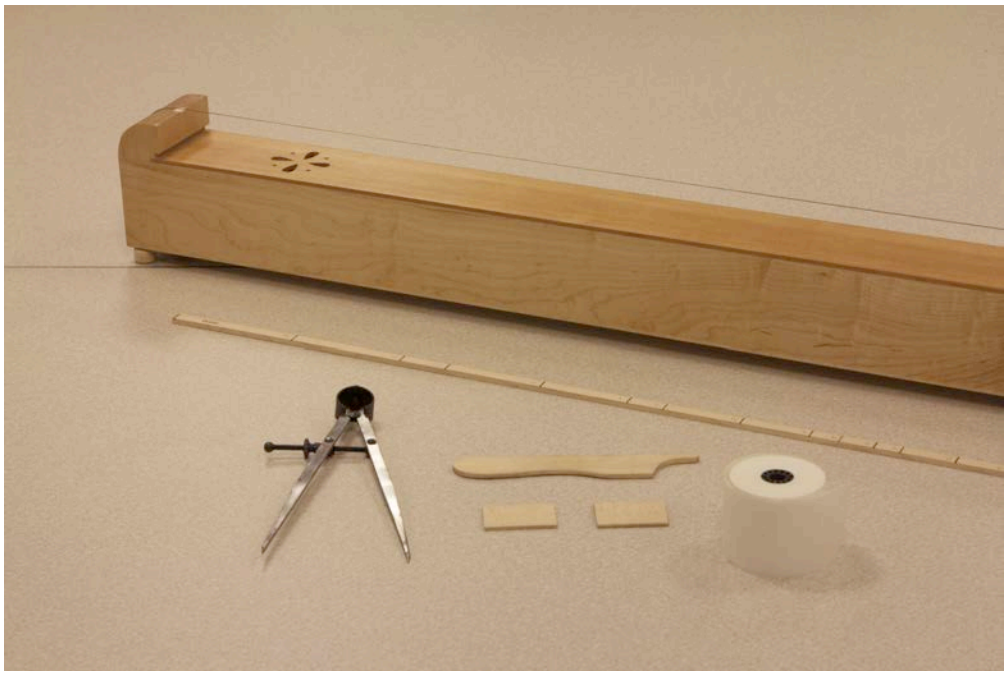
The monochord can be viewed primarily as a tool in making physically manipulable the numerical world that lies behind the musical one. It allows for the easy calculation and representation of various notes and intervals. It is, thus, a mathematical instrument on which different solutions can be tested, and the results of those solutions can be observed and weighed.

Much of the science embodied in the varied mathematical approaches to the monochord—or its conceptual foundations—is beyond the scope of a typical survey course, in no small part due to the complexity of the mathematical concepts. Few modern music students will be willing to deal with, for example, the 256:243 Pythagorean semitone. Besides, a full exploration of these mathematical concepts and their execution would demand far more time than can be given over to such an endeavor. Instead, we would like to propose a simple course module that highlights the basic theory and practice of the monochord, along with suggestions for more practical uses. While we have presented these lessons in rather ideal situations (an undergraduate course of about twenty students, a graduate course on the history of pedagogy for music education students, and at various conference workshops), we hope that they can also be adapted for larger classes and different situations.

Our goals for this lesson are fairly simple. The first is to introduce the concept of number and ratio as musical elements by demonstrating the simple derivation of intervals on the monochord. The second is to provide an experiential element to the students' understanding by guiding them through the construction of the Guidonian gamut using a simple method of division.

In addition to the monochord, the lesson needs simple dividers (one for each group of students), the completed division pre-marked on a stick (a more permanent version of the receipt paper), a set of movable bridges, and a roll of calculator tape or receipt paper (see **Figure 9**). In the absence of a monochord, a guitar with only one string can be used to demonstrate the basics of dividing the string, while the creation of the gamut can be done without the instrument.

Figure 9: From top: Monochord, Marked Stick, Divider, Bridges, and Calculator Tape.



A Primer on Sounding Number

We begin by reviewing with the students the basic information in their text about the medieval concept of number and sound, and of the central role of Pythagoras, Boethius, and ultimately Guido in the medieval speculative and practical traditions. In order to get them thinking about the physical properties, we ask them some simple questions in preparation for the session:

- How does one create an octave on a string?
- How does one create a fifth?
- How does one create the double octave?
- What are the principles involved in these processes?

To reinforce this, we use the simplest Pythagorean division scheme using only the ratios 2:1, 3:2, and 4:3. This can be done either by demonstration or by student involvement. The general placement is easy to do by eye, proving the intervals by playing the divided string:

- Using the monochord (tuned to a nominal G) and a movable bridge, demonstrate the 2:1 octave, then set a temporary bridge. Further divide that to create the double octave.
- Demonstrate 3:2 and 4:3 ratios to create D and C.
- To show the compounding and reciprocal quality of these intervals, set the D (3:2) with a temporary bridge, and then find the G (4:3) above that, comparing its placement with the octave G found in the first step.

This does two things. The first is that it makes physical the concept of number. And by having the students work through the problem, it clears up (at least for those who are not strong in math) the nature of the ratio—that it is best seen as a comparison of the part to the whole, not a true fraction or process of division.

Creating the Gamut

The next step is to have the students create the gamut using Guido's fast division, which we outlined earlier. The goal here is to get the students as involved as possible. To do this, set the monochord aside and prepare a paper "monochord" that the students in groups will use to mark the notes. For each group, prepare a tape long enough to have the entire string length of the monochord (or the guitar), with some room to spare. Using the pre-marked stick, mark the ends of the string, and then draw a line representing the string. Then, using a pre-marked stick, set the divider to one ninth of the string length, double-checking it by measuring the length of the string with the divider.

As we noted earlier, the choices made by each theorist about how to present his division can reveal how he intends the student to use the knowledge. This can equally be true for the modern teacher. The method that we use (see the Appendix for the class handout/overhead) is attractive for a couple of reasons, unrelated to Guido's use of the division. The first is that it doesn't start with a 2:1 or 3:2 division, so it immediately takes students out of their comfort zone by moving away from the ratios that they intuitively understand. The second is that it encourages for them to discuss various proofs of the intervals and to reinforce that there are multiple ways of deriving the same pitch using different ratios.

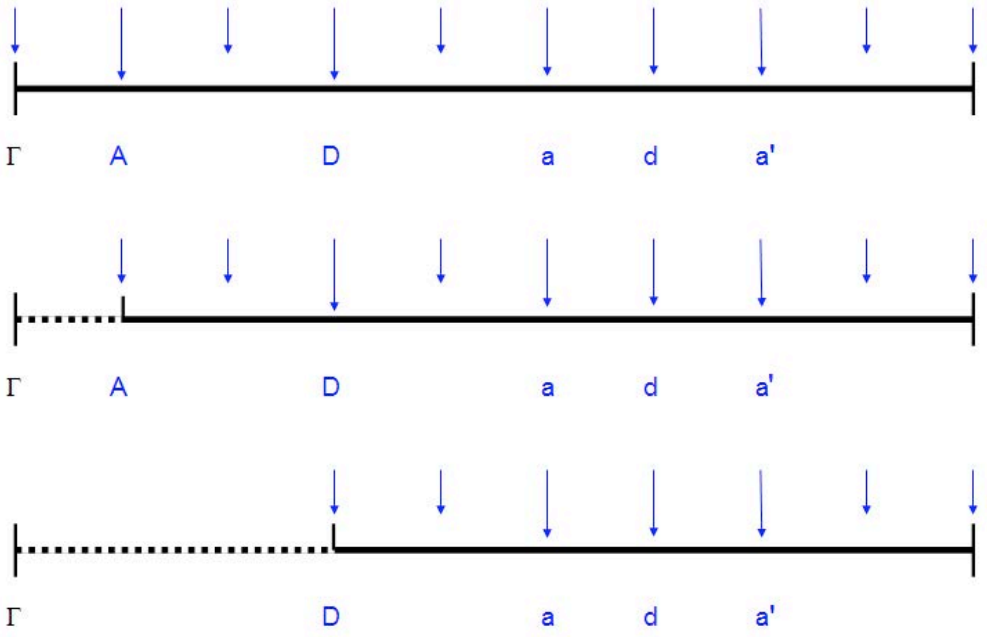
1. Deriving pitch classes A and D. The first division allows for the generation of pitch classes A and D. Set the dividers to one ninth of the entire string length. Starting from the bottom (left), mark A at 1/9, D at 3/9, a at 5/9, d at 6/9, and a' at 7/9. This creates a pure fifth between Γ and D (3:2) and a whole tone between Γ and A (9:8), along with their octaves and double octaves (see the first line of **Figure 10**). After the students have successfully made this division, you can explore some of the relationships behind it:

- The Γ–A second is marked at the 1st of 9 sections, leaving 8 sections, making a 9:8 ratio.
- The Γ–D fifth is marked at the 3rd of 9 sections, leaving 6 sections, making a 9:6 or 3:2 ratio.

After this is clear, some further observations can be made (looking at the second line of **Figure 10**). The A, since it was set at the first of 9 sections, contains 8 sections in itself, so:

- The octave a falls at the 4th of the 8 sections of A, proving the A–a octave (4:2/2:1).
- The D is marked at the 2nd of 8 sections, leaving 6 sections, proving the A–D fourth (8:6/4:3).

Figure 10: First division, for deriving pitch classes A and D.



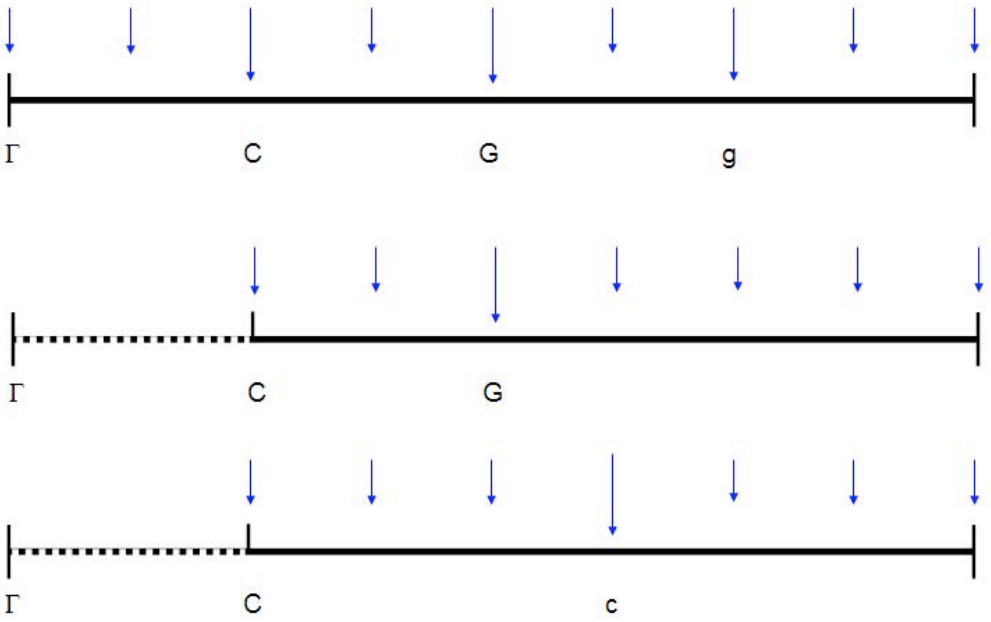
Finally, you can present them with a challenge: how can they prove the D to d octave? In order to do this, they will start on the D, noting that its length is divided in 6 parts, so that the small d falls on the third part, making a 2:1 ratio (see the third line of **Figure 10**, supra).

2. Deriving pitch classes B and E. The second division replicates the first, starting on the note A. This yields the pitches B, E, b, e, and b'. The benefit of this for the student is that it allows him or her to redo the process and observe it leading a similar solution. The challenge is, of course, resetting the divider from one-ninth of the entire string length to one-ninth of the length from A to the end, and it is here that they learn a valuable lesson in the compounding of error—one that will resonate with them in a discussion of the Pythagorean comma as a result of consecutive perfect fifths. We often find that the "dead time" that this process creates allows the students to comment and ask questions that solidify earlier concepts or open the door to more in-depth discussion. It can, in fact, be a very creative period in the class.

3. Deriving pitch classes C and G. The third division, which yields pitch classes C and G, allows the students to deal with the 4:3 ratio for the fourth. Go back to the entire length, and set the dividers to one eighth of the string

length. Starting from the bottom, mark C at 2/8, G at 4/8, and g at 6/8. This creates a pure fourth between Γ and C, 4:3 (see **Figure 11**).

Figure 11: Third Division, for deriving pitch classes C and G.



The demonstrations here are straightforward:

- The Γ–C fourth is marked at the 2nd of the 8 sections, leaving 6 sections, and making a an 8:6 or 4:3 ratio.
- The octave G is marked at the 4th of 8 sections, making a 2:1 ratio.

But it also presents two new challenges:

- How can one prove the C–g fifth?
- Where would one place the octave c?

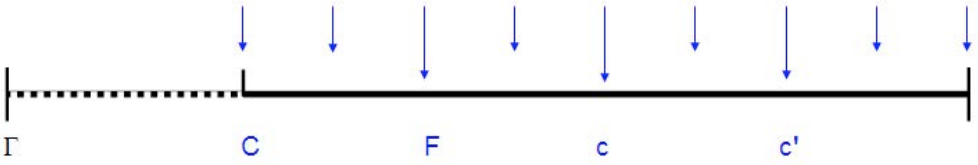
The first is proven by noting that the C is divided into 6 parts, with the G lying on the second of these, creating a 6:4 or 3:2 ratio.

Likewise, starting with the C, the student will quickly see that the octave c falls on the third of the 6 divisions. They can mark this pitch, and prove it with the next division, which (as you can see from **Figure 12**) creates this note while deriving the F.

4. Deriving pitch classes F and C. For this division, start at the note C, and divide the remaining part of the string length into eight parts. Starting at C, mark F at 2/8, c at 4/8, and c' at 6/8 (see **Figure 12**).

This is the same procedure as was used for the previous division, providing a 4:3 fourth and the octave and double octave of the C. The students will see that the c they marked in the last step matches the c created by the division. A few students will likely notice that the f could be placed at 5/8, making

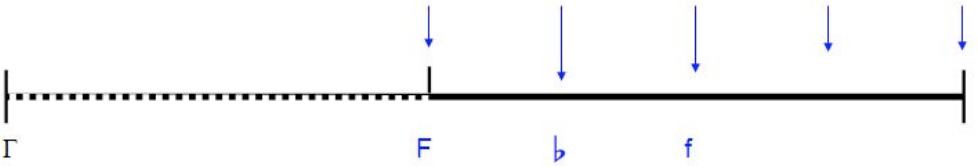
Figure 12: Fourth Division, for deriving pitch classes F and C.



a 2:1 octave with the F at 2/8. As before, they can pencil it in and check it with the final division.

5. Deriving pitch classes B♭ and F. For the final division, start at F and divide the remaining length into four sections (see **Figure 13**). Mark b♭ at 1/4, f at 2/4. This is the same procedure as the fourth division, creating another 4:3 fourth. But because the string length is shorter, we can set the dividers wide enough to mark fourths. Students will quickly see that the f they marked from the previous division matches the f derived here.

Figure 13: Fifth Division, for deriving pitch classes B♭ and F.



You now have a fully marked string with the complete gamut, with the exception of b♭' d' and e'.[30] These can easily be derived, and the students can be challenged to find as many ways as possible to do this.

It is difficult to get through the entire division, with the attendant discussion, in one fifty-minute class period. If everything works logistically, it's not hard getting through the first three divisions, and that is probably enough to solidify the concepts. Then, like your favorite TV chef, you can pull out the finished product—a pre-marked stick against which they can compare the pitches they have marked.

III. Beyond the Gamut: Further Uses of the Monochord

Having created a gamut, there are several directions that you can move the discussion, depending on time and student inclination. In a survey class, you can use the monochord once again to discuss Guido's solmization, the hand, and learning chant. We have found that the last thing a student wants to talk

30. See note 20 above.

about in history class is theory. But pedagogy is a topic they are intimately familiar with—as students and as future teachers—and are naturally interested in. So using the instrument as a practical teaching tool has a strong resonance for the student, and it provides a strong context to help them understand the musical world of the past. By using a simple chant, students can work together to reinforce the basic intervallic components of the chant, or to teach individual phrases. Exploring this simple and mechanical method can provide insight into the daunting task of teaching and learning the chant repertoire. It also makes the improvements represented by Guido's solmization system real and apparent. From here it is easy to make the transition to talking about the Guidonian hand, and students can gain a great deal of insight by using the monochord and the hand in conjunction.

In terms of pure content, we can't say that this adds to what we already do in a class focused on the Guidonian system. If we are lecturing, we are essentially rehearsing everything covered here—that in the "bad old days" students learned chants by rote (and were often beaten when they failed), and that it was the same routine for each chant that they learned. We will go on to sing the praises of Guido and his marvelous invention and discuss how it revolutionized the process of learning and teaching. And we will also tell them that, in the end, the chants were still held in the huge repository of memory that the medieval students were building day by day. On the other hand, the advantage to having the monochord is that the students have a physical connection to the process of the pedagogy that was part of the daily lives of their counterparts of a thousand years ago. More powerfully, perhaps, than the use of the Guidonian hand, this allows the students to step into the role of either the medieval student or teacher.

Another approach is to continue with different types of divisions to explore issues of tuning and temperament. One of the most practical for many musicians is to compare a pure major third to an equal-tempered third and a Pythagorean ditone already found. Find the ditone by going up two 9:8 intervals from a starting point. Find the pure major third by dividing the length of string from that same starting point into five, and going up one swing of the dividers, creating a 5:4 ratio. Equal temperament cannot be derived with the same method, as it is based on an irrational number: the twelfth root of two. Instead, you must compute it by measuring the length of the string. Measure the length of string to your starting note, and divide this by 1.259921 to find the length of string one major third higher. You can also work up by half steps, dividing the length of the lower note by 1.059463 five times in a row. To hear the consonance of a pure major third on a single string, divide the string into nine parts and put a bridge at the fifth part (this is the same point as the pitch "a" in Guido's division used above). Now you have five parts on one

side of the string and four on the other, so comparing one side to the other will produce the 5:4 pure third.

Christian Meyer's *Mensura monochordi* provides an admirable text for exploring other divisions. The analytic tables at the back of the book condense each division into chart form, making them easy to browse and execute on the monochord. Of particular interest are Prosdocimo's fully chromatic Pythagorean division, in which the flats are higher than the sharps (Meyer, pp. 113 and 188), an anonymous division which takes you nearly all around the circle of fifths, making it easy to complete the loop and see the Pythagorean comma (Meyer, p. 145), just divisions (Meyer, pp. 224–30), and divisions which use the Greek enharmonic genera (Meyer, pp. 11 and 56 among others).[31]

As teachers, we are constantly faced with the demands of "engagement" and we think there is no better route to engagement than through the kind of identification that a student gains from working with something like the monochord—an engagement both with the concepts and with the actual practice. The speculative becomes a little less so, and the practical takes on practical meaning.

Appendix: Using Guido's Division of the Monochord[32]

1. Deriving pitch classes A and D: Set your dividers to one ninth of the entire string length. Starting from the bottom (left), mark A at 1/9, D at 3/9, a at 5/9, d at 6/9, and a' at 7/9. You have created a pure fifth between Γ and D, 3:2, and a whole tone between Γ and A, 9:8.

- The Γ–A second is marked at the 1st of 9 sections, making a 9:8 ratio.
- The Γ–D fifth is marked at the 3rd of 9 sections, making a 9:6 or 3:2 ratio.

Note: The A that you created contains 8 sections, so:

- The octave a is marked at 4th of the 8 sections of A, proving the octave (2:1).
- The D is marked at the 2nd of 8 sections, proving the fourth (8:6/4:3)

How can you prove the D to d octave?

2. Deriving pitch classes B and E: Now take the distance from A to the end, and divide that into ninths. Starting from A, mark B at 1/9, E at 3/9, b at 5/9, e

31. These and other interesting divisions are also discussed in author Kate McWilliams' monochord blog: http://www.monochordtheory.blogspot.com.

32. The monochord is nominally tuned to G.

at 6/9, and b' at 7/9. You have created a pure fifth between A and E, 3:2, and a whole tone between A and B, 9:8.

- This is the same procedure as above, with a shorter string.

3. Deriving pitch classes C and G: Go back to the entire length, and set your dividers to one eighth of the string length. Starting from the bottom, mark C at 2/8, G at 4/8, and g at 6/8. You have created a pure fourth between Γ and C, 4:3.

- The Γ–C fourth is marked at the 2nd of the 8 sections, making a 8:6 or 4:3 ratio.
- The octave G is marked at the 4th of 8 sections, making a 2:1 ratio.
- How can you prove the C–g fifth?
- Where would you place the c?

4. Deriving pitch classes F and C: Starting at C, divide the remaining part of the stick into eighths. Starting at C, mark F at 2/8, c at 4/8, and c' at 6/8. You have created a pure fourth between C and F, 4:3.

- This is the same procedure as above, with a shorter string.
- Does your new c match the one from the previous division?

5. Deriving pitch classes B♭ and F: Finally, starting at F, divide the stick into fourths. Mark b♭ at 1/4, and f at 2/4. Now you have a pure fourth between F and b♭.

- This is the same, using a division of 4 rather than of 8. So the F to b♭ fourth is marked at the 1st of 4 parts, making a 4:3 ratio.
- The octave f is marked at the 2nd of 4 sections, making at 4:2 or 2:1 ratio.

Leeds International Jazz Education Conference (2012): Global Perspectives on the Practice and Pedagogy of Jazz History in the Twenty-First Century

Katherine Williams, Guest Editor

The Leeds International Jazz Education Conference (LIJEC) was established in 1993 to bring together leading scholars, musicians, and educators from around the world. The 2012 conference had the explicit theme of jazz education in the twenty-first century, leading to international discussions of the necessity of jazz education in today's environment, and the potential merits and pitfalls of such programs. Many topics were explored throughout the duration of the conference, including: the role of jazz singers' sound vocabulary in musical practice; teaching rhythmic improvisation by integrating traditional Brazilian and modern jazz concepts; the mechanics of jazz composition; the role of mentors in British jazz education; and interaction in John Coltrane's living room. In addition, percussionist Trilok Gurtu gave a fascinating keynote demonstration, and the National Youth Jazz Orchestra of Great Britain gave a workshop and concert.

In the closing plenary session, speakers from around Europe and North America were invited to explain their opinions on the importance of history in contemporary jazz education in their respective regions or countries. The opening statements of the speakers are summarized in the short papers that follow and give an overview of the main themes of the conference, as well as suggesting ways to move forward in jazz education.

UK-based independent scholar Brian Priestley suggests in his piece that today's jazz *teachers*, never mind students, do not have an appropriate breadth and depth of knowledge of early jazz. Jeremy Hepner (an instructor at the Teachers College, Columbia University in New York, and President of the Canadian Association for Jazz Education) addresses the tensions between Canada's proximity to the United States and its historical association with Europe in the formation in the formation of a Canadian jazz identity. Heli Reimann (a researcher and PhD fellow in the Department of Musicology at the University of Helsinki) offers a reading of canonized American jazz as the central focus of jazz education, suggesting that in Eastern Europe, musicians

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frequently cross generic boundaries. Estonian jazz, Reimann suggests, can be seen as peripheral to the established American jazz scene and its related pedagogical traditions. My perspectives as a Senior Lecturer in Jazz at the host institution (Leeds College of Music) are drawn from my doctoral research and explain the importance of three facets of contemporary British jazz education: transgenerational mentors (the informal practice of learning from the experiences and abilities of older musicians); learning from existing jazz recordings; and the study and performance of jazz repertoire in repertory bands. Anthony Bushard (an Assistant Professor in Music History at the University of Nebraska, Lincoln) concludes the selection with an evaluation of the role played by jazz history when developing a graduate program in jazz at his own institution. He explains his explicit intention of building bridges between the university and local audiences, in order to reverse the separation of the academy and the people.

The plenary session was provocative and resulted in much energetic and impassioned debate. The main topics that emerged focused on the difficult position today's jazz educators face internationally. First, given the progressive nature of jazz, how can a set of rules for teaching the music be defined? We agreed that elements of repertoire and existing traditions need to be taught, but jazz is frequently—more often than in other idioms such as rock and pop—defined by its innovators. Given also that all the speakers at this event brought different geographical perspectives—from countries whose musicians may have experienced jazz first, second or third hand—deciding what historical material to include in jazz education is problematic.

And while no one on the plenary panel or in the audience disputed the importance of jazz history and traditions in education, a jazz syllabus that is centered on historical practices is in danger of losing its contemporary drive. Indeed, the very word "conservatory" suggests looking back and preserving an existing music, rather than looking forward with inventiveness.[1] Canon formation in jazz has been a central problem to jazz discourse for many years now, and the issue shows no signs of receding. How do practitioners of a developing music acknowledge the music's history, while continuing to move forward? This issue is explored in several of the contributions to this piece.

Finally, in a music in which boundaries of form, timing, and harmony are extended in the name of development, how can we as international jazz educators create a syllabus and framework for assessment? If becoming a convincing and expressive jazz musician means breaking conventions, by definition any assessment criteria will be outmoded. The following papers suggest existing and proposed solutions to these dilemmas.

1. Audience members suggested alternative, more progressive, names for the institution of the conservatory; "visionatoire'" and "observatory" were popular choices.

Dan Morgenstern and Teaching the Early History of Jazz

BRIAN PRIESTLEY

One of Dan Morgenstern's most important contributions to jazz scholarship has been his work as director of the Institute of Jazz Studies (IJS), housed at Rutgers University—in particular through guiding its constant acquisition of books, periodicals, and historic artifacts. Morgenstern has recently retired from this post after thirty-five years, and I believe we can attribute to him the IJS's open-minded definition of its remit, from pre-jazz beginnings to the most contemporary developments, and its user-friendly attitude to researchers, as evidenced by the frequent and fulsome gratitude expressed in the introduction section of almost every serious book published on our music.

What has not been sufficiently emphasized, perhaps, is the example set by Morgenstern himself, as a journalist and editor (successively, of the periodicals *Metronome*, *Jazz*, and *DownBeat*). His own writing is not only a joy to read, but a mine of information, as well as enthusiastic opinion, and many of his more extensive articles were anthologized in the collection *Living With Jazz*.[1] In particular, he has been one of the few writers on jazz to have retained a comprehensive overview of the music's history, and to have covered with authority the period preceding the arrival of bebop. As an editor too, he encouraged a new generation of critics such as Gary Giddins and technical commentators such as educator David Baker, who continue to share his wide interests.

While Baker recently criticized "the treadmill of [jazz] students who become teachers who teach other students to become teachers,"[2] Morgenstern has gone even further in lamenting the fact that several generations of such teachers have only been interested in jazz from bebop onwards, and that their students therefore have had their own lack of interest in pre-bebop reinforced. (Rather than sully the open-minded reputation of IJS by airing his

1. Dan Morgenstern, *Living With Jazz* (New York: Pantheon Books, 2004).

2. Quoted in Monica Herzig, *David Baker: A Legacy in Music* (Bloomington: Indiana University Press, 2011), 323.

Journal of Music History Pedagogy, vol. 3, no. 2, pp. 175–77. ISSN 2155-1099X (online)

complaints publicly, he has confined them to private correspondence, for instance commenting about the lack of research into the use of jazz on radio in the early days that "Some doctoral candidates might well consider this largely unplowed furrow.")

The consequence of the narrowly focussed backgrounds of most educators is that we now have whole faculties ostensibly teaching jazz, who may have some knowledge of earlier achievements (possibly even some personal listening favorites) but no real grasp of the scope and sounds of early jazz. If the head of the jazz department sees some value in teaching the history of the music, then the individual teacher with least resistance to the role (and perhaps a broader collection of records and/or transcriptions than their colleagues) will be assigned the task of developing and delivering the jazz history module, with a minimum of involvement from other faculty members.

This, of course, is just as unsatisfactory as the situation described above by David Baker. It should be mandatory for every member of a jazz faculty to be intimate with the works of not only Charlie Parker and Duke Ellington but, for instance, Chu Berry and James Reese Europe. This is necessary not merely because of the cliché that "In order to know where we're going, we have to understand where we've been." It should be a simple requirement that, if we wish our subject to be worthy of academic status, our instructors should at least be educated about the history of the subject. My perception is that this is presently not the case in most institutions, to an extent that, in any other academic subject area, would be viewed as scandalous.

It is not unreasonable to suggest that, in the average three- or four-year undergraduate jazz course, a history component should be a core (in other words, not optional) element throughout each year of the course. It is perfectly understandable that, as in other subject disciplines, youngsters of average student age will not initially be motivated to learn about the history of their subject (unless their major is History, perhaps). I recall that, when I was a student at the university of this very city, Leeds, the French department regarded French political and religious history as being just as important as French language and literature—and rightly so. That did not make it any more palatable to me at that time to study French history, but it was an essential part of the undergraduate degree course and occupied an important part of our course load in each of the three years of the course.

The challenge is to make the study of jazz history meaningful, and not just a painful labor, for students who will, in the majority of cases, have initially no interest at all in hearing about the antecedents of their current heroes. If this challenge is met and solved, the intelligent teaching of the history can only benefit the learning and the maturing of the individual students' own performance. As teachers in this day and age, we need to remember the influence of the internet, and the fact that one-off performances by historical figures (for

instance, from 1950s American television) are now available on YouTube at the click of a search button. Unless we are able to provide students with a sufficiently wide contextual base from which to understand them, such random discoveries will go to waste.

As it happens, I have just been completing an article for a Dan Morgenstern festschrift to be published in the online journal *Current Research in Jazz*.[3] Because of my own interest, but also as a tribute to Morgenstern's contribution to our knowledge, it concentrates (although not exclusively) on jazz of the pre-bebop period and in particular its interaction with the blues and gospel performance techniques of the same period. It concludes with the (I hope) resounding words, "I am certainly not moralizing in a prescriptive way as to how the performance of jazz 'ought to' develop, whether more or less blues-oriented. But I am saying that jazz scholarship has been seriously deficient, not merely failing to address some of the factors I have raised but remaining blissfully unaware of them."[4]

3. http://www.crj-online.org/v4/index.php.

4. "Just Scratchin(g) the Surface: The Unacknowledged Commonality of Jazz, Blues, and Gospel," *Current Research in Jazz,* 4 (2012); http://www.crj-online.org/v4/CRJ-JazzBluesGospel.php.

The Relevance of Jazz History in the Twenty-First Century: Jazz Practice and Pedagogy in Canada

Jeremy Hepner

Jazz history in Canada is the story of a people and their relationship to a jazz identity; however, jazz in Canada has always been greatly influenced by its proximity to the United States. As Duke Ellington put it:

> I am well aware that a problem of communication exists between Canada with its twenty-one million people and us, the big neighbor to the south, with our two hundred and three million. Canada has a character and a spirit of its own, which we should recognize and never take for granted.[1]

Despite living in the shadow of the US, Canada has produced a number of major jazz innovators. Many jazz aficionados are often surprised to hear that some of the great names in jazz—including artists such as Oscar Peterson, Gil Evans, Kenny Wheeler, Maynard Ferguson, and Paul Bley—are in fact Canadians.[2] Our jazz heritage must be preserved and taught so that our music students become aware of the significant contributions made by Canadians.

As jazz emerged from New Orleans and began to move north in the early twentieth century, large Canadian cities located close to the border became stops for American touring ensembles. The first known jazz concert in Canada took place when the Creole Band from New Orleans performed in Winnipeg, Manitoba in 1914, as part of a Pantages Theatre tour. By the 1930s, jazz broadcasts from strong American radio signals and the new recordings flowing north from the United States, lifted jazz to new heights of musical popularity in Canada. The people were exposed to jazz and enthusiasm was building for this new rhythmic and improvised music.[3]

1. Edward Kennedy "Duke" Ellington, *Music is My Mistress* (New York: Da Capo Press, 1973), 138.

2. Terry Martin, "Jazz in Canada and Australia," in *The Oxford Companion to Jazz*, ed. Bill Kirchner (New York: Oxford University Press, 2000), 575–82 and Mark Miller, "Jazz in Canada," *Jazz Education Journal* 35, no. 4 (2003): C10–C12.

3. Mark Miller, *Such Melodious Racket: The Lost History of Jazz in Canada, 1914–1949* (Toronto: Mercury Press, 1997).

Journal of Music History Pedagogy, vol. 3, no. 2, pp. 179–81. ISSN 2155-1099X (online)

Many Canadian jazz artists have since created unique identities as jazz improvisers. Oscar Peterson is said to have been able to develop his style precisely because he was Canadian:

> Oscar Peterson's nationality is crucial to any assessment of his career . . . . Even more significant, perhaps, is that it explains why Oscar's formative years as a musician went unremarked, so that when he finally appeared in the United States, he burst upon the American jazz scene with the impact of a new planet.[4]

Moe Koffman, a flautist from Toronto, furthered the notion of a Canadian jazz identity. He wrote and recorded a song entitled "The Swinging Shepherd Blues," an international hit in 1958 making it to #28 on the Billboard charts. The song went on to be recorded over 300 times by many jazz artists including Count Basie and Ella Fitzgerald,[5] and by 1980, Koffman was recognized as the leader of a unique movement in jazz emanating from Canada:

> But it is in large part through Koffman's example and influence that modern jazz has in recent years become an undeniable and attractive element in Canada's culture, ranking on a level with the fiction of writers like Richard Wright or the art of painters like Christopher Pratt, not large and cosmic but small scaled and accomplished. There is even, thanks to Koffman and his fellow musicians, something now recognizable as a distinctively *Canadian* brand of jazz.[6]

Canada is a bilingual country with two distinct cultures, English and French, and as a member of the British Commonwealth, has strong ties to England. The Francophone population, centered predominantly in Quebec, holds strong cultural ties to France. Thus as a nation Canada, may stand at the crossroads of twenty-first century jazz history. Stuart Nicholson, writing about the future of jazz, has suggested that the globalization of jazz has placed European musicians in the lead regarding innovative jazz practices while Americans have remained focused on past jazz traditions like New Orleans style and swing.[7] This notion of Europe as the new creative jazz center and America holding a more traditional and historical practice and perspective is controversial; however, it should be noted that there is a distinct difference between these two perspectives and Canada, with a foot in each world, may have the opportunity to be a leader in jazz innovation by bridging the American and European approaches.

4. Richard Palmer, *Oscar Peterson* (New York: Hippocrene Books, 1984), 15.

5. Betty Nygaard King, "Swining Shepherd Blues," http://thecanadianencyclopedia.com/articles/emc/swinging-shepherd-blues (accessed February 8, 20113).

6. Jack Batten, "Jazz Boss," *Toronto Globe and Mail Saturday Night*, October, 1980.

7. Stuart Nicholson, *Is Jazz Dead?: Or Has It Moved to a New Address* (New York: Routledge, 2005).

Vancouver International Jazz Festival organizers have created opportunities to bring significant Canadian and European musicians together to compose, rehearse and to perform new works at their annual festival. Such progressive programming and partnerships also serve to demonstrate yet another need for the preservation of Canadian jazz history in the twenty-first century. As globalization links artists across the world, the documentation of Canada's jazz legacy will help illuminate its contributions to the international scene.

With its role in the early movements of jazz dating back to 1914, and its current support of the European jazz movement as evidenced with the festival collaborations, Canada is situated to become a key player on the twenty-first century world stage. Teaching of jazz history is relevant and vital, and will be the foundation of Canada's developing identity.

Jazz Education and the Jazz Periphery: An Example from Estonia

HELI REIMANN

In his widely cited article "Constructing the Jazz Tradition," Scott DeVeaux claims that academic jazz training was a part of the jazz tradition and has became one of the ways of defining jazz.[1] Since its inception, jazz has become an integral part of musical academia and needs no self-justification about its presence. The necessity to convince educational authorities of the importance of the field is no longer of interest to jazz educators: every self-respecting and "up-to-date" higher education institution of music includes jazz in its curriculum, to a greater or lesser degree. Even in Estonia, which is an academically conservative country, the Academy of Music opened its doors to courses in jazz in 2004.

Jazz education has reached a point in its history where certain contradictions and mythologies that previously preoccupied the discourse have been significantly reduced. Jazz is not conceptualized in terms of mythical bio-musical perception which portrays jazz performers as instinctive, emotive, and corporeal as opposed to rational, cerebral, and theory-based jazz academics.[2] Nor are the paradigms which emphasize certain biological or inborn qualities which underestimate or even deny the role of formal education in jazz learning supported. Also, the discursive rather than practical tensions related to describing jazz in polar terms like emotive/rational, cerebral/soulful, or to approaching jazz learning by dichotomies like art music/classical music, oral/written, improvisation/composition, formal/informal, system/creativity, mind/body polarity no longer add fuel to the debate. Jazz has firmly established its position in the academic establishment by now and has its own educational paradigms and pedagogical methodologies. Where discursive and pro forma jazz education has established its position, there is a

1. Scott DeVeaux, "Constructing the Jazz Tradition: Jazz historiography," *Black American Literature Forum* 25, no. 3 (1991): 525–60.

2. David Ake, "Learning Jazz, Teaching Jazz," in *Cambridge Companion to Jazz*, ed. Mervyn Cooke and David Horn, 255–69 (Cambridge: Cambridge University Press, 2002).

Journal of Music History Pedagogy, vol. 3, no. 2, pp. 183–85. ISSN 2155-1099X (online)

dichotomy that is more evident than ever before. Having no desire to be provocative, I would like to use the center/periphery divide here in order to make distinctions between two tendencies within the discourse of jazz education. What I have in mind with the central/periphery divide is not only the geographical placement of one or another jazz culture or the well-known opposition between American and European education traditions. Rather, the divide is perceived as a metaphorical distinction at the level of discourse between what we call the canonized or central jazz educational practice and the practices which are more fluid, less specifically determined and which thus stay in the symbolic periphery.[3]

Questions instantly arising in this context concern the relationship of the central educational and pedagogical paradigms that accepts bebop as the *lingua franca* of the jazz tradition. As Tony Whyton puts it, is the A-B-C (Aebersold-Baker-Coker) methodology which considers virtuosity as the highest aesthetical norm the appropriate educational situation in the imaginary periphery?[4] Is the (so called) central model the only possible way to think about jazz education nowadays? To what the extent does this model of jazz education meet the needs of jazz practices in the periphery?

Questions like these have no single (and univocal) answer. One way to respond is to articulate the interdependence of the jazz scene and jazz education. The academic study of jazz history and perforamnce should not be an isolated pedagogical system transmitting certain immutable aesthetical and stylistic paradigms, and educational practices; rather jazz education is an extension of the jazz performance. Since the contemporary jazz scene as a stylistically homogeneous musical setting has lost its relevance, jazz education, in order to maintain its position as a seedbed for the music scene, must also be flexible enough to react to the changing situations. Unfortunately, education is conservative and inert in its (very) nature and tends to be slow in reacting to changes and fails to keep up with developments and shifts in society.

The Estonian jazz periphery is an excellent way to illustrate the idea of a diverse contemporary musical scene. What we find there is a frequent crossing of genre borderlines by jazz musicians and a high level of collaboration between classical and jazz musicians—although the latter is one-sided phenomenon: it is mostly jazz musicians joining the art music projects and not the other way around. The musical versatility of Estonian jazz musicians is not a phenomenon of recent origin. It has been historically emblematic to our

3. See also Kenneth E. Prouty, "Toward Jazz's 'Official' History: The Debates and Discourses of Jazz History Textbooks," *Journal of Music History Pedagogy* 1, no. 1 (2010): 19–43; http://www.ams-net.org/ojs/index.php/jmhp/article/view/4/4.

4. Tony Whyton, "Birth of the School: Discursive Methodologies in Jazz Education," *Music Education Research* 8, no. 2 (2006): 65–81.

musical tradition—to the tradition where jazz has been a relatively less autonomous musical genre compared to those national styles (such as the United States) located in the center of the jazz tradition. Hence, we can ask what are the implications that this state of affairs has to music education? To provide suitable answers to those questions is not my task here but it is rather an assignment for our recently convened society of jazz educators who will hopefully be the guiding light for the future of our jazz education. That the changes are necessary was shown by my recent small pilot study which demonstrated the relatively high level of students' dissatisfaction with mainstream jazz methodologies. The main reason for their resentment is the irrelevance of bebop and standard-based methods to the local musical practices. This leads to suggestions that maybe the teaching/learning of certain skills and musical knowledge should be placed at the center of jazz pedagogy rather than focusing on one particular style. But are we as educators flexible and skilled enough to replace the old well-developed methods with new untested ones?

I would like to conclude my ruminations by turning once again to Scott DeVeaux.[5] By talking about (American) jazz history he warns us against exclusionary tendencies, grand narratives and canonization. Those thoughts are easily conveyed to the global context and to jazz education. Hence, the future of jazz education relies in inclusion rather that in exclusion, in diversity of methodologies rather than in one orthodox or central approach, and in decanonization rather than in canonization.

5. Scott DeVeaux, "Constructing the Jazz Tradition" (1991) and "Core and Boundaries," *The Source: Challenging Jazz Criticism* 2 (2005): 15–30; http://www.equinoxpub.com/JAZZ/article/view/1716.

The Relevance of Jazz History in Twenty-First Century British Jazz Practice and Pedagogy

KATHERINE WILLIAMS

In this discussion of jazz education, I contrast the development of traditions and practices in Britain with the practices of North America. In both cases, I categorize methods of jazz education into formal and informal schools of training, with the former focusing on early schemes of oral learning, and the latter on codified systems.[1] To my mind, history has a particularly important role in three main areas of jazz education: firstly, transgenerational mentors, by which I mean the practice of learning from the experience and abilities of older musicians; secondly, learning from recordings—and by this I mean existing jazz recordings, not Music-Minus-One™-type practice tools; and finally repertory bands. These three processes took slightly different forms in Britain than they did in the US in both informal and formal training, and they occurred after a delay of twenty years. After the first jazz performances in Britain in 1919, aspiring British jazz musicians met informally to play and study the repertoire. The formalization of jazz education in Britain took place in 1965, with the establishment of a degree program at Leeds College of Music and summer schools offered by the London School Jazz Orchestra (later the National Youth Jazz Orchestra).

The division of jazz education into informal and formal practices is highlighted by Gary Kennedy, in an entry for *The New Grove Dictionary of Jazz*.[2] In the United States, African-American teachers and institutions in the early twentieth century provided a basic musical grounding to such pupils as Louis Armstrong and Benny Goodman (informal), while high school and college degree programs evolved from the 1940s onwards, using systems derived from bebop methodologies (formal). In Britain, these processes took a slightly different form, and occurred after a delay of twenty years.

1. I borrow from Lucy Green's work on popular music education in making this distinction; *How Popular Musicians Learn* (Aldershot: Ashgate, 2002), 16.

2. Gary Kennedy, "Jazz Education," in Barry Kernfeld, ed., *The New Grove Dictionary of Jazz,* 2nd ed. (New York: Macmillan Publishers Limited, 2002), 396.

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The idea of a jazz mentor is a recurring theme in jazz history, as evidenced by numerous accounts from respected jazz musicians. Before the birth of formalized jazz education, aspiring jazz musicians learned from those around them. Such mentorships can take different forms, as pianist and educator Charles Beale explains:

> Apprenticeship often involves the learner in working with key mentors rather than teachers. Armstrong had King Oliver, for example. Mentors are sometimes just friends with big record collections or musicians seen in brief but crucial encounters where advice is given. They may also be older, more experience players in a band who guide the learner's developing practice. At the top level, mentors who had guided sidemen in the past include Art Blakey, Miles Davis, Woody Herman, and Buddy Rich.[3]

By referring to more experienced musicians already working in the field, it was possible to gain both skills and abilities, and contacts for gigs. British trombonist Eddie Harvey commented upon the importance of mentors in his informal jazz education experiences in the 1940s:

> If you get in a section and shut up, people will help you. Don't come along with an ego or anything like that, just sit there and be quiet and then the old guys in the section will be very kind and they'll show you what to do.[4]

The relevance of this historical approach to formalized contemporary learning and practice is evident in Harvey's written introduction to the Associated Board of the Royal Schools of Music (ABRSM) jazz syllabus (which was established in 1999). He implored students to: "Find a teacher or mentor . . . [because] all jazz musicians will tell you that the odd piece of advice from a respected jazz musician is invaluable."[5]

Recordings have also long been a source of inspiration for jazz musicians. The birth of recording technology and the emergence of jazz occurred within a few years of each other, and jazz recordings have helped disseminate the music, as well as cross race, class, and geographical boundaries, as David Ake has noted.[6] Britain, recordings played a particularly important role in early jazz education, because an officious Ministry of Labour ruling banned foreign (read American) musicians from performing between 1935 and 1955. Harvey and other jazz musicians around this time recalled being able to get hold of just one jazz record a month, and then transcribing it, copying it, and

3. Charles Beale, "Jazz Education," *Oxford Companion to Jazz*, ed. Bill Kirchner (Oxford: Oxford University Press, 2000), 759.

4. Eddie Harvey, interview with the author, Richmond, 2 March 2010.

5. Eddie Harvey, introduction to *Jazz Piano from Scratch* by Charles Beale (Sussex: Associated Board of the Royal Schools of Music, 1998), ix.

6. David Ake, "Learning Jazz, Teaching Jazz," *Cambridge Companion to Jazz*, ed. Mervyn Cooke and David Horn, 255–69 (Cambridge: Cambridge University Press, 2002).

absorbing the language through repeated plays. "That's where I got my language from in jazz," he says, "from listening to early Basie and a lot of Duke Ellington things. It was all done by ear."[7] Saxophonist John C. Williams confirms that this experience was common, recalling the understanding of jazz harmony he gained from studying recordings before formalized jazz education was available:

> I remember it was in 1960 I discovered . . . how the altered dominant chord works from listening to Dexter Gordon playing "Willow Weep for Me" on *Our Man in Paris* . . . . I realised he was just using all the upper [tones]—you know, sharp ninth, flattened ninth . . . . So I managed to sort of work it out by [ear].[8]

Now that jazz education is available in formalized conservatory courses around the country (and the world), transcription and stylistic reproduction from recordings still form a major part of syllabi, showing that this historical approach is important in contemporary jazz education.

Finally, repertory bands also represent an important way in which British and American jazz musicians learn from history. Alex Stewart documents the long history of repertory bands in America in his study of New York big bands, explaining the canonizing and legitimizing effects these ensembles had on the reputation of jazz.[9] From 1930s efforts such as the Bob Crosby Orchestra and Benny Goodman's "From Spirituals to Swing" concert in 1938, bands replicating and promoting the old jazz masters grew in popularity and prestige through the 1960s New York Jazz Repertory Orchestra, the 1970s National Jazz Ensemble, and New York Jazz Repertory Company. Wynton Marsalis is the most recent figurehead of repertory jazz in the United States. In Britain this phenomenon began in the 1950s, when a network of so-called "rehearsal bands" began in London, offering jazz musicians the opportunity to rehearse big band repertoire in informal settings that were not intended to lead towards performance. This tradition has continued, with all music colleges and most universities, as well as county systems, offering repertory bands. These groups offer the chance to play big band music from different eras and composers, capturing stylistic and idiomatic language through repeated performance. In this way too, historical knowledge informs contemporary jazz education and practice.

In conclusion, jazz is commonly regarded as a progressive and inclusive music. As these three examples have proven, though, progress can only be achieved if its historical foundations are acknowledged. And as these three

7. Harvey, interview with the author.

8. John C. Williams, interview with the author, Ratlinghope, 27 February 2010.

9. Alex Stewart, "3: The Rise of Repertory Orchestras," in *Making the Scene: Contemporary New York City Big Band Jazz* (Berkeley: University of California Press, 2007), 61–89.

examples have also shown, jazz education (and more broadly jazz *learning*) in Britain is firmly grounded in tradition.

A Model Jazz History Program for the United States: Building Jazz Audiences in the Twenty-First Century

ANTHONY J. BUSHARD

When charged with creating a graduate program in jazz studies at the University of Nebraska, Lincoln (UNL) in fall 2006, our committee determined that a thorough grounding in jazz history would be a crucial curricular component. At the same time, the university decided to take a role in helping jazz students to build audiences; we designed an annual "historical concert" that features music from either a seminal recording or a historically significant artist/group is into the curriculum.

The Jazz History Curriculum

Jazz studies students at UNL take a diagnostic jazz history test upon entry (similar to more general diagnostic tests offered at graduate institutions throughout the United States) and a full year of jazz history courses—origins and development to bebop in the first semester and post-bebop trends in the second semester—with plans for future seminars currently under consideration.[1] Naturally, jazz studies students comprise the chief cohort in the jazz history sequence, but the course is also routinely populated by individuals enrolled in more conventional (read "classical") performance trajectories.[2] Such a situation provides both a challenge and an opportunity to the instructor. For example, students more accustomed to the importance of the common score-and-CD anthology materials as necessary tools for analyzing

1. This is in addition to a more general jazz history course offered to non-music majors twice per year that routinely draws well over one thousand students in multiple sections.

2. A common intersection of these separate but related performance degrees occurs in the student—saxophone performance for instance—who desires to be stylistically "bilingual" on one's instrument and thus uses this class to enhance one's musical development in the same way that canonical period surveys have been for decades. Ken Prouty alludes to the benefit of such an experience to jazz players by quoting renowned Indiana University jazz pedagogue David Baker's position that "they [should] do it all" in *Knowing Jazz: Community, Pedagogy, and Canon in the Information Age* (Jackson, MS: University Press of Mississippi, 2012), 108–9.

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works of the western canon can become frustrated in an environment where discussions of multiple improvisations by a single artist on a single tune across several recordings are (1) routine and (2) can reveal the limitations of a transcription for any of those solos.[3] Moreover, in order to heed David Ake's caution against "Europhilia,"[4] and to expand the musical awareness of both "classical" and jazz artists, one could, for example, treat Middle Eastern musical influences on the Spanish "arrow song" tradition as it relates to Miles Davis's recording of "Saeta" or discuss similarities between George Russell's *Lydian Chromatic Concept of Tonal Organization* and aspects of Indian classical music theory. In other words, the more connections the instructor can make between artists, styles, eras, cultures, and trends in both "serious" and vernacular traditions, the more well-equipped the student becomes to succeed in an increasingly diverse and demanding performance world.

Building Audiences

During informal conversations among participants in the Leeds International Jazz Education Conference (2012), many lamented the contemporary state of jazz, evidenced largely through the decline in traditional performance venues and a corresponding civic disinterest in jazz. As David Ake correctly points out, the role of the urban club as the site where jazz is created and consumed has gradually been supplanted by the college jazz program.[5] This is especially true in Lincoln, Nebraska where the majority of live jazz events throughout a given year are either sponsored by the University on campus (or at other smaller campuses in town) and complemented at various nightclubs by members of faculty and student jazz ensembles performing in private bands or under official (university) auspices.[6]

If the academy is the chief generator of jazz in communities across the country, then the academy must also be a strong advocate for jazz and

3. One wonders if such frustration may have welcomed Lawrence Gushee at his oft-cited lecture at a meeting of the International Musicological Society at Berkeley in 1977. See Lawrence Gushee, "Lester Young's 'Shoe Shine Boy'," reprinted in *A Lester Young Reader*, edited by Lewis Porter (Washington, DC: Smithsonian Institution Press, 1991), 224–54.

4. Ake challenges Stuart Nicholson's plea for increased attention to European styles by noting jazz musicians have been influenced just as profoundly by South American, Indian, and African cultures; Stuart Nicholson, *Is Jazz Dead?: Or Has It Moved to a New Address* (New York: Routledge, 2005), 120–23. See also David Ake "Crossing the Street: Rethinking Jazz Education," in *Jazz/Not Jazz: The Music and Its Boundaries*, edited by David Ake, Charles Hiroshi Garrett, and Daniel Goldmark (Berkeley: University Press of California, 2012), 242.

5. Ake, "Crossing the Street," 238.

6. In addition, an interesting merger between sacred and secular spheres occurs at First Lutheran Church in Lincoln where each month "First Friday Jazz at First" finds local jazz talent performing at the church's gymnasium for patrons who gather at the church over the lunch hour.

undertake a concerted effort to reach all audiences, aficionados, and novices alike. As Ake makes abundantly clear:

> In some regions, on-campus concerts by visiting artists, student ensembles, and faculty groups represent some of the only live music available and so provide a service to the community while strengthening relations between "town and gown." Reaching these constituencies goes beyond simple goodwill for many schools. In an era of declining financial support from state coffers, it is no secret that colleges and universities must now raise a significant percentage of their budgets from private sources. Local audiences are increasingly seen as potential sources of that funding. And when institutions on campuses actively integrate their jazz education programs into their efforts to cultivate donor relationships, jazz's commentators should take note.[7]

The first step towards nurturing these future patrons lies in making their experience as audience members more fulfilling and meaningful. As mentioned above, each year at UNL we present a "historical concert" that features music from either an important recording or a historically significant artist/group.[8]

For two of our "historical concerts"—Duke Ellington's *Far East* (2007) and Benny Carter's *Kansas City Suite* (2010)—we decided to incorporate an interactive concert lecture: I interspersed my original commentary, enhanced by audio, video, and photographs, between suite movements. A few examples from the Ellington suite demonstrate the use of such a pedagogical tool. While the audience could read Ellington's account of "Our Lady of Lebanon" and its inspiration in "Mount Harissa,"[9] such a connection can be difficult to process for listeners, particularly given the movement's overt Latin American influences. However, when a speaker points out the number's allusion to the *habanera* and *bossa nova* and connects those dances to other musical depictions of "exotic ladies"—namely the aria "L'amour est un oiseau rebelle" from Bizet's *Carmen* and *The Girl from Ipanema*—and if the alto saxophonist quotes excerpts from each of those songs in his solo, all amidst projected images of "Our Lady of Lebanon," Helô Pinheiro, and Gabriella Besanzoni's performance of *Carmen*, the audience can begin to develop a more nuanced understanding of Ellington's and Billy Strayhorn's intentions. Even more

7. Ake, "Crossing the Street," 249-50.

8. For instance, last year we performed a concert tribute to Stan Kenton with a performance of *Cuban Fire* (in the original instrumentation) as the centerpiece and in 2011 we presented a retrospective of the Thad Jones/Mel Lewis Orchestra (now the Vanguard Jazz Orchestra) with arrangements by both of those bandleaders as well as more contemporary charts performed by the VJO with guest soloist Scott Wendholt (trumpet). For a sampling of those notes please see http://music.unl.edu/anthony-bushard.

9. See Edward Kennedy Ellington, "Notes on the State Department Tour, 1963," in *Music is My Mistress* (Garden City, NY: Doubleday, 1973), 329.

poignantly, because we presented this concert when the United States was more heavily entrenched in military conflict in both Iraq and Afghanistan, the music, accompanied by images, sounds, and eyewitness accounts of a sophisticated Middle Eastern culture that embraced contact with the West, challenged contemporaneous media accounts of a backwards and barbarous society.

In addition to the educational benefits, such community engagement can also foster recruiting inroads, thus reaping rewards from an administrative standpoint. Perhaps more importantly, whenever such a collaboration can connect the historian with the performer together on stage—therefore merging history with practice in real time—it demonstrates jazz education at its best to the student performers and the public consumers as well as provides an opportunity to make vital connections crucial to strengthening jazz history's role in jazz education going forward.

Richard Taruskin and Christopher H. Gibbs. *The Oxford History of Western Music*, College Edition. New York and Oxford: Oxford University Press, 2013. 1,212 pp. $85.00. ISBN 9780195097627

Oxford Anthology of Western Music. New York and Oxford: Oxford University Press, 2013.

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Robin Elliott

This lavishly produced (hardcover, wide margins, copious color illustrations), authoritative (the Taruskin/Oxford imprimatur), and comprehensive (1,123 pages of text) tome stakes a claim for domination of the

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textbook market for the undergraduate music history survey course sequence. For decades the Grout/Palisca/Burkholder textbook enjoyed an almost unrivalled position in that market.[1] In recent years, serious challenges to the hegemony of the Grout (et al.) textbook were mounted by Seaton, Bonds, and Wright/Simms, among others.[2] Taruskin/Gibbs now looks set to become the textbook of choice for instructors wishing to offer their students a serious, in-depth introduction to the history of Western music. Competitively priced, and with abundant supporting materials in print, sound, and online formats, it sets a new standard of excellence. I just hope that there are enough music history survey courses left standing at this late date to justify the expense and effort that went into the creation of this textbook and related materials. As I will explain at the end of the review, I have my doubts on that score.

Richard Taruskin's contribution to this book consisted of allowing Christopher H. Gibbs to make a one-volume reduction of his magisterial *Oxford History of Western Music*. It must have been no easy feat to shrink five volumes and 4,000-plus pages of material to one quarter of its size. We learn in the Acknowledgments (p. xxxi) that this College Edition was six years in the making, a testament to the difficulty of Gibbs's task. The opinion of over sixty music history professors was sought during the development phase of the project, which no doubt prolonged its gestation period. The work was overseen by an eleven-member editorial advisory board (including the four editors of the anthology volumes), a further tribute to the project's sterling academic credentials. Due credit must be given to Rebecca Maloy, who created the timelines, musical examples, maps, chapter summaries, and links to the three-volume anthology of scores with related recordings, all of which make the book user-friendly for the undergraduate students who will be its principal readers. Beautifully designed and produced to the highest standards, the book is a treat to look at, although wearying to hold for any length of time because of its substantial weight.

Ancillary resources for the textbook include a website, with a password-protected section for instructors, and three hefty volumes of music scores with matching volumes of recordings. As an added bonus, students are given free access to Oxford Music Online for eighteen months with their textbook purchase. The CD recordings are in MP3 format; be forewarned that most CD

1. J. Peter Burkholder, Donald Jay Grout, and Claude V. Palisca, *A History of Western Music*, 8th ed. (New York: Norton, 2010). The first edition, by Grout alone, was published in 1960.

2. Douglass Seaton, *Ideas and Styles in the Western Musical Tradition* (Mountain View, CA: Mayfield, 1991; 3rd ed. New York: Oxford University Press, 2010); Mark Evan Bonds, *A History of Music in Western Culture* (Upper Saddle River, NJ: Prentice Hall, 2003; 3rd ed. 2010); Craig Wright and Bryan Simms, *Music in Western Civilization* (Belmont, CA: Thomson/Schirmer, 2006; 3rd ed. Boston: Schirmer Cengage Learning, 2010).

players are not MP3 compatible. If you try, as I did, to play these CDs on traditional CD players the resulting noise is extremely unpleasant!

Given the vast, indeed almost limitless, amount of material that could be included in a textbook of this scope, what choices have been made and why? The prefatory matter in the book states that the focus is on "a lasting canon of musical excellence" (p. xx), and indeed, what are music history textbooks for if not to reinforce and validate the canon? But it also claims that the book "foregrounds the people" and "emphasizes the connections among works" while at the same time aiming to "cultivate ways of historical and critical thinking" (p. xx)—tall orders, to be sure. As Melanie Lowe has noted, the Burkholder textbook in its narrative account foregrounds the people, while Bonds concentrates on the music.[3] Taruskin/Gibbs aims to include it all—the people, the musical works, and the context—and to describe it all in more detail than ever before. In referring to the Bonds textbook recently, Taruskin criticized the fact that "following in the latest trends in textbook publication, [it] has very little continuous text but consists in the main of bite-sized verbal clumps."[4] No bite-sized clumps here. There is not a single sidebar in the entire book; every chapter unfolds as an unbroken narrative from start to finish. Indeed, the entire book is one continuous narrative, which opens and closes identically. The first sentence is "Our story begins, as it must, in the middle of things" (p. 1), and the last sentence is "Our story ends, as it must, in the middle of things" (p. 1,121). *Ma fin est mon commencement*, as Machaut stated. Taruskin/Gibbs state that this Machaut rondeau is notable for its "intellectual cleverness and intricacy of detail" (p. 109); the very same could be said of their textbook.

Just as with the *Oxford History of Western Music*, which devoted significantly more space to the music of the nineteenth and twentieth centuries, so too in this College Edition "the last two hundred years of music history are given enhanced coverage . . . the works that are most salient to today's students" (p. xxi). Just 463 pages are needed to cover the story from antiquity up to Mozart, whereas 660 pages are devoted to the music of the past 220 years. One could argue that this is simply acquiescing to one of the most striking developments in musicological practice of the past twenty-five years: the wholesale abandonment of research into the music of earlier eras. Of the book's thirty-six chapters, only six are devoted to Medieval and Renaissance music. Indeed, the very term Renaissance is abandoned. An interesting essay on "Periodization" at the end of Chapter Three concludes that "the term

3. Melanie Lowe, "Teaching Music History Today: Making Tangible Connections to Here and Now," *Journal of Music History Pedagogy* 1, no. 1 (2010): 45, n. 1; http://www.ams-net.org/ojs/index.php/jmhp/article/view/17/24.

4. Richard Taruskin, "Non-Nationalists and Other Nationalists," *19th-Century Music* 35, no. 2 (2011): 134.

[Renaissance] serves little purpose for music history except to keep music in an artificial lockstep with the other arts" (p. 127).

Gibbs sums up the approach of this book as follows: "The trick is to shift the question from 'What does it mean?' to 'What has it meant?'" (p. xxx). The inherent quality and value of the music itself, though still obviously important, is now less emphasized, while issues pertaining to reception history are given more weight. In short, a shift has taken place from a work-centred approach to a listener-centered one. There are discussions, sometimes quite detailed ones, of actual pieces of music in the book, but the main thrust of the work-centered component has now shifted over to the anthologies. The three-volume anthology, with nearly 2,000 pages of scores and detailed analytical and contextual introductions to each work, places the music itself front and center. Clear annotations in the margins of the textbook refer the reader to the relevant anthology scores and recordings, allowing for integrated use of these materials. There is ample information here to keep students occupied for a music history survey sequence of four courses spread out over two years. And good luck to those students who are expected to digest these materials in any less time than that.

Four composers are rated as important enough to be the subject of an entire chapter: Haydn, Mozart, Beethoven, and Schubert. Bach and Handel share two chapters, one on their instrumental music and one on their vocal music. Wagner and Verdi share a single chapter. Other composers given substantial treatment here include Mahler, Strauss, and Schoenberg. This predominant focus on Austro-German composers is to be expected. However, given Taruskin's exhaustive writings on Russian composers, it is surprising to see them being given comparatively short shrift. Stravinsky receives adequate treatment (but not more than that) in two chapters, one on modernism in France (Chapter 28) and one on neo-classicism (Chapter 30). But Rimsky-Korsakov, his teacher, gets barely a mention. Taruskin wrote recently that "as Russians are often shocked to learn, Rimsky-Korsakov is not taken very seriously by musicians and music scholars in the West."[5] This book does nothing to correct that attitude. The English do not fare well, either. Britten is given six pages, but Elgar rates just a single paragraph, half of which is about Hans Richter's efforts to promote his music. And don't get me started on Canada. Canadian instructors who adopt the textbook should be forewarned that their students will get the very clear message that it is their country, not England, that is "Das Land ohne Musik." Only two Canadians, Henry Brant and Colin McPhee, are mentioned in the book, and both men spent most of their career in the United States. (Incidentally, one Canadian is pictured but

5. Richard Taruskin, "Catching Up with Rimsky-Korsakov," *Music Theory Spectrum* 33, no. 2 (2011): 170.

not identified: the percussionist on the far right of a photo of the Steve Reich Ensemble on p. 1,075 is Russell Hartenberger, a former Dean of the Faculty of Music at the University of Toronto.)

To get the nitpicking over with, the musical example on p. 768 is missing its key signature after the first system; "were" on the last line of p. 40 should be "where"; and "in motet" at the bottom of p. 146 should read "in a motet." The book has clearly been meticulously copy-edited and proof-read, as these were the only three errors that I found.

The authors do give a rationale for the small amount of space devoted to composers (such as Rimsky-Korsakov and Elgar) who are popular with audiences but not with music historians, in a short essay titled "Innovation and Popularity—'Canon' versus 'Repertory,'" that is tucked into Chapter 26 (pp. 778–80). The essay ends on a confusing note, though. Having explained that composers whose music "supposedly makes stylistic progress" (p. 779) are the only ones to be granted canonic status, the essay ends by complaining "but that is a poor criterion of selection; it plays into the historicist purposes that more recent historiography, including this book, has sought to challenge" (p. 780). A fairly extensive discussion of Puccini follows (pp. 780-84). While devoting this much space to Puccini could be thought of as challenging the paradigm of stylistic progress, numerous examples could be cited to show how the textbook buys into that very same paradigm. This is the contemporary musicologist's dilemma: our narratives of music history are based on the canon, but once we tinker with that narrative by including "repertory" pieces as though they were "canonic," the inherent logical consistency of our enterprise is compromised.

The only major issue I have with the Taruskin/Gibbs textbook is that it at times fails to distinguish between interpretations and facts. Though not a pervasive problem, this is a persistent one that occurs from time to time throughout the narrative. At the bottom of p. 118, for instance, *Non avrà ma' pieta* is called "one of Landini's most popular ballate," as though this were a commonly known fact. Really? Popular with whom? Popular in his day, or now? How is this popularity measured? What evidence is there to support this assertion?

To consider the interpretation-versus-fact issue more closely, the case of Dufay's *Nuper rosarum flores* is instructive. The work is given an extended discussion in both the textbook (pp. 121–24) and the first volume of the anthology (pp. 100–1). I have used *Nuper rosarum flores* in my music history pedagogy course to examine the processes by which we write music history, and the relationship between the musical work itself and commentaries upon it, i.e. between fact and interpretation. In an article in 1973, Charles Warren stated that the isorhythmic proportions of Dufay's motet, which was created for the consecration of the Cathedral of S. Maria del Fiore in Florence in 1436

(fact), mirror the architectural proportions of the cathedral (interpretation).[6] Warren's interpretation duly made its way into music history textbooks as fact, and it was the story about Dufay's motet that was related to me when I was an undergraduate music student. In 1994, however, Craig Wright argued that Warren's analysis of the architectural proportions of the cathedral was deeply flawed, thus rendering his interpretation invalid. Wright proposed an alternative interpretation: the motet relates to the proportions of King Solomon's temple, as given in the Bible (1 Kings 6:1–20).[7] Textbooks, including Taruskin/Gibbs, have changed their tune accordingly, stating that the proportions of Dufay's motet relate to King Solomon's temple, and not the Cathedral of Florence—as though this were a fact. In 2001, however, the architectural historian Marvin Trachtenberg wrote a convincing essay to demonstrate that Dufay's motet may be referencing *both* Solomon's temple *and* the Florence Cathedral.[8] In the Oxford anthology, Rothenberg and Holzer's discussion of the Dufay motet mentions its relationship to both Solomon's temple and the Florence Cathedral, but without citing any secondary literature, they give the impression that these are facts, rather than interpretations, about Dufay's music. A student reading both the textbook and the anthology discussions of the Dufay motet may be confused: do the proportions of the music relate to the biblical temple, the Florence Cathedral, or both? The student will also likely miss the larger issue, which is that we don't know any of this for a fact. Interpretations of music and its "meaning" are provisional—at best we can offer an educated guess, a convincing argument, a solid theory, but nothing more than that. Dufay's music has not changed since 1436, but our guesses as to what he had in mind when he wrote it have. Students like facts and struggle with interpretations, but we need to do more than give them interpretations posing as facts. It is that struggle which will bring them to the very heart of our discipline, and show them why it remains an exciting, ever changing, rewarding adventure.

I have an enormous respect for what this book represents and what it accomplishes. The textbook and its ancillary materials offer as comprehensive and balanced an account of the mainstream of Western music history as we are likely to get. And yet when reading it, I found myself vaguely troubled by the whole enterprise, without quite knowing exactly why. I sensed it had

6. Charles W. Warren, "Brunelleschi's Dome and Dufay's Motet," *The Musical Quarterly* 59, no. 1 (1973): 92–105.

7. Craig Wright, "Dufay's *Nuper rosarum flores*, King Solomon's Temple, and the Veneration of the Virgin," *Journal of the American Musicological Society* 47, no. 3 (1994): 394–441.

8. Marvin Trachtenberg, "Architecture and Music Reunited: A New Reading of Dufay's *Nuper rosarum flores* and the Cathedral of Florence," *Renaissance Quarterly* 54, no. 3 (2001): 740–75.

something to do with the fact that such a comprehensive account of the history of Western music should appear at a time when we are busily dismantling the entire edifice—both musical and academic—upon which this account rests. It is both troubling and yet somehow mildly reassuring that I found the precise reason for my unsettled mood within the pages of the book itself. In a section titled "Aesthetics of Pastiche," which is about postmodernism in general, and Rochberg's String Quartet No. 3 in particular, the authors reference Umberto Eco's novel *The Name of the Rose*. They write, "The Italian writer and intellectual described the dilemma of 'belatedness,' a sense of coming after everything that mattered" (p. 1,098). The source of my mild unease was not my own belatedness (real though that is), but rather the textbook's. This superb account traces the progress of Western music from a Stone Age bone flute (pp. 1 and 3) to the operas of John Adams and Kaija Saariaho (pp. 1,117–21). But I cannot find solace in the fact that the story ends with a discussion of the late-twentieth century rebirth of interest in opera; not when we have already read that "opera in essence ceased as a major living genre" (p. 949) when its role and function were subsumed by cinema. No, these cultural artifacts—the operas of Adams and Saariaho, and indeed the textbook itself—will one day be read as the last gasps of music and musicology as we once knew it. Like the Easter Island statues, the Taruskin/Gibbs book will perhaps remain a puzzling artifact of a long-dead culture. No wonder I was disheartened as I came to the end of the book. "The implication is indeed depressing" (p. 1,098).

Jazz: The Smithsonian Anthology, Richard James Burgess, John Edward Hasse, and Daniel E. Sheehy, producers. Smithsonian Folkways Recordings, SFW CD 40820, 2010. 6-CD set with 200-page book, notes by thirty authors, $108.00.

PATRICK WARFIELD

The saxophonist John Zorn once quipped that jazz musicians "don't think in terms of boxes."[1] While it may be true that the most creative of jazz innovators have drawn on a range of influences, anyone who has taught a jazz survey knows that small boxes (swing, bebop, cool, free) can be immensely helpful in introducing this ever-adapting music to students. Containers of a larger sort, of course, inform any anthology of scores or recordings. Until now the most prominent container to define the history of jazz—for students and aficionados alike—was *The Smithsonian Collection of Classic Jazz* (*SCCJ*). This monumental box set was first issued on five LPs in 1973, and it traced a history of jazz from 1916 (Scott Joplin's piano roll of *Maple Leaf Rag*) to 1966 (Cecil Taylor's *Enter Evening*) through the eyes of a single compiler, Martin Williams. Despite receiving some minor updates in 1987 when it was reissued on five CDs, this collection helped to create—for better or worse—a remarkably stable canon of jazz players, pieces, and recordings. Textbooks began to tie their musical examples to Williams's selections, instructors centered courses around the anthology, and for many of us it was Williams's ears and insights that came to form the box bounding the semi-official history of America's improvised "classical" music.

In many ways this state of affairs was pleasant enough. Williams gave special attention to a number of important players (his original anthology happily dwelled on Jelly Roll Morton, Louis Armstrong, Duke Ellington, Charlie Parker, and Thelonious Monk). He provided multiple takes of several tunes (which allowed for close comparison in this performers' art), and his liner notes told a powerful story about the (mostly) African-American men who created this music. In other ways, however, Williams's collection fell short. By

1. John Zorn in Bill Milkowski, "John Zorn: One Future, Two Views," *Jazz Times* (March 2000), http://jazztimes.com/articles/20521-john-zorn-one-future-two-views.

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focusing so forcefully on a handful of innovative soloists, Williams missed a great deal of stylistic diversity. With the exception of some mighty singers, women were largely absent, as were non-black Americans, fusions with popular styles, and small solo or collaborative works. There have been loud calls to update the *SCCJ* ever since it went out of print in 1997. Rather than simply add the last quarter century of creative and scholarly work, however, the Smithsonian has undertaken the construction of an entirely new box. The result is *Jazz: The Smithsonian Anthology*.

There is much to admire about this new collection, but it is difficult to praise it without comparison to its predecessor. First there are the recordings themselves. In its first edition the *SCCJ* was woefully marred by some miserable LP transfers. Almost as bad, tracks were often truncated to focus attention on favored soloists. While some of these problems were corrected in the collection's 1997 remastering, the six CDs that compose the new anthology are a huge step forward in aural experience. These 111 tracks are exquisitely remastered and contain almost entirely complete recordings. Quite simply, this collection happily allows the music to speak for itself while providing a truly magnificent sonic experience. The quality of the recordings, coupled with a beautifully produced booklet, easily justify the $108 price tag. (To be perfectly honest, "booklet" is too weak a word. This 200-page reference work contains not only brief essays on each piece, but also detailed discographic information and period photographs for almost every track. Thankfully, it is also bound to lay flat.)

In addition to sounding quite different, the two collections vary considerably in their contents. Williams had worked to select recordings that showed a stylistic development from ragtime and the blues to free jazz. Along the way he lingered on favored artists. The 1987 revision, for example, included a string of eight Ellington recordings: *East St. Louis Toodle-Oo, The New East St. Louis Toodle-Oo, Diminuendo in Blue/Crescendo in Blue, Ko-Ko, Concerto for Cootie, Cotton Tail, In a Mellotone,* and *Blue Serge*. All but the first of these pieces was recorded between 1937 and 1941, a period during which Williams clearly found Ellington at the height of his powers. This assessment—in large part because of the *SCCJ*'s success—has become conventional wisdom. Despite its increased length, *Jazz* lingers much less, and it contains just four Ellington recordings: *Black and Tan Fantasy*, *Ko-Ko*, *Cotton Tail* (with Ella Fitzgerald), and *Isfahan*. This change not only helps to reduce Ellington's dominance, but as the tracks are now spread between 1927 and 1966, they better show the breadth and development of his skills.

The editors of the new collection also decided to follow a fairly strict chronological approach rather than placing similar tracks together as Williams had done. This change will make teaching the boxes of jazz considerably more difficult, but that may be a good thing as it better exposes the

music's surprisingly untidy history. When I first listened to the collection from beginning to end, I was pleasantly surprised to hear The Chico Hamilton Quintet, The Lucky Thompson Trio, Sonny Rollins, Sun Ra and his Arkestra, and Nat "King" Cole and his Trio back-to-back, thanks to a single year: 1956. In short, *Jazz* tells a radically new story. Its contents overlap only slightly with the *SCCJ*, and it arranges musical material to highlight stylistic diversity rather than force a sense of historical continuity.

The breadth indicated by the Ellington selections is mirrored in the new collection as a whole. Whereas the *SCCJ* reflected the tastes and biases of a single compiler, the contents of *Jazz* were selected by consulting some fifty educators, authors, broadcasters, and performers. Final decisions were made not by one listener, but by a committee of five (David Baker, José Bowen, John Edward Hasse, Dan Morgenstern, and Alyn Shipton). The new collection is much more inclusive as a result. Students and teachers alike will be delighted to find a much better representation of women, including artists like the Boswell Sisters, Mary Lou Williams, and Toshiko Akiyoshi. The music's reach outside the United States is also made much clearer with selections from Irakere (Cuba), Abdullah Ibrahim (South Africa), and Nguyên Lê (French-Vietnamese). Most happily for this listener's ears, the new anthology better recognizes jazz's connections to music beyond ragtime and the blues with Bunk's Brass Band (New Orleans), Tito Puente (Afro-Cuban), Masada (Jewish New York), and Medeski, Martin & Wood (jam/rock). Finally, the box defining jazz is now allowed to slip (if only slightly) into the twenty-first century, with a final selection from 2003: the Polish trumpeter Tomasz Stańko's *Suspended Night Variation VIII*.

Despite these improvements, as an educational tool *Jazz* does have its shortcomings. By their very nature anthologies are always incomplete. This one may have successfully expanded the box, but its holes are still significant. First, the anthology is, of course, already a decade out of date, and it scurries perhaps too quickly past fusions between jazz and more popular styles. Second, without the multiple takes that Williams had selected, the new collection makes it much more difficult to demonstrate the intricacies of improvisation. Most importantly, while Williams had endeavored to tell a unified history in his liner notes, the short essays that accompany each piece in *Jazz* were written by some thirty different authors, ranging from scholars to performers and from educators to journalists. While this sort of approach allows us to hear many different voices, there seems to have been little effort made at unifying these essays, and together they vary considerably in style, content, and quality. Some reflect on the mechanics of a recording session, while others examine issues of racial or musical content. Only a handful draw connections between multiple pieces, and many seem to be little more than efforts to justify an artist's place within this new canon. In short, Williams's collection may

have been limited, but it told its story in some detail. The new anthology casts a wider net, but does so with somewhat less coherence.

The new Smithsonian anthology may well come to represent a new box for jazz history, and a beautiful box it is. That said, it is perhaps worth reflecting on the continued value of such boxes. When the *SCCJ* was first released in 1973, it was welcomed in large part because it brought together a body of recordings, many of which had become quite difficult to obtain. Today, however, almost all of the material on *Jazz* is easily acquired in a well-stocked library or through Internet downloads. The educational value of such compilations is, as a result, considerably less clear. I doubt I will ever require students to purchase *Jazz: The Smithsonian Anthology*, as there are cheaper ways to make these materials available. The new collection will, however, now be my first answer when a student asks, "Where can I find more recordings, photographs, or information?" Perhaps the Smithsonian will come to see the new anthology not as a completed work, but as a jumping off spot for bigger projects. In his Foreword to the 1997 remastering of the *SCCJ*, Bruce Talbot recognized the collection's shortcomings and suggested that they were best dealt with "through recent and future Smithsonian jazz collections." *Jazz: The Smithsonian Anthology* is (to borrow from a track present on the collection) a giant step in the right direction. The Smithsonian has already launched an educational website, http://www.folkways.si.edu/jazz/mixer.aspx, to accompany the anthology. Perhaps the work of better explaining and expanding the jazz canon can continue there. Whatever the case, the boxes represented by these two collections are quite different, and the new anthology clearly offers some welcome additions to the story of jazz.

The State of the Academy: A Review Essay

Professor X, *In the Basement of the Ivory Tower: Confessions of an Accidental Academic*. New York: Viking, 2011. 258 pages. $25.95. ISBN 9780670022564

Richard Arum and Josipa Roksa, *Academically Adrift: Limited Learning on College Campuses*. Chicago: University of Chicago Press, 2011. 259 pages. $75.00.
ISBN 9780226028552
Paper ($25.00) ISBN 9780226028569

Robin Wallace

When I enrolled as a freshman at Oberlin in 1973, the college had just instituted a remedial writing course. Prior to that year, it had been assumed that students admitted to Oberlin (and many other elite colleges and universities) already knew how to write at the college level. There was no perceived need to teach writing as part of the curriculum. Seventeen years later, temporarily unable to find a college teaching job in musicology, I taught for two years at a small, undistinguished private high school in California. While there, I struggled to make contact with the most skill-deficient, poorly motivated students I have ever taught. Not only were they unprepared to write at their grade level, they were unable to construct sentences, spell correctly, distinguish parts of speech, or grasp the themes in required reading assignments. Producing an extended essay showing evidence of critical thinking was utterly beyond them. Furthermore, they had absolutely no idea of why they should want to do these things.

From my own experiences with English instruction at the college and pre-college level, it would be easy to conclude that standards in English instruction declined dramatically over a very short time and that the decline was already well underway by the time I began college. The two books under review both indict American higher education and, at least implicitly, compare its situation today with that of an idealized past when college students were better and professors had it easy. Apart from that, they are as different as can be. *In the Basement of the Ivory Tower* (henceforth *IBIT*) originated as an

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essay in the June 2008 issue of *The Atlantic*. Its author, who identified himself only as "Professor X," wrote colorfully and provocatively about the time he had spent as an adjunct instructor of English teaching evening classes at two local schools. The article was widely read and provoked much discussion, including a lengthy exchange on the AMS listserv. *Academically Adrift* is written by two sociologists with the assistance of several graduate students, and it received very wide press coverage when it appeared in 2011 because of its claim that despite the vast amounts of money being spent by American students to get a college education, most of them aren't learning very much. Unlike Professor X, whose evidence is almost entirely anecdotal, the authors of *Academically Adrift* provide copious documentation, presented in a sixty-eight-page Methodological Appendix, for their claim that critical thinking skills in particular are not being effectively taught. Both books are important for music history teachers because, like everyone in the humanities, we spend a great deal of time teaching our students to write and think critically. It is worth spending some time, therefore, examining the authors' claims and their relevance to our field. The books also raise broader issues about the integrity of higher education as a whole, and thus pose challenges with which anyone in the academy should be concerned.

IBIT, unlike *Academically Adrift,* which frequently lapses into mind-numbing jargon, makes for entertaining reading. Professor X writes like a frustrated novelist. In Chapter 5, titled "The Four Stages of a Plot," he reviews the life circumstances that have led him, as a middle-aged husband and father with too much house on his hands, to moonlight as an academic. His refusal to share his actual identity is understandable. ("I have . . . changed the names of the colleges where I teach, freely added bell towers, parking lots, and quadrangles, and moved lecture halls and gymnasiums around like an architecture student running amok with his models," he writes in the "Author's Note," p. ix). Nevertheless, the combination of anonymity with the fiercely personal nature of much of the writing in this book can be jarring, and one suspects that the real reason for the author's anonymity—apart from his desire to keep his jobs—is a certain degree of shame he feels because of the way he has worked a system whose goals he often finds indefensible.

His argument, in short, is that colleges are opening their classes to countless students who really have no business being there, and that it makes little difference whether their instructors pass them on the basis of inadequate performance or fail them as they deserve. Either way the colleges make money, and people like Professor X continue to be able to make their mortgage payments. Professor X describes writing so poor it invites disbelief, and standards of intellectual rigor so low that the resulting instruction is neither intellectual nor rigorous. He describes students utterly unable to understand the inadequacy of their work. Readers of the *Atlantic* article will recall his struggles

with himself over a research paper that clearly deserved to fail, but that he briefly considered awarding a C because the student had worked hard and obviously expected to pass—and they will recall the student's devastation upon receiving a failing grade after all. Despite such moments of compunction, Professor X shows little regret over his participation in a system that lets such students—most of whom do not fit the traditional profile—enroll in college in the first place, pushing them to acquire meaningless degrees for reasons remote from their lives and experience. (In both books, incidentally, President Barack Obama is presented as a major figure in this drive to get more and more students into college without considering the consequences.)

Richard Arum and Josipa Roksa's *Academically Adrift* focuses on the performance of a very different group of students, tracking the performance of traditional college-age students at two dozen four-year colleges and universities from Fall 2005 to Spring 2007. The authors use what they view as a sophisticated measurement tool, the Collegiate Learning Assessment, or CLA, to compare student performance at the beginning and end of this period. Unlike more familiar standardized tests, the CLA "consists of three open-ended, as opposed to multiple-choice, assessment components," and is intended to measure student skills in critical thinking, analytical reasoning, problem solving, and writing (p. 21). The results showed that "from their freshman entrance to the end of their sophomore year, students in our sample on average have improved these skills, as measured by the CLA, by only 0.18 standard deviation," or a seven percentile point gain (p. 35). "With a large sample of more than 2,300 students, we observe no statistically significant gain in critical thinking, complex reasoning, and writing skills for at least 45 percent of the students in our study" (p. 36). A secondary finding, which also received a lot of press coverage, was that many classes taken by the students in the study group did not require forty or more pages of reading a week and/or twenty pages of writing over the course of a term. Higher education, the authors found, does little to even out inequalities in academic performance that stem from students' racial or economic backgrounds; those who enter college with greater advantages generally leave that way as well.

Subsequent chapters deal in turn with differences in student backgrounds and educational contexts ("Origins and Trajectories"), variations in the college experience itself ("Pathways through Colleges Adrift"), and the extent to which college can shape student outcomes ("Channeling Students' Energies toward Learning"). One conclusion that was to some extent lost in the media coverage of Arum and Roksa's more sensational claims is that the quality of the college experience makes almost as much difference in student outcomes as does academic preparation. Students who are consistently challenged to think critically and to do what the authors consider significant amounts of reading and writing, who study alone rather than in groups, and who regard

college more as a learning experience than as a social one, do emerge with better cognitive skills and sharper intellects: things that are not just advantages in today's more competitive job market but are often essential to success.

This finding forms the pretext for the final chapter, titled "A Mandate for Reform," in which the authors write, "Over the past two decades, while the U.S. higher education system has grown only marginally, the rest of the world has not been standing still" (p. 123). The United States, long accustomed to regarding its system of higher education as the best in the world, is being overtaken and surpassed. What is needed is multi-tiered change both in higher education and in primary and secondary schooling. Given the emphasis that these authors place on CLA assessment, it is worth noting that they endorse William Damon's finding that students are entering college at a disadvantage because "our obsessive reliance on standardized test scores deters both teachers and students from concentrating on the real mission of schooling: developing a love of learning for learning's sake" (pp. 126–7). Those of us who teach music and other humanistic disciplines should be cheered by their argument that the actual value of a college education can be measured not just by students' acquisition of concrete job skills, but also by the development of their minds. While Arum and Roksa suggest that a shock comparable to that of the Sputnik launch in 1957 may be necessary, it is clear that if and when such a change does come, the humanities will play a central role.

What does this mean for our field? We might begin by playing devil's advocate, pointing out that music majors, in contrast to many other college students, tend to be a highly self-selective group seeking to master a clearly-defined skill set. Theoretically, at least, this makes them the opposite of the goalless, "adrift" students who are the focus of Arum and Roksa's study. Nevertheless, as I mentioned earlier, we often find ourselves, like Professor X, playing the role of writing instructor. Here our goals can be confusing. We want our students, faced with competing demands from studio teachers and ensemble directors, to devote sufficient time to coursework. Of the time that they do devote to our classes, we usually expect them to do some writing, although in most cases it probably falls short of the twenty pages a semester that Arum and Roksa believe to be essential. The same can be true for reading. Students in my semester-long course, which covers music from Beethoven through World War I, read about twenty pages a week from a very familiar textbook; this is at least 60% more than they would have been required to read from the first edition of that book, published in 1960, but still only half of what Arum and Roksa recommend. Crucially, though, they also spend a great deal of time listening critically to the music examples that accompany the reading, and that experience is also reflected in the writing assignments that they complete. At its best, the music history curriculum is ideally suited to

encouraging critical thought and intellectual engagement, as many of us continue to discover in novel and inventive ways.

Meanwhile, I suspect that the experiences of Professor X described in *IBIT* will resonate most clearly with those who teach music appreciation: a course that is offered at nearly every college and university in the country, that enrolls students indiscriminately regardless of background or experience, and that is often taught by adjuncts. A quick perusal of the standard textbooks also suggests that the music appreciation experience has changed demonstrably during the last generation or two, as has its constituency among students. In this respect, it differs from music history, which has always been required primarily of music majors, who are assumed to have prior musical training. When Joseph Machlis first published *The Enjoyment of Music* over fifty years ago, the average college student also had some limited experience listening to classical music. Machlis took advantage of that fact by beginning with the music of the Romantic period, which is what his students were most likely to recognize and like. This gave his book an immediate advantage over those that were arranged entirely in chronological order. Since students may no longer be familiar with Romantic music, or with any particular type of music, the chronological format has once again become common. Most current textbook authors, though, at least attempt to deal with music in popular styles and non-Western traditions. The typical student now emerges from the music appreciation class with a superficial knowledge of a wide variety of music.

But while the music appreciation course may look different on paper, its pedagogy has changed little. Now as then, it is open to students with no musical training: students are unprepared to listen to music at what might be called a college level, with no idea of why they should want to do so. Now as then, it can easily fail to challenge those students seriously to do what might be called "critical listening." In the 1939 essay, "Why Composers Write How," Virgil Thomson described such courses as participating in the "Appreciation Racket," arguing that their goal is not to introduce students to music at any deep level, but to promote an elitist view of what it means to be musically literate.[1] One might further argue today that despite significant shifts in course content, the profile of elitism has simply changed; as Shamus Khan recently suggested in *The New York Times* (Op-Ed, July 7, 2012), it is now considered chic to have expansive musical tastes encompassing many different styles and genres. In contrast to these "cultural omnivores," Khan writes, those with a strong preference for any one type of music ally themselves with the poorer classes.

1. Virgil Thomson, "Why Composers Write How, or the Economic Determinism of Musical Style," in *Virgil Thomson, A Reader: Selected Writings, 1924–1984*, ed. Richard Kostelanetz (New York: Routledge, 2002), 138–44.

Thus, faculty who teach music appreciation can neither look back to an idyllic past nor claim significant progress. Professor X's experiences in *IBIT* might lead us to ask whether such progress is possible in the diverse and baffling environment of current college teaching. Arum and Roksa's study might challenge us to wonder what that progress would look like. Meanwhile, those who teach music history should take encouragement from Arum and Roksa's endorsement of the importance of the humanities and of critical thinking skills, while perhaps also applying their conclusions to the way we teach students to listen, and not just read, critically.