Journal of Music Theory Pedagogy

Volume 22 Article 7

1-1-2008

Listen Up! - Thought on iPods, Sonata Form, and Analysis without Score

Brian Alegant

Listen Up!: Thoughts on iPods, Sonata Form, and Analysis without Score

Brian Alegant

Introduction

In a recent textbook Gary S. Karpinski summarizes two kinds of activities that have proven useful for developing listeners' skills in attending to form.[1] One activity involves listening guidelines (or questions to be answered in prose); the other uses some kind of visual representation. Both have the potential to highlight features of a work that will become clearer through repeated listening. Karpinski makes three assertions about developing listening skills: first, that students should focus on the recurrence of motivic and thematic materials, textural changes, harmonic instability, and key areas; second, that students need to listen *repeatedly*; and third, that the skills gained through acquiring "intimacy with even only a handful of works" can be transferred to unfamiliar repertoire.

This essay summarizes a pedagogical approach that uses iPods to teach students to analyze sonata forms without score.[2] It discusses the advantages of iPods and outlines the organization of the course, paying particular attention to the learning outcomes and the roles played by graduated assignments. My primary aims are to stimulate thought about the topic of analysis without score, and to suggest that it is both possible and rewarding to teach this particular skill. The strategies I advocate resonate strongly with Karpinski's three assertions above, namely an emphasis on close readings of a handful of works in order to develop specific skills that can be generalized; the use of various kinds of visual representations (ranging from virtually blank scores to highly annotated ones); and an ideal device for repeated listening—the iPod.

An earlier version of this essay was read at the annual College Music Symposium conference held in San Antonio, Texas in 2006. I would like to thank my colleague Jan Miyake for her valuable feedback.

[1] Karpinski, *Aural Skills Acquisition*, 2000, pp. 136–137; emphasis his.

[2] While there are many writings on sonata form and aural skills pedagogy, to my knowledge none deal in any depth with the topic of teaching sonata form without score.

The course in question was Music Theory III, the third semester of a two-year sequence required of our undergraduate music majors.[3] I divided the course into two units, one on 19th-century song and the other on sonata form. The harmonic vocabulary included the standard items found at the end of most tonal-music textbooks: chromatic sequences, Neapolitans and augmented sixths, common-tone (embellishing) chords, advanced mixture, enharmonic reinterpretation, and symmetrical divisions of the octave into major and minor thirds.[4] These items were introduced through repertoire, and reinforced through analysis and part-writing assignments.

The main objectives of the sonata-form module were to provide students with the skills to acquire a non-trivial understanding of movements without score and to develop their ability to analyze in "real time." By the end of the unit students were expected to hear the formal divisions and subdivisions of a sonata form (ideally, in real time); recognize vocabulary items and the large-scale harmonic structure; and identify and write convincingly about "marked" features.[5] They also were expected to apply these skills to unfamiliar repertoire.

I began the unit by analyzing several sonata-form movements *with* score. Once students understood the small-scale and large-scale events, they listened to the works *without* score until they could recognize and identify (in real time) the analytical details. Gradually the movements became longer and more complicated, as formally transparent piano sonatas gave way to increasingly chromatic and formally ambiguous works for ensemble and orchestra. At the same time the assignments became increasingly more difficult: the first few assignments provided many hints; subsequent ones contained fewer hints; and the final ones provided no hints at all. Overall, the syllabus unfolded this way:

---

[3] Theory III is the third and last tonal course in our "fundamentals" curriculum; Theory IV is devoted to post-tonal, atonal, and twelve-tone music. Students take zero, one, or two upper-division electives, depending on their specific degree program. Throughout the curriculum the theory courses are linked with aural skills courses that stress similar content and skills.

[4] Such as Aldwell and Schachter, *Harmony and Voice Leading*, 2002; Kostka and Payne, *Tonal Harmony*, 2004; Laitz, *The Complete Musician*, 2003.

[5] I borrow the term "marked" from Hatten, *Musical Meaning in Beethoven* (1994), and *Interpreting Musical Gestures* (2004).

Weeks 1 and 2: Listening with score to major-mode sonatas; vocabulary
Week 3: Major-mode sonatas with visual aids
Week 4: Minor-mode sonatas with visual aids
Week 5: Development sections, with and without visual aids
Weeks 6 and 7: Consolidation: listening without any visual aids

The iPods proved to be tremendous assets. Every student received a 20-GB iPod for the duration of the semester. Each iPod contained everything needed for the course: syllabus, handouts, assignments, analytical reductions, articles, recordings, and scores.[6] Students thus had immediate and unlimited access to materials; when listening they could pause, rewind, fast-forward, and repeat as often as needed. (A built-in timer allows a user to identify events to the level of the second—so that it is possible to pinpoint, say, an augmented sixth in the key of the submediant precisely at 4'33".) I used the iPods to store and catalog hundreds of sound files, thereby facilitating both inside- and outside-of-class listening.[7] A final bonus: since the iPods were collected at the end of the semester, copyright permission for recordings became a non-issue.

There were some disadvantages to using iPods, too. Creating a master play list was quite time consuming, since it involved

[6] While one can also store these files on ERES or Blackboard, I found it much easier to move multiple files to iPods than to upload them to a remote server. Moreover, ERES and Blackboard accounts have space limitations and tend to be slow during periods of heavy use. I also found it best to store scores as pdf files and to store sound recordings as mp3 files (on our server, mp3 files—while not ideal sonically—are more reliable than AAC and require much less space than WAV files). In case readers are wondering about the logistics: each student signed a "contract" at the beginning of the unit stating that he or she would be charged the replacement cost of the iPod if it were lost, stolen, or damaged. All iPods were returned, in working condition, at the end of the semester.

[7] I found it useful to construct individual play lists containing multiple performances. For instance, I had nearly a dozen different interpretations of the first movement of Beethoven's "Ghost" Trio (op. 70, no. 1), and multiple performances of the fourth movement of Schubert's posthumous A-major piano sonata (D. 959). I then crafted assignments that asked students to evaluate different interpretations through various lenses or analytical filters. iPods are much better suited for such comparative listening than swapping CDs or downloading files from a remote source.

importing and classifying files, standardizing play lists, and transferring the playlists to the individual iPods.[8] And the devices are not cheap: a 20-GB iPod at the time was $260. (One can now purchase an 80-GB video iPod for the same price.) Certainly, some institutional backing is required, such as an internal grant. I received funding for 22 iPods, one for each student, one for me, and one reserved for an emergency. Since then I have "recycled" the iPods from one class to the next.

Are iPods necessary to teach students how to listen without score? In a word: no. Students could always listen the "old-fashioned" way—by visiting the library. Or they could connect remotely to a course management system like Blackboard or another electronic reserve platform. Nevertheless, students took full advantage of the iPods' portability and versatility. They listened significantly more with iPods than previous classes did without them; indeed, they reported an average of six hours per week of listening to material related to the class (and, presumably, additional time listening to other music). This amount of listening resulted in a substantial engagement with the subject matter and deeper learning.

A FEW WORDS ON SONATA FORM

I will assume that readers are conversant with the principles of sonata form, and comfortable with some analytical approach or system (such as Caplin, Green, Hepokoski and Darcy, Ratner, or Rosen).[9] The terminology used here is based on the sonata theory of Hepokoski and Darcy. Theirs is a detailed and complicated genre-based approach to sonata form, one that places a premium on the notion of areas, or zones. My purpose here is not to rehearse its intricacies but rather to familiarize readers with its terminology.

Example 1 models a prototypical sonata form, with labels and

[8] I spent a considerable amount of time, for instance, standardizing the names of composers, works, and movements—in large part because students had difficulty finding movements if the key words were not coded in a similar fashion. Thus, I chose the tag "Mozart" instead of "Mozart, Wolfgang," or "Amadeus, Wolfgang Mozart," or "Mozart, W. A," etc. All in all, I estimate that it took about 50–60 hours to compile the playlists. While this start-up cost is daunting, it is a one-time expenditure: the playlist can now be instantly retrieved and easily amended.

[9] See for instance Caplin, *Classical Form,* 1998; Hepokoski and Darcy, "The Medial Caesura," 1997, and *Elements of Sonata Theory*, 2006; Ratner, *Classic Music*, 1980; Green, *Form in Tonal Music,* 1979; and Rosen, *The Classical Style*, 1997.

```
Exposition                Development //  Recapitulation  (Coda)
|| P — Tr      S — Cl  || (stages)  Rt   P — Tr     S — Cl       ||
       MC         EEC                          MC       ESC
```

P = primary zone
Tr = transition (functions primarily to increase tension)
MC = medial caesura (the dividing point in most expositions)
S = secondary zone (may contain multiple components, which are labeled S1, S2, etc.)
Cl = closing zone (commensurate with the onset of EEC and ESC)
EEC = essential exposition closure (the definitive authentic cadence in the exposition)
Rt = retransition
ESC = essential structural closure (corresponds to EEC in the exposition)

Example 1. A typical sonata form with a two-part exposition.

abbreviations for what Hepokoski and Darcy refer to as a two-part exposition.[10] The first half of this type of exposition contains the Primary zone (P) and the transition zone (Tr); the second half contains the Secondary zone (S) and the Closing zone (Cl). The medial caesura (MC), a significant rhetorical device, bifurcates the exposition. The signal event of the exposition is the definitive arrival of a perfect authentic cadence (PAC) in a non-tonic key (most often V in major keys and III in minor keys). By definition, this PAC marks the essential expositional closure (EEC), which is commensurate with and initiates the closing zone. The corresponding event in the recapitulation is the essential structural closure (ESC), which ushers in the closing zone of the recapitulation. A coda may follow (although many early sonatas lack codas).

[10] By standard I mean the normative two-part exposition, as discussed in Hepokoski and Darcy 1997 and 2006. Of course, readers know that there is no such thing as a universal or definitive model of sonata form.

A SAMPLE ANALYSIS

I began the unit with the third movement of Mozart's Piano Sonata in G major, K. 283, iii.[11] Example 2 provides an annotated score of the exposition. The score outlines the large-scale formal design and offers a few observations on phrase structure, chromaticism, and voice-leading details.[12] In my experience, the analytical annotations match what most sophomores can reasonably apprehend in a single class. One advantage of the movement is its formal transparency: the exposition, development, and recapitulation are relatively straightforward. At the same time, it contains some interesting harmonic wrinkles, including modal mixture, augmented sixths, and applied chords.

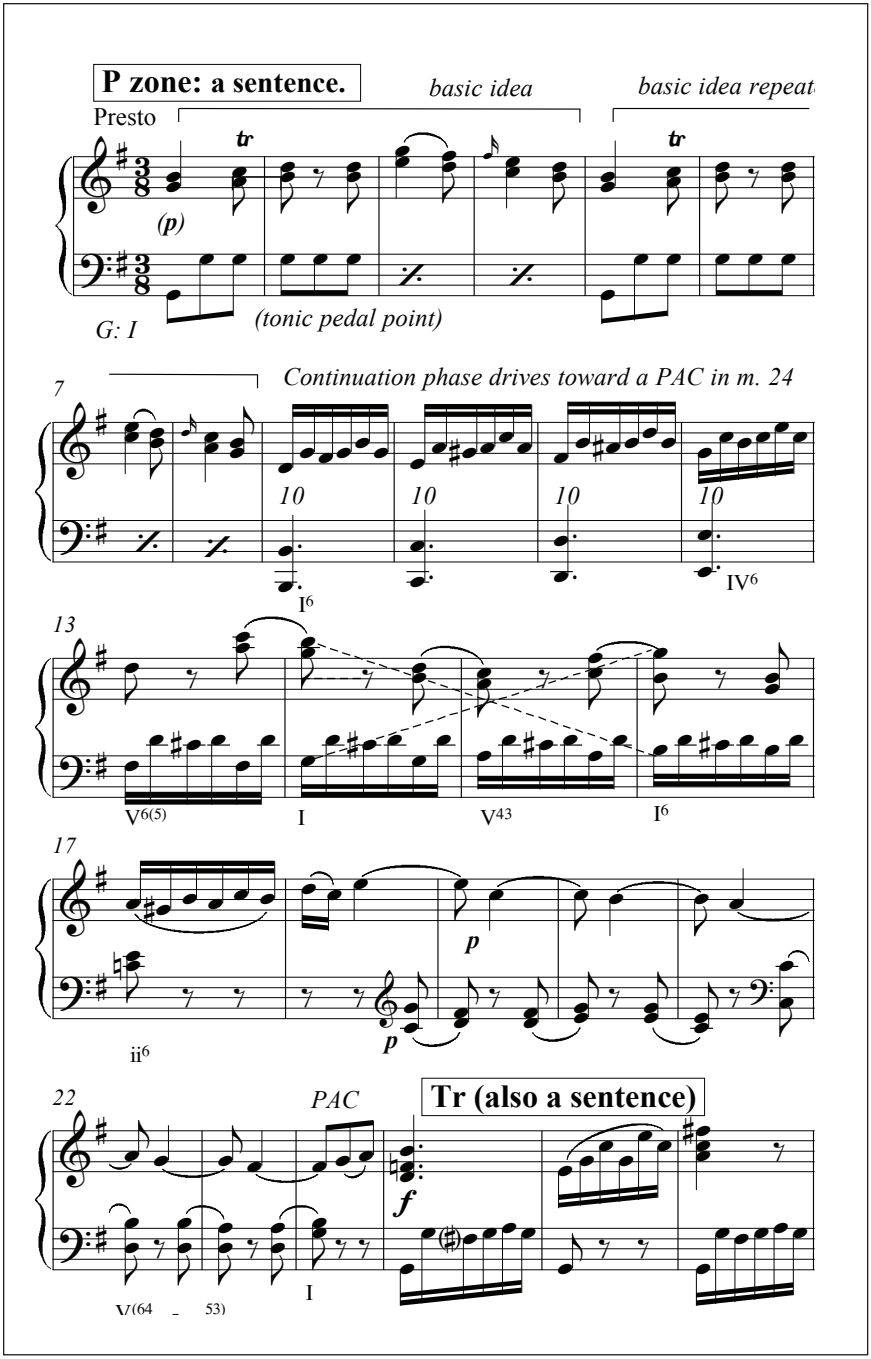
The P zone of the exposition unfolds a sentence, with a clear-cut presentation phase that includes a four-bar basic idea and its repetition. A four-bar hypermeter is immediately established; this hypermeter governs nearly the entire movement.[13] The continuation phase of the sentence (mm. 9–24) changes figuration and character. It features an ascending bass line (mm. 9–16) that extends I6 harmony, an expansion of ii6 (mm. 17–21), and a cadential-6/4 that leads to a PAC (mm. 22–24). The latter portion of the continuation is characterized by syncopation and rhythmic instability. The transition (mm. 25–40) immediately reasserts a sense of squareness. It touches on the subdominant (IV), moves through a fleeting C♯ (m. 28), and lands on V, which I hear as a half-cadence in G. The MC (medial caesura) encompasses the two eighth-note rests, which release the energy built up during the transition. The S zone is twice as expansive as the P zone. It is also structured as a sentence, with an eight-measure basic idea (mm. 41–48), its repetition (mm. 49–56), and a sixteen-bar continuation (mm. 57–73). The PAC in the key of the dominant (m. 73) marks the EEC and initiates the Cl zone.[14]

[11] Another ideal choice is the anthologized first movement of K. 333.

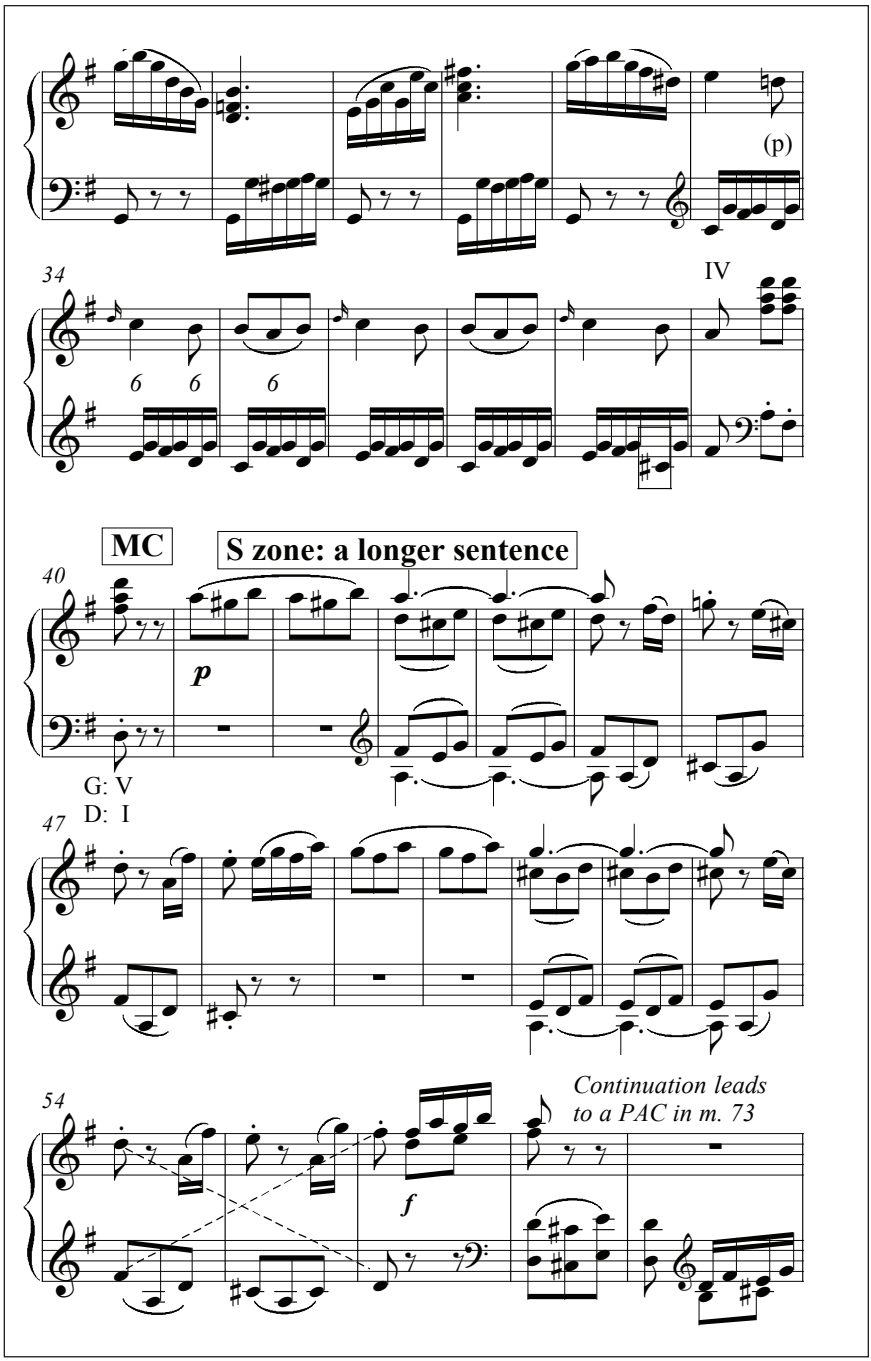
[12] Such chromatic events include the telling C♯4 in m. 38, which points to V, and the fleeting instances of B♭4 in mm. 65–68, which invoke modal mixture and foreshadow the inflection to d minor with which the development begins.

[13] Early writings on hypermeter and its analytical implications include Rothstein, *Rhythm and the Theory of Structural Levels*, 1981, and *Phrase Rhythm in Tonal Music*, 1989; and Schachter, "Rhythm and Linear Analysis," 1987.

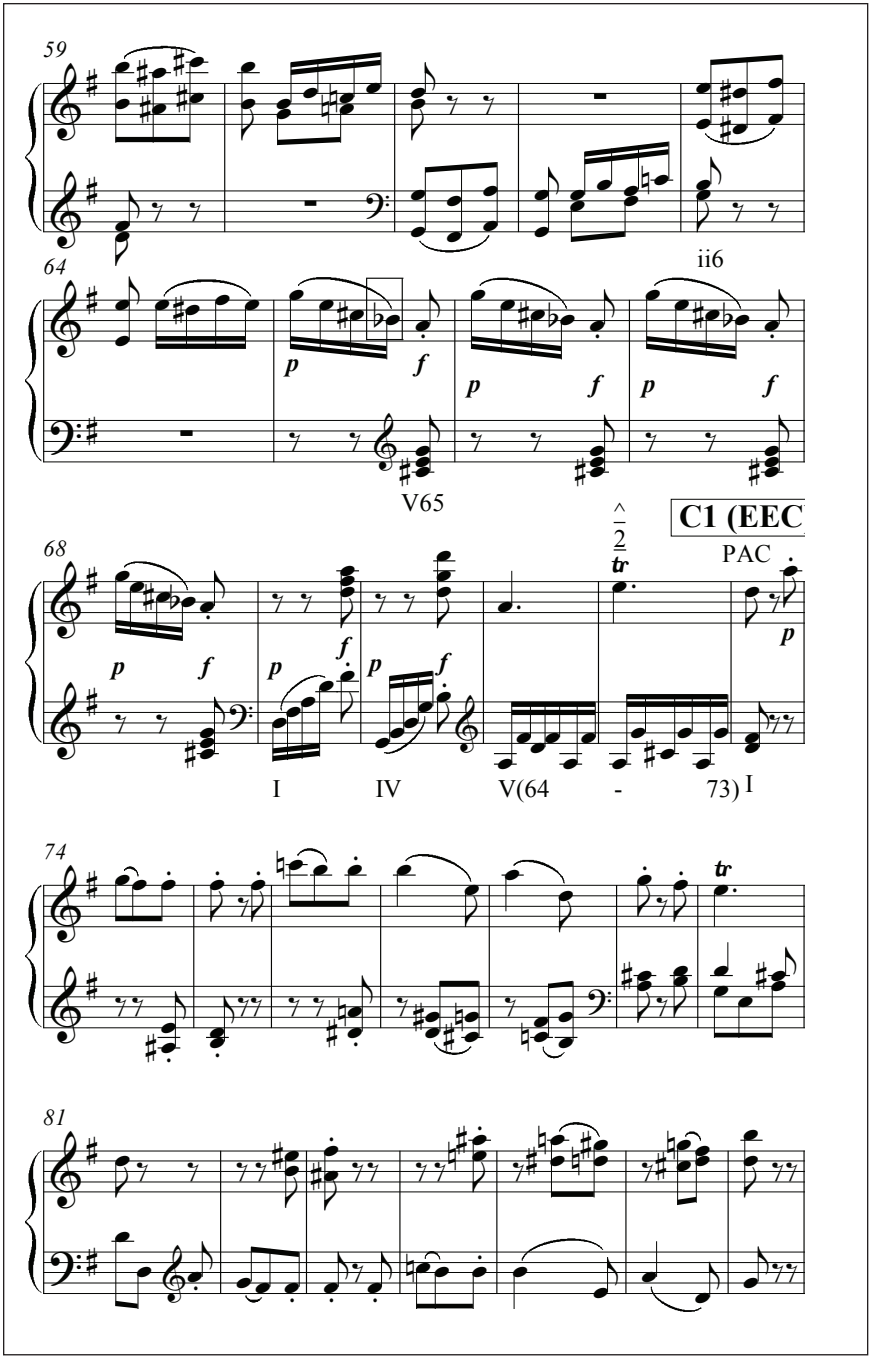
[14] One could argue that m. 97 and not m. 73 is the EEC, in which case the C1 zone in Example 2 would function as S2. This is a good talking point in class. I prefer the former reading, in large part owing to the trill.



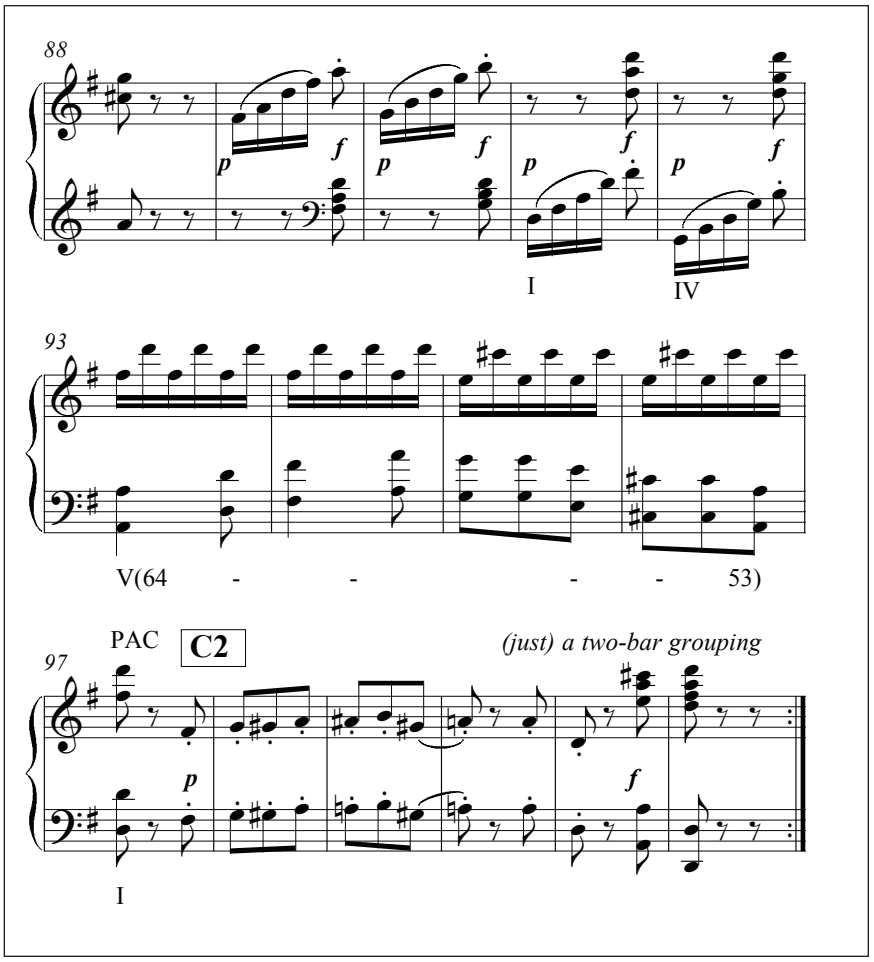
Example 2: Mozart, Piano Sonata in G major, K. 283, iii.



Example 2: Mozart, Piano Sonata in G major, K. 283, iii. *(continued)*



Example 2: Mozart, Piano Sonata in G major, K. 283, iii. *(continued)*



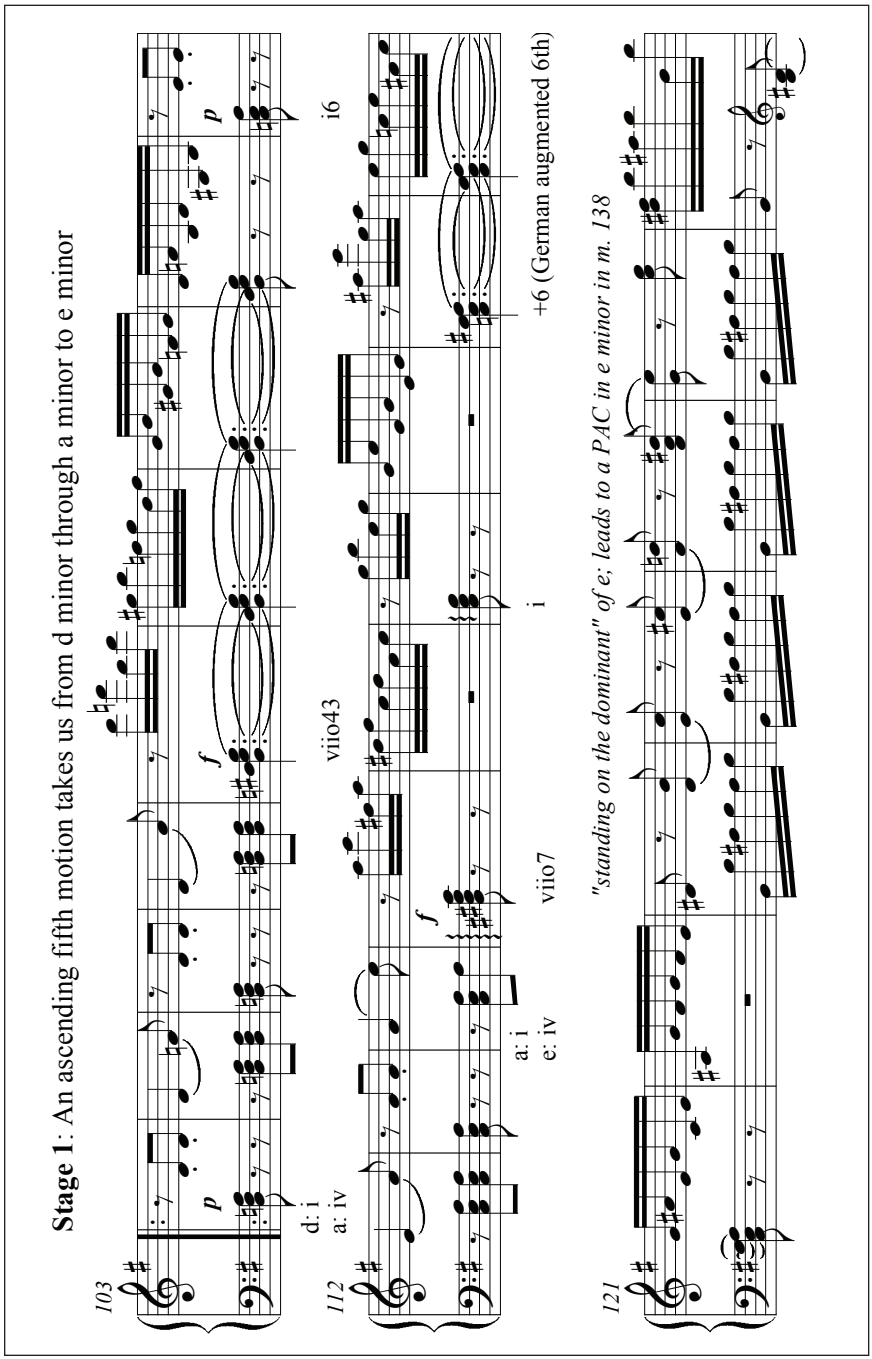
Example 2: Mozart, Piano Sonata in G major, K. 283, iii. *(continued)*

The Closing zone houses an eight-measure chromatic phrase (mm. 74–81) and a varied repetition of this phrase subject to invertible counterpoint (mm. 82–97). "Rocket" gestures (mm. 89–92) initiate a cadential flourish (mm. 93–96) followed by another V:PAC (m. 97). The C2 zone contains a four-measure chromatic idea (which is subsequently exploited in the development) and a two-measure cadential gesture that reaffirms, for the third and last time, a PAC in the key of the dominant.

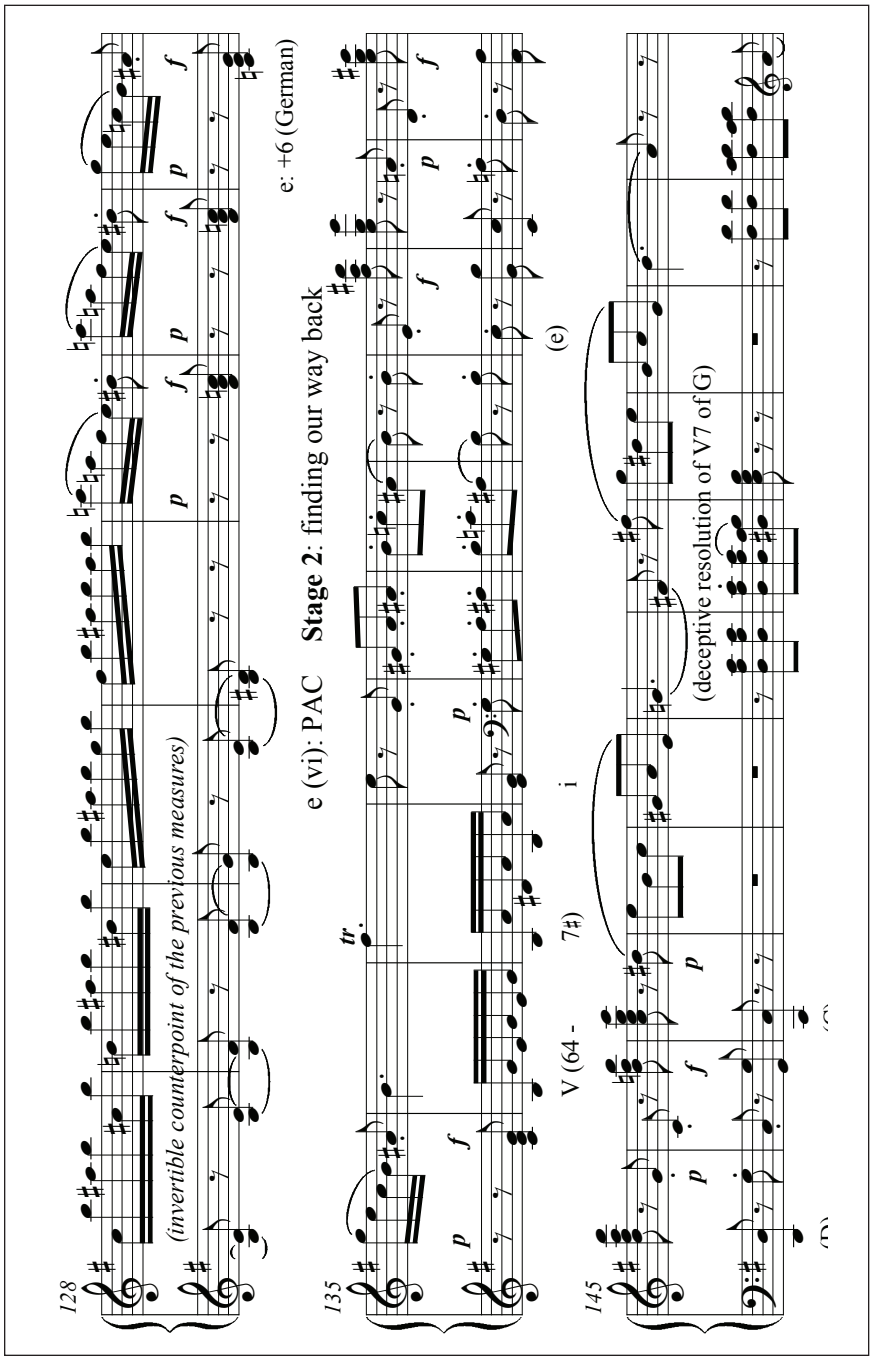
The development section is shown in Example 3.[15] (See the following pages.) I divide it into three stages based on motivic content, cadences, and changes in figuration, dynamics, register, and texture. (Parsing the development into autonomous "chunks" makes it easier for students to model the character shifts and large-scale harmonic organization.) Stage 1 unfolds a series of four-measure groupings. It begins on d minor (mm. 103–06), touches on a first-inversion a-minor chord (m. 111), and travels another fifth "sharpwise" in the direction of e minor (vi). The pull to e minor is enhanced by an augmented sixth (mm. 119–22) and an extended dominant expansion (mm. 123–31). There follows a brief detour (mm. 132–33), a re-gathering of momentum, and a conclusive PAC (m. 138). Stage 2 is fragmented and saturated by *p–f* juxtapositions and cadential gestures that allude to other keys. Stage 3 occupies the retransition, which interestingly enough lacks a strongly asserted C♮ (the 7th of V7).

The central issues of the recapitulation concern subtle changes in the P and Tr zones, the (mostly literal) transposition of material in the S and Cl zones, and the presence of a perfunctory coda.

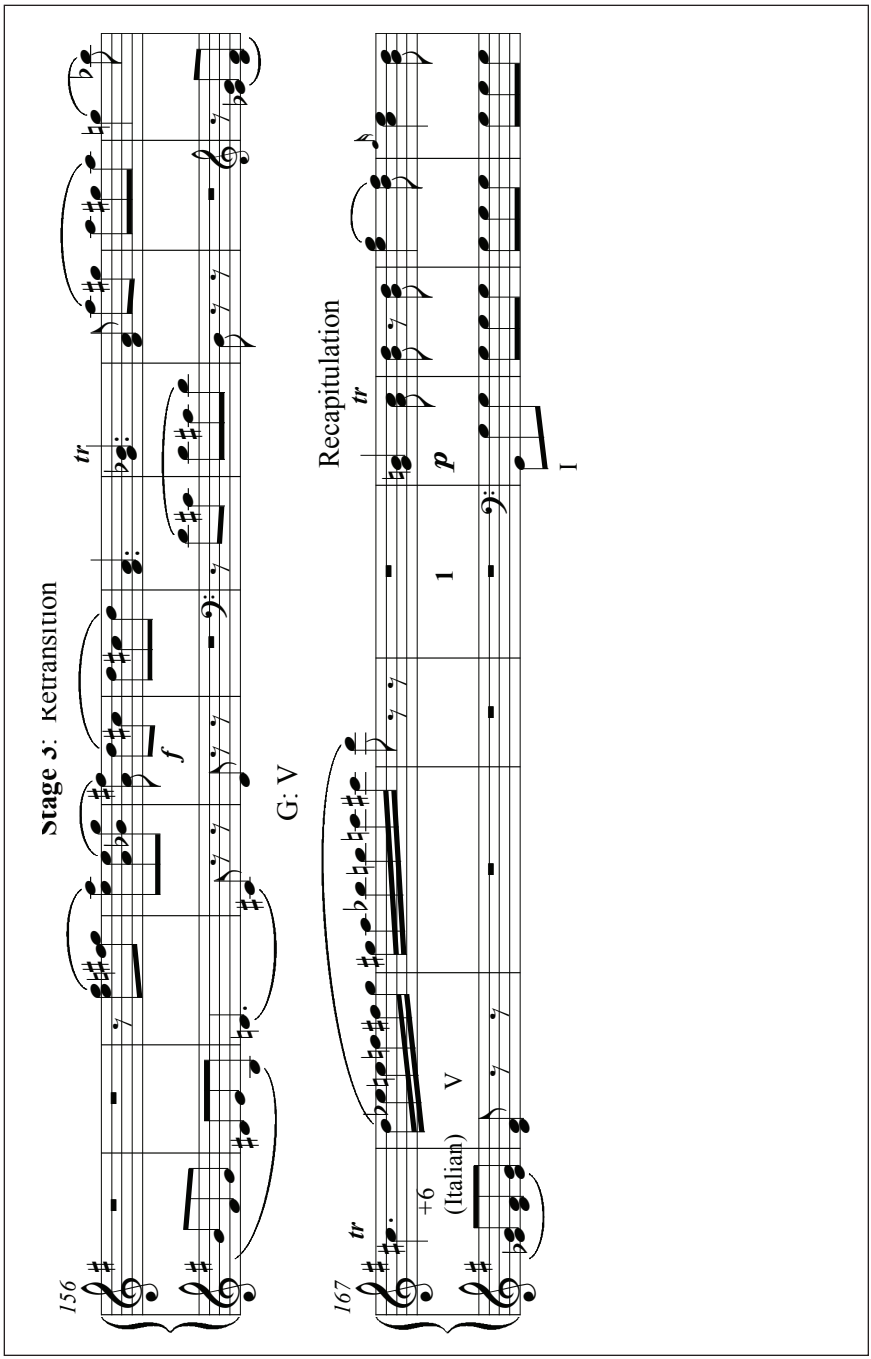
[15] In the interest of space I shall gloss over many analytical details, including the establishment of a four-bar hypermeter, the expansion of subsections, and several "extra" measures; the specific derivation of thematic material (most of which is taken from the transition zone and the cadential gesture at the end of the exposition; the absence of P and especially S zone material is intriguing); and the references in mm. 159–66 to the B♭ near the end of the closing zone of the exposition.



Example 3: Development Section of K. 283, iii



Example 3: Development Section of K. 283, iii *(contiinued)*



Example 3: Development Section of K. 283, iii *(contiinued)*

Listening with score, consolidating with visual aids

Once students understood the basic principles of sonata form and the characteristic features of this movement, I used visual aids to consolidate the analysis and help them internalize small-scale and large-scale features. To illustrate, Example 4 represents a timeline or flowchart for the movement.

Exposition		
P	0:00; 1:01	sentence: 4 + 4 + 8 measures
Tr	0:14; 1:15	
MC	0:23; 1:25	I: HC
S	0:24; 1:26	also a sentence, but longer
C1	0:43; 1:44	beginning of closing = EEC repeated w/invertible cpt.
C2	0:58; 1:59	another confirming PAC begins in d (v), modulates
Development		
	2:13	a *forte* +6th chord in e minor
	2:23	PAC in e minor (vi)
	2:24	Rt (back to V)
Recapitulation		
P	2:40	return to tonic and opening tune
Tr	2:59	
MC	3:09	
S	3:10	
C1	3:28	*ESC*: essential structural closure

Example 4: A sample early assignment: Mozart, K. 283, iii

The assignment asked students to provide times for the main formal divisions and harmonic arrival points. It also reinforced many of the analytical details that were addressed in class.[16] I included a

[16] The actual assignment did not provide the times; they are included for reference. These times match the performance by Ivo Pogorelich on Deutsche Grammophon 437762–2. His quirky, extroverted, and unconventional performance contrasts strikingly with the interpretations of Mitsuko Uchida (Philips 412 122–2) and Malcolm Bilson (Hungaroton HCD 31010). Such differences lead to lively discussions and provocative essays or reaction papers. I should add that students were on their honor not to use score to complete the assignment.

Listen to the movement several times *without score*, and enter times for the formal divisions at the spots indicated below. When finished, check your work by studying the movement *with score*.

Exposition

P	0:00; 1:29	sentence; *ff* summary 0:20, 1:49
Tr	0:28; 1:58	wanders, moves to V of III
MC	0:42; 2:11	V of III extended
S	0:51; 2:19	sentence; III
EEC/C	1:18; 2:28	

Development

Pre-core	2:59	begins in I (!)
Core	3:10	moves to iv (f minor)
Rt	3:43	standing on V

Recapitulation

P	3:51	sudden *ff*; sentence
Tr	4:14	note: a flat key
MC	4:28	V of iv/IV
S	4:35	IV (F major!)
	4:48	corrected to i; *sub. f*
ESC/C	5:17	
Coda	5:26	just two measures

* * *

Also: Write one paragraph on unusual features of the S zone in the recapitulation, and two paragraphs on hypermetric irregularities. Indicate the precise times of these passages.

Example 5. Beethoven, Sonata op. 10, no. 1, i

brief summary of the exposition at the top of the assignment, as a reminder of the large-scale structure; I am stating it below in the text rather than crowd the example. It read: The P zone is a sentence; you can conduct it (and nearly all of the movement) in a four-bar hypermeter. The move from to the Tr is somewhat tricky. The Tr zone begins at 0:14, with a change in figuration, and moves from the tonic to the dominant. The *medial caesura* (MC) is the

noticeable break in the texture at 0:24. The S zone is also a sentence, but the basic idea and its repetition are *eight* measures apiece; the continuation is also expansive. The PAC in the dominant at 0:44 is the *EEC*, or essential exposition closure. This, the defining event in the exposition, confirms the new key area.

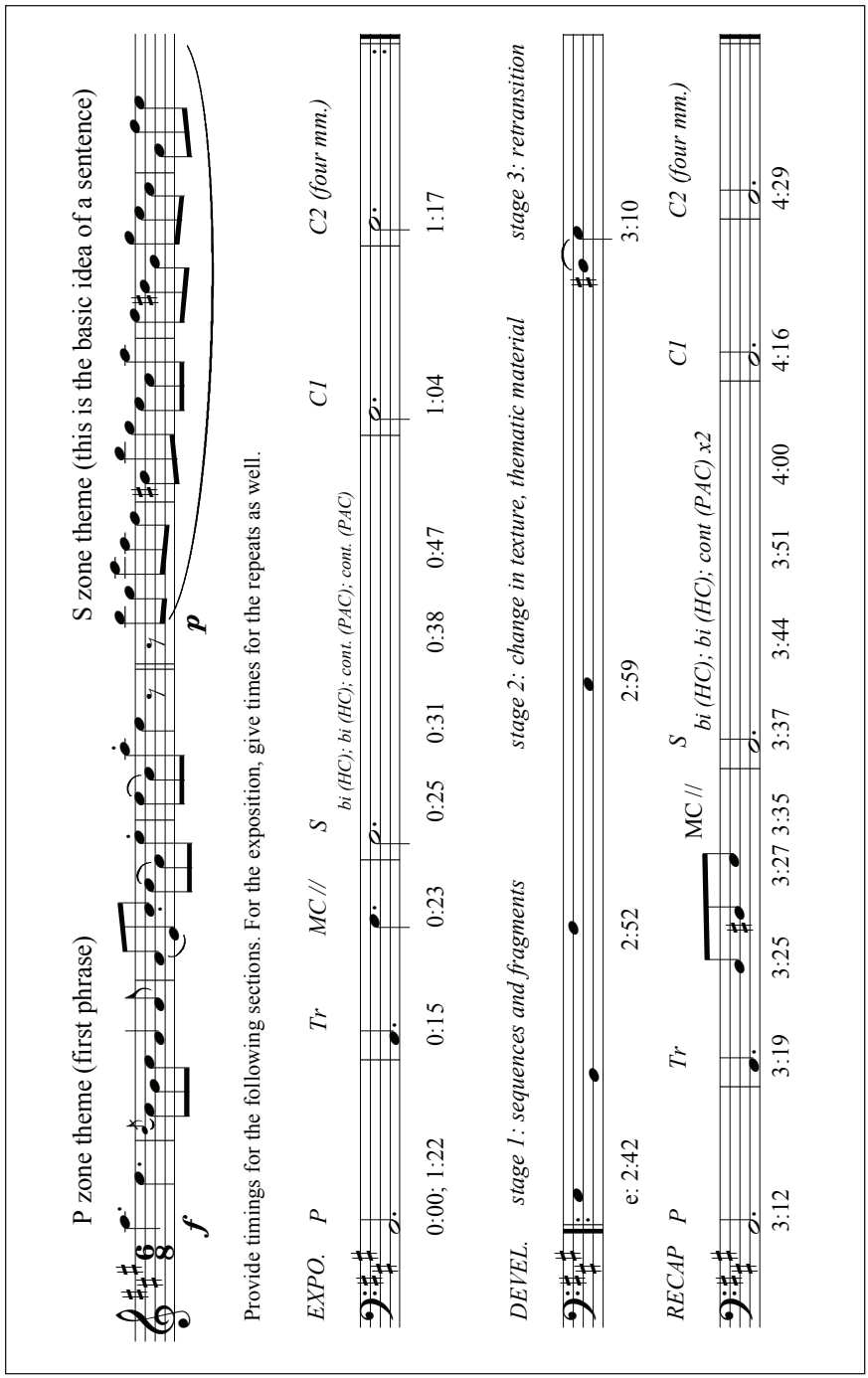
The first two weeks proceeded in this fashion: students analyzed major-mode sonata movements with score until they reached a satisfactory level of understanding, then reinforced their understand by listening with visual aids. A few students struggled with this step; soon, however, everyone was up to speed. (There were, of course, widely varying degrees of success in identifying voice-leading details, chords, sequences, progressions, and modulation schemes.) In week three I introduced minor-mode sonatas, with score. Example 5 is a filled-in version of an assignment that summarized the salient features of the first movement of Beethoven's piano sonata in C minor, op. 10, no. 1.[17]

Listening without score, but with visual aids

By the end of three weeks students were relatively comfortable listening without score. Thus, the subsequent assignments provided fewer crutches and signposts. At first they were asked to interpret movements without score, but with profiles of the P and S themes and a sketched-out template of the form. To illustrate, Example 6 was designed for the first movement of Mozart's sonata for violin and piano, K. 305.[18]

[17] This particular assignment did not provide times, and gave only a few hints in the far column. The times shown correspond to Richard Goode's performance on Elektra Nonesuch 79213–2.

[18] Times correspond to the performance by David Breitman (fortepiano) and Jean-François Rivest (violin) on Analekta AN 29821–2.



Example 6: Mozart, Sonata in A major for violin and piano K. 305, i

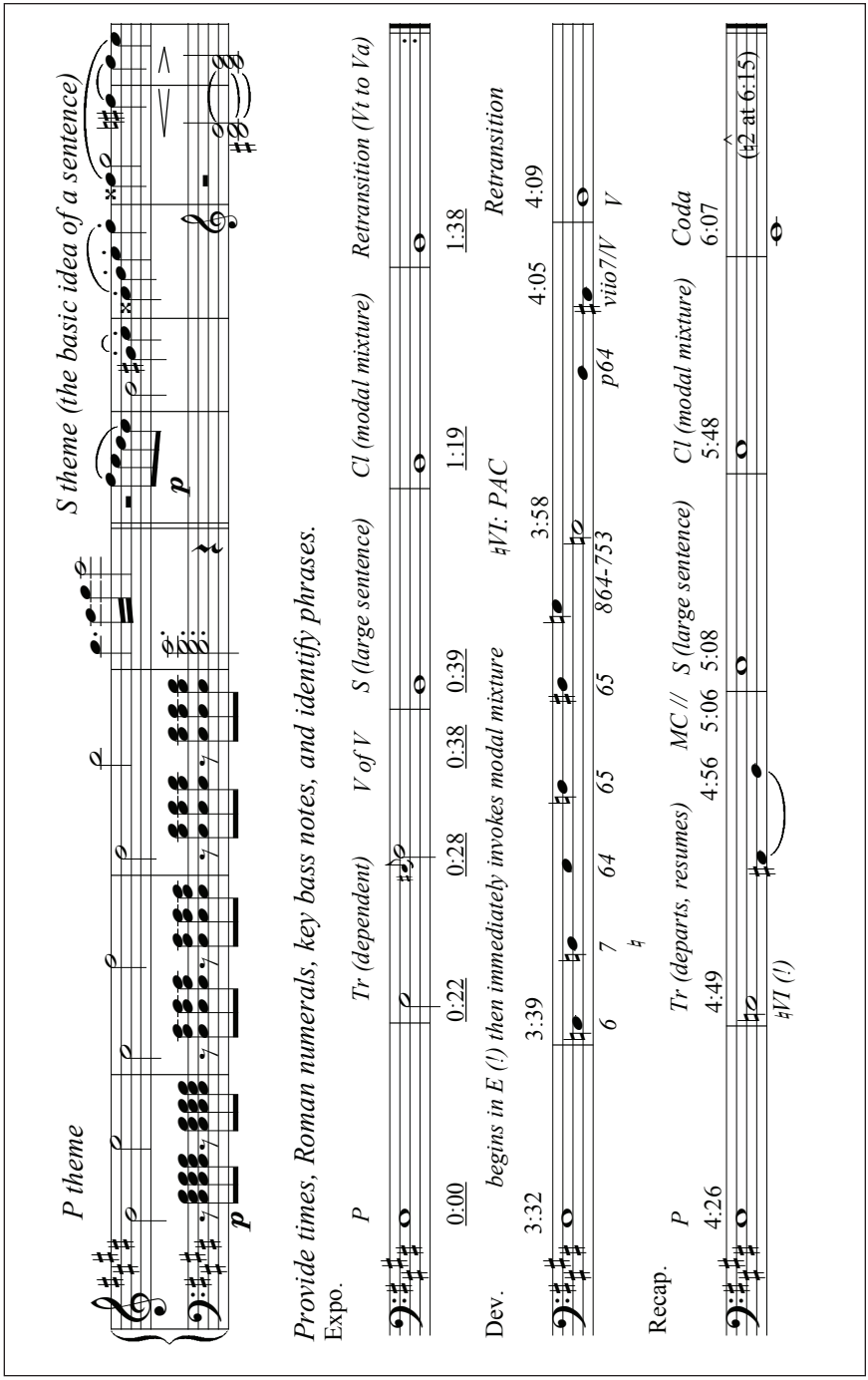
Example 7 was designed for the first movement of Beethoven's piano sonata in E major, op. 14, no. 1. It gives the broad outlines of the exposition and recapitulation (the skeleton of P, Tr, S, and Cl), plus selected bass notes and figured-bass symbols in the development. Students were asked to fill in the remaining materials. Students found these types of assignments challenging but manageable.

I would like to make one brief note about the assignments. The first time I taught the course I assigned Examples 4 and 5 early on in module; students were still finding their way. Thus, I gave all of the information on the page except the timings; this was the only information students were asked to provide. One could—with more advanced classes, or at a later point in the semester—remove some or all of the hints in the right-hand margin. One could also remove some or all of the structural signposts to provide less of a scaffold for students. The point is that there are many possible variations and degrees of difficulty. In a similar vein, Examples 6 and 7 provided nearly all of the information shown save the timings. Here, too, one could selectively remove some or all of the bass notes, formal markers, or hints.[19]

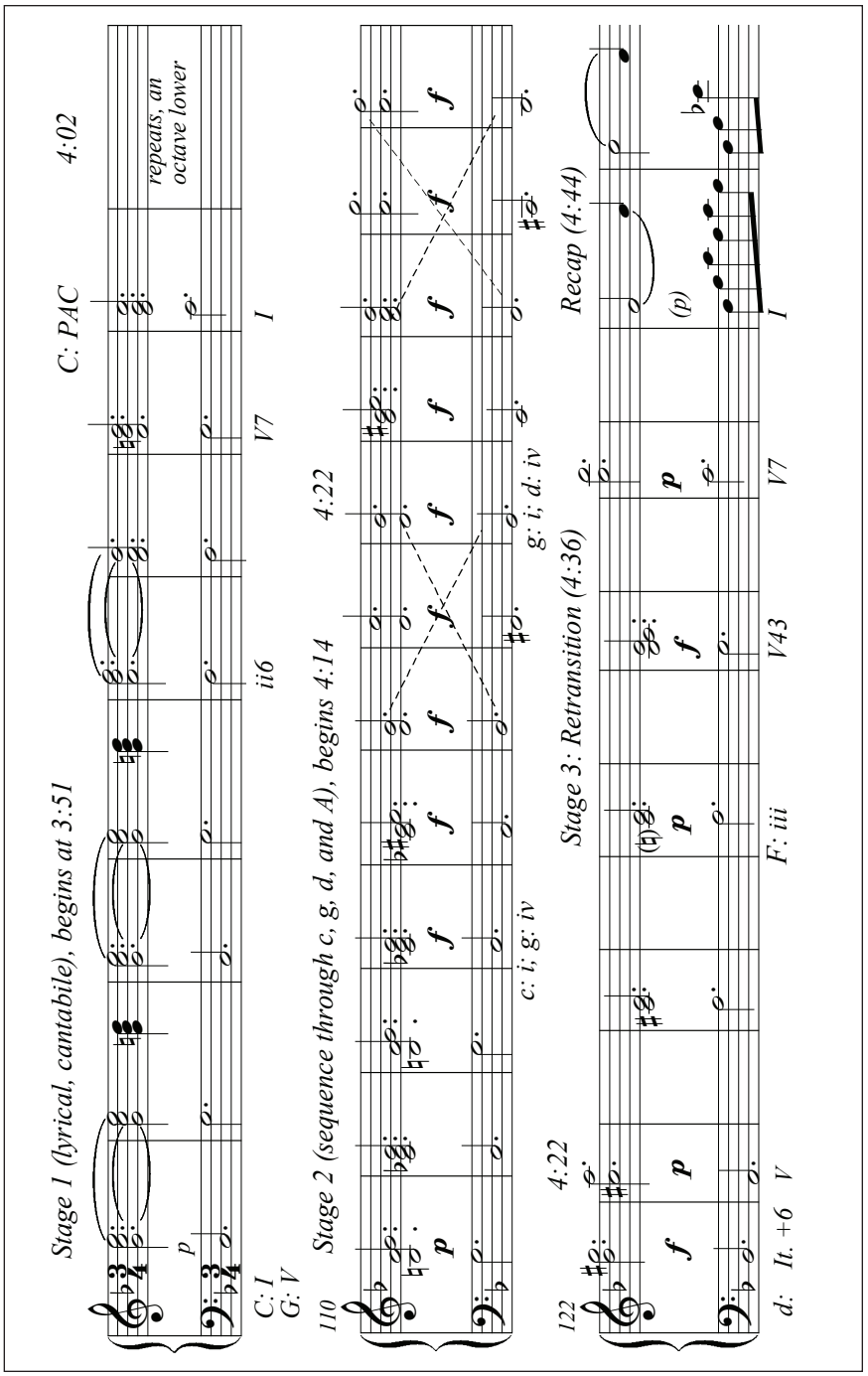
Soon, most students were able to ascertain the basic structure and the large-scale harmonic plan of a sonata form movement in two hearings. I then devised assignments that focused on specific passages: chromatic sequences, unusual progressions, mixture, or entire development sections or subsections. I spent a fair amount of time on development sections because they tend to give students trouble—no doubt due to their harmonic instability (rapid and distant modulations and highly figured sequences). I found the timer feature of the iPod to be inordinately helpful: I could merely ask students to notate in the key of A major the passage from 3:15 to 3:32. To illustrate, Example 8 is a worksheet designed to help students come to grips with the development section of Mozart's piano sonata in F, K. 332, i.[20]

[19] For example, I gave these pointers for the Mozart: (1) in the exposition, the P zone is repeated twice; (2) the S zone begins as a parallel period (antecedent with a HC, then what would seem to be a consequent); however, its would-be consequent also ends with a HC, effectively turning the S zone into an extended sentence; (3) as a result, the closing zone does not begin at 0:45—the continuation phase of the sentence is immediately repeated, extending the S zone and delaying the Closing zone (and EEC).

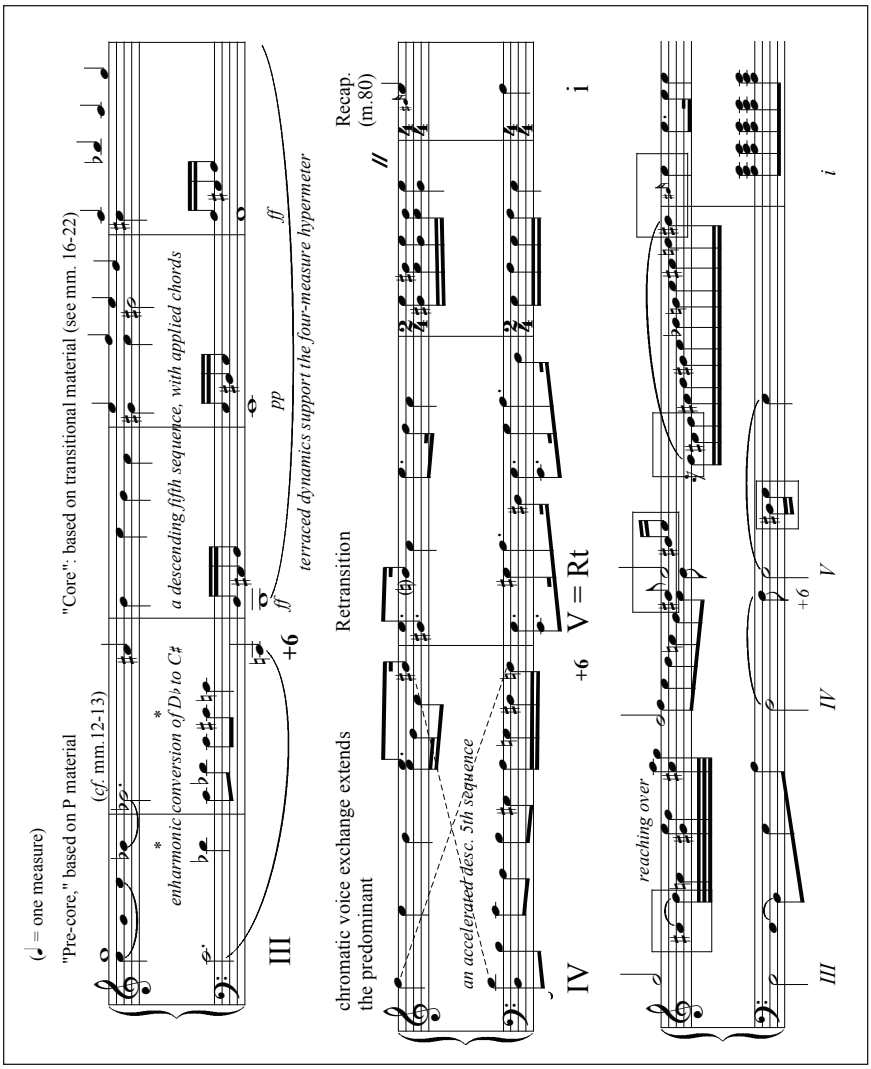
[20] Some of the registers have been normalized, and timings are for Andreas Staier's performance (Harmonia Mundi, HMC 901856). For purposes of space I have not included the score.



Example 7: Beethoven, op. 14, no. 1, i



Example 8: Development section for Mozart, K. 332, i



Example 9: Mozart, K. 310, i. "Road map" of the development, shown as a rhythmic reduction.

Briefly, I parse the development section of the first movement of K. 332 into three discrete stages. The first stage cadences in C major; the second stage initiates a large-scale fifth ascent that travels from c minor to A major, which I read as the dominant of d minor; the third stage is the retransition, which inflects or "corrects" C♯ to C and eases into V43 and V7 of F. This assignment, too, could receive variation, such as the following: reinforce the learning that occurred during class by asking students to supply timings; require students

to identify the stages and the bass notes by providing Roman numerals and notating a chordal reduction of the retransition; or require students to sketch the entire development, using any means or symbols appropriate.

Example 9 provides a road map of another development section. This is the first movement of Mozart's sonata in a minor, K. 310, a quintessential illustration of a minor-mode III—iv—V development. The upper portion of the example is a rhythmic reduction that uses quarter notes to represent full measures. This development also divides into three stages: a "pre-core" that begins on III; a "core" that uses a descending fifth sequence to lead to iv; and a retransition that is ushered in by an augmented sixth.[21] The example also includes a few details on surface features. These observations are placed into a broader context in the "satellite view" in part II of the example. One intriguing issue concerns the dyads A♯–B and especially D♯–E, the latter of which plays a vital role in the sonata.[22]

[21] The terms "pre-core" and "core" are drawn from Caplin 1998.

[22] It would be a worthwhile exercise to "trace the history" of D♯ (and its enharmonic equivalent E♭) throughout the movement. D♯ is in fact the first melodic note we hear (it is strikingly asserted as the chromatic lower-neighbor of E_5). Throughout the movement it appears frequently as a chromatic lower-neighbor to E (see mm. 9, 11, 14, 80, 98–99, 107–08, 110, 113, 115–117), as a chromatic passing note to E (such as m. 7), as a "agent" of modal mixture (re-spelled as E♭ it colors mm. 16–21 of the transition), and as the bass note of the rhetorically-charged viio7/V (m.127) in the final cadential flourish that begins in m. 118. B♭ admittedly plays a smaller role: the conversion of B♭ to A♯ in the development section initiates the core of the development, and B♭ is highlighted in the Neapolitan chords in mm. 109 and 119.

Listening without score

Once students were comfortable—or, at least, less uncomfortable—with the challenges imposed by development sections, they were ready to tackle full movements without a score or visual aids. To foster this goal I devoted several classes to listening (without score) to several expositions. Students were asked to trace six events in each exposition—to take aural inventory of the harmonic and rhetorical structure. These are summarized in Example 10. I also instructed them to listen for other features, such as topics,[23] modal mixture, evaded or unusual cadences, augmented sixths, chromatic sequences, hypermetric irregularities, and striking changes in register, dynamics, or texture. By the end of the unit students became proficient at discovering and representing the main details of a sonata form. And by the end of the seven-week unit the majority of the class (roughly four of five students) was able successfully to analyze a sonata-form movement from "scratch": with no hints whatsoever.

|| P — Tr (MC) // S — EEC / Cl :||
(1) (2) (3) (4) (5) (6)

(1) The phrase structure of the P zone (frequently a sentence or period)

(2) The cadence at the end of the P zone, and the point of departure for Tr

(3) The harmonic context for the MC—and the point of departure for S
(is it half-cadence in tonic? A PAC in the dominant?
Another possibility?)

(4) The phrase structure of S, and its subsections (if any)

(5) The precise onset of EEC

Example 10 - Taking inventory: a checklist of the exposition.

[23] The study of topics (or *topoi)* has emerged in the past generation as a powerful analytical tool for tonal music. A survey of the field would include: Ratner, *Classic Music*, 1980; Allanbrook, *Rhythmic Gesture in Mozart: Le nozze di Figaro and Don Giovanni*, 1983; Agawu, *Playing with Signs*, 1991; and, more recently, Caplin, "On the Relation of Musical *Topoi* To Formal Function," 2005. Semioticians have picked up this thread, too; see Hatten, *Musical Meaning in Beethoven,* 1994; Grabócz, "A. J. Greimas's Narrative Grammar and the Analysis of Sonata Form," 1998; Monell, *The Sense of Music*, 2000; and Klein, "Chopin's Fourth Ballade as Musical Narrative," 2004.

Final thoughts

I set out to teach a seven-week unit on analyzing sonata form without score. I began by teaching the principles of sonata form by analyzing several works with score. I then created a set of graduated assignments that steadily removed hints and landmarks. Class time was spent listening, doing close analysis, and modeling the act of writing about specific events. By the end of the term, students were able to recognize (in real time) relevant vocabulary elements, mixture, sequences, phrases and cadences, large-scale form, and deviations in hypermetric organization. The majority of students were able to parse development sections and write competently about topics, narrative, and implications for performance. The iPods provided a seemingly endless number of sonata-form movements from the 18th and 19th centuries; students also had the opportunity to hone their listening skills in hundreds of live performances on campus. (They could also transfer their own libraries to the devices.)

Example 11 (see the following page) lists the repertoire I chose for the unit. I realize that we all have our favorite pieces and that there is a multitude of sonata forms—in addition to suitable rondos and concerti. I suggest these pieces because I had success with them and because it is easy to find multiple performances. The works are arranged into categories of easy, medium, and hard, based primarily on length, the degree of formal and harmonic complexity and ambiguity, and the "tallness" of the score. The list allows one to gradually increase the level of difficulty during the unit. It also suggests pieces suitable for final projects.

Overall, I was delighted with the learning that took place in (and out of) the class, especially the final projects, which asked students to analyze a movement without score and write a short (three- to five-page) essay on features of the work they found striking. In my view, students in this class acquired a better understanding of harmonic vocabulary and a firmer grasp of large-scale structure than in previous years. Additionally, they reported in their informal evaluations that they detected benefits in their aural skills classes; that their real-time listening skills improved significantly; and that their listening habits had changed dramatically. (In fact, half of the class purchased their own iPods before they left campus at the end of the semester.) The experience convinced me that it is entirely possible to teach students to "listen up" by using iPods to analyze sonata forms without score.

Easy: relatively transparent; fairly short; "thin" textures

Mozart	Piano Sonata K. 283, iii, I [Major mode]
Mozart	Piano Sonata K. 309, i, or K. 311, i, or K. 332, i
Mozart	Piano Sonata K. 333, i or iii
Beethoven	Piano Sonata op. 14, no. 1, i
Beethoven	Piano Sonata op. 2, no. 1, [minor mode]
Beethoven	Piano Sonata op. 10, no. 1, i; op. 49, no. 1, i
Mozart	Piano Sonata K. 310, i
Mozart	Violin + Piano Sonatas K. 305, i, or K. 306, i
Mozart	Violin and Piano Sonatas K. 377, i, or 378, i
Mozart	Clarinet Quintet, K. 581, i
Mozart	Symphony in A major, K. 201, i

Medium: longer; more mixture; more formal ambiguity

Beethoven	Sonata op. 13, i ("Pathetique"); op. 53, i ("Waldstein"); op. 55, i ("Appassionata")
Beethoven	Sonata for Cello and Piano, op. 69, i
Beethoven	Symphony No. 1, 6: i
Haydn	Piano Sonata Hob. XVI: 50, i
Mozart	Sonata for Violin and Piano, K. 304, i
Mozart	Quartet (three strings and oboe), K. 370, i
Mozart	String Quartet, K. 464, i
Mozart	String Quintet, K. 516, i
Mozart	Symphony 36 ("Linz"), ii; Symphonies 39, 40, 41, i
Schubert	String Quartet in a, D. 804, i
Schubert	Piano Sonata in A, D. 664, i

Hard: increased length, mixture, formal ambiguity

Brahms	Cello Sonata in e minor, op. 38, i
Brahms	Sextet, op. 18, i
Schubert	Symphonies 5 and 9, i
Schubert	Piano Sonatas in A and Bb, D. 959, i and D. 960, i
Schubert	*Quartettsatz* (difficult)

Extensions include concertos, rondos, and later 19th-century works.

Example 11: Suggested repertoire of sonata forms.

Reference List

Agawu, Kofi V. *Playing with Signs: A Semiotic Interpretation of Classical Music*. Princeton: Princeton University Press, 1991.

Aldwell, Edward and Carl Schachter. *Harmony and Voice Leading*, 3rd edition. New York: Harcourt Brace Jovanovich, 2002.

Allanbrook, Wye J. *Rhythmic Gesture in Mozart: Le nozze di Figaro and Don Giovanni*. Chicago: University of Chicago Press, 1983.

Caplin, William E. "On the Relation of Musical *Topoi* To Formal Function." *Eighteenth-Century Music* 2.1 (2005): 113–124.

_____. *Classical Form: a Theory of Formal Functions for the Instrumental Music of Haydn, Mozart, and Beethoven*. New York: Oxford University Press, 1998.

Grabócz, Márta. "A. J. Greimas's Narrative Grammar and the Analysis of Sonata Form." *Intégral* 12 (1998): 1–24.

Green, Douglass. *Form in Tonal Music: An Introduction to Analysis*, 2nd ed. New York: Holt, Rinehart and Winston, 1979.

Hatten, Robert. *Interpreting Musical Gestures, Topics, and Tropes: Mozart, Beethoven, Schubert*. Bloomington: Indiana University Press, 2004.

_____. *Musical Meaning in Beethoven: Markedness, Correlation, and Interpretation*. Bloomington: Indiana University Press, 1994.

Hepokoski, James and Warren Darcy. "The Medial Caesura and Its Role in the Eighteenth-Century Sonata Exposition." *Music Theory Spectrum* 19.2 (1997): 115–54.

_____. *Elements of Sonata Theory: Norms, Types, and Deformations in the Late Eighteenth-Century Sonata*. New York: Oxford University Press, 2006.

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

Klein, Michael. "Chopin's Fourth Ballade as Musical Narrative." *Music Theory Spectrum* 26.1 (2004): 23–56.

Kostka, Stefan and Dorothy Payne. *Tonal Harmony, with an Introduction to Twentieth-Century Music*, 5th ed. Boston: McGraw-Hill, 2004.

Laitz, Steven. *The Complete Musician: an Integrated Approach to Tonal Theory, Analysis, and Listening*. New York: Oxford University Press, 2003.

Monell, Raymond. *The Sense of Music: Semiotic Essays*. Princeton: Princeton University Press, 2000.

Ratner, Leonard. *Classic Music*. New York: Schirmer Books, 1980.

Rogers, Michael. *Teaching Approaches in Music Theory: An Overview of Pedagogical Philosophies*, 2nd ed. Carbondale: Southern Illinois University Press, 2004.

Rosen, Charles. *The Classical Style: Haydn, Mozart, Beethoven*. New York: W. W. Norton, 1997.

Rothstein, William. *Phrase Rhythm in Tonal Music*. New York: Schirmer Books, 1989.
_____. *Rhythm and the Theory of Structural Levels*. Ph.D. Dissertation, Yale University, 1981.
Schachter, Carl. "Rhythm and Linear Analysis: Aspects of Meter." in *The Music Forum* 6. New York: Columbia University Press, 1987.
Wittlich, Gary and Lee Humphries. *Ear Training: An Approach Through Music Literature*. New York: Harcourt Brace Jovanovich, 1974.