

Structure and Motive in the First Movement of Beethoven's Piano Sonata Op. 53

Heinrich Schenker states plainly in the final chapter of *Free Composition*, "All forms appear in the ultimate foreground; but all of them have their origin in, and derive from, the background."¹ Through his statement, Schenker implies that to fully understand the surface-level structure for any well-formed work of tonal music, we must first understand the piece's deepest fundamental structure. This fundamental structure, however, is never explicitly portrayed in a musical work but rather hidden beneath layers of transformations, prolongations, and elaborations. In a sense, Schenker's method of analysis thus seems to set up a Catch-22 situation: to understand the foreground we must understand the background, yet to understand the background we must understand the foreground. Fortunately, in any practical analysis, the piece of music under scrutiny can at least initially be understood on a superficial, conspicuous musical level; double-bar lines, cadences, pedal-points, etc. all connote structural divisions. The comprehension of a musical composition can therefore follow an approach not unlike solving an algebraic equation, working from the known to the unknown. After stripping away surface-level melodic ornamentation and harmonic progressions until we reach the fundamental structure, we can then relate and reinterpret foreground features in an organic and coherent way back to the most basic kernel of the piece. Via this mode of reductive analysis, I wish to elucidate the organizational and motivic techniques in the first movement of Ludwig van Beethoven's *Waldstein* Piano Sonata Op. 53. The insights gleaned from this reduction should reveal a basic framework through which we may enjoy a more informed view of the foreground features in this movement. As Schenker warns, however, the process of working from this simple, skeletal framework back to the more complex, fleshed-out foreground should not be misinterpreted as a retracing of the steps leading to the composition of the piece; rather, the most illustrative representations or analyses show merely functional relationships, not methods towards creating such relationships.²

At its highest organizational level, the *Allegro con brio* of Beethoven's Op. 53 is an example of Sonata-Allegro form, the common form in which first movements of symphonies, sonatas, or concertos from Beethoven's era were usually if not always molded. Traditionally,

¹ Heinrich Schenker, *Free Composition [Der freie Satz]*, trans. and ed. Ernst Oster (Hillsdale, NY: Pendragon Press, 1977), p. 130.

² *Ibid.*, p. 18.

theorists have divided the basic structure of Sonata-Allegro form into three main sections: the Exposition, the Development, and the Recapitulation. One can argue that these formal divisions naturally evolved out of the simpler Three-Part song-form, expanded and developed to include multiple themes and codettas.³ While this derivation may be historically instructive, the Sonata-Allegro form has consequently outgrown the Three-Part structure through this same evolution. For example, when attempting to separate the first movement of Op. 53 into the traditional three main divisions, we are faced with an 89 measure Exposition, a 66 measure Development, and a 143 measure Recapitulation, the Recapitulation exceeding the Development by more than twice its length. The lopsided and end-heavy result of this simple division should prompt a careful person to question whether this tripartite segmentation most accurately reflects the best conceptual way of breaking up the movement. No rule states that sections of a musical work must be similar in length, of course, but the dissimilar sizes resultant from our typical groupings suggest that we may not have found the lowest common denominator (to make a mathematical analogy) by which the movement can be most basically divided. Possibly, therefore, a more balanced formal organization exists.

Splitting the Recapitulation into two distinct sections would be the obvious solution to creating formal divisions of relatively equal length, but is such a split warranted? Bar 249 is the overwhelming candidate for the location of this potential split since it marks the end of what is mostly an exact reiteration of the Exposition in the Recapitulation. The remaining 54 measures from bar 249 until the end of the movement thus possibly operate on a structural level equal to the Exposition, Development, and Recapitulation. Most theorists label these final 54 measures as the Coda, a term which unfortunately carries marginalizing connotations. *The New Harvard Dictionary of Music* defines Coda as "a concluding section extraneous to the form as usually defined; any concluding passage that can be understood as occurring after the structural conclusion of a work."⁴ The Coda is often therefore relegated to subsection status of the Recapitulation in standard Sonata-Allegro form,⁵ but I would like to propose an alternative form, as shown in Table 1, which raises the Coda (preserving the same terminology) to a section of greater importance.

³ Percy Goetschius, *Lessons in Music Form* (1904; Melville, NY: Belwin Mills, n.d.), pp. 132-3.

⁴ Don Randal, ed., *The New Harvard Dictionary of Music* (Cambridge, MA: Harvard University Press, 1986), p. 178.

⁵ Goetschius, p. 127.

Table 1: Outline of Form for Beethoven's Op. 53, first movement

I. Exposition	mm. 1-85		
A. First Subject		mm. 1-34	
1. Theme			mm. 1-13
2. Restatement (w/modulation)			mm. 14-22
3. Pedal			mm. 23-34
B. Second Subject		mm. 35-59	
1. Theme			mm. 35-42
2. Restatement			mm. 43-49
3. Pedal			mm. 50-59
C. Codetta		mm. 60-85	
1. Extended Cadence			mm. 60-73
2. Cadences			mm. 74-81
3. Compressed Cadences			mm. 82-85
II. Exposition (Repeat)	mm. 1-89		
III. Development	mm. 90-155		
A. First Subject		mm. 90-111	
1. Circle of Fifths			mm. 90-103
2. Sequence			mm. 104-111
B. Second Subject		mm. 112-135	
1. Circle of Fifths			mm. 112-123
2. Sequence			mm. 124-135
C. Codetta		mm. 136-155	
1. Sequence			mm. 136-141
2. Pedal			mm. 142-155
IV. Recapitulation	mm. 156-248		
A. First Subject		mm. 156-195	
1. Theme			mm. 156-173
2. Restatement (w/modulation)			mm. 174-183
3. Pedal			mm. 184-195
B. Second Subject		mm. 196-220	
1. Theme (w/modulation)			mm. 196-203
2. Restatement			mm. 204-210
3. Pedal			mm. 211-220
C. Codetta		mm. 221-248	
1. Extended Cadence			mm. 221-234
2. Cadences			mm. 235-242
3. Compressed Cadences			mm. 243-248
V. Coda	mm. 249-302		
A. First Subject		mm. 249-283	
1. Theme (w/modulation)			mm. 249-258
2. Sequences			mm. 259-283
B. Second Subject		mm. 284-294	
1. Theme			mm. 284-289
2. Pedal			mm. 290-294
C. Codetta		mm. 295-302	
1. Theme			mm. 295-299
2. Cadence			mm. 300-302

In this alternative form, each main division of Op. 53 (denoted with Roman numerals) begins with First Subject material, follows with Second Subject material, and closes with a Codetta. Since the Coda also includes a similar progression of parts, the Coda itself can potentially be seen as occupying a level of structural importance matching that of the traditional three main divisions. Goetschius calls an elaborated and extensive Coda a "second Development,"⁶ thereby creating almost a large-scale Two-Part form where the Exposition and Development mirror the Recapitulation and the Coda. While the Coda in Op. 53 does show thorough thematic sequencing rivaling sections in the Development, the Coda also presents much more straightforward versions of the main themes than ever appear in the Development, signifying that the Coda instead acts possibly as a substitute for a second Recapitulation, balancing the repeat of the Exposition in the long-range form. The function of the Coda as conceived by Beethoven can never be truly known, of course. Even if this knowledge were available, however, Beethoven's application of the Coda may have created a purpose extending beyond that of its original design. More practically, the structural importance of the Coda cannot be well understood merely with a simple look at broad divisions of the movement. We can, however, attempt to better interpret the role of the Coda in the *Allegro con brio* of Op. 53, as well as better understand Beethoven's formal and motivic procedures, through a closer inspection of voice-leading and tonal motion throughout the movement. This inspection should lead us to the fundamental structure and reveal a more informed overall view of the work. A natural path for such an inspection follows the natural course of the music, directly showing the structure as sketched in Table 1.

Exposition: First Subject:

Many terms exist to describe the opening harmonic and melodic motives of a piece in Sonata-Allegro form: First Theme, Main Theme, First Group, First Subject, Principal Theme, etc. For the *Waldstein* Sonata, delineation needs to be drawn between the thematic material itself and areas in which that thematic material is expanded or developed. I have therefore chosen the term "First Subject" to refer to broader areas in which the opening material appears in one form or another, eschewing the term "First Group" since it implies multiple motives while reserving the term "Theme" itself to refer to local and specific instances of the material.

⁶ Goetschius, p. 127.

In bars 1-13 of Op. 53, Beethoven exposes the main theme of his First Subject. In these bars, Beethoven also exposes three main techniques used in developing this and other themes throughout the piece: transfer of register, mixture, and compression. Beethoven utilizes the technique of registral transfer almost immediately after the beginning of the work. The atypically low register of the opening chords for a piano sonata of this period generates a motivic fragment in bar 3 as shown in Example 1. This motivic kernel still dwells in the same low register as the first two bars but is followed with a consequent fragment in bar 4 that has escaped into the treble clef. Why does Beethoven need such variety of register in a single phrase? The probable reason for such a transfer lies in the similarity between the two fragments. Bar 4's motive seems simply a subtle variation of the motive in bar 3: notice the last three notes of each motive are the same (only four and five notes long respectively), even to the point of rhythmic position in the measure. Registral transfer therefore aids in developing what is basically the same musical idea.



Example 1: Motives in mm. 3-4

As previously mentioned, Beethoven relies heavily on transfer of register as a motivic developmental technique throughout this movement, partially necessitated by the germinal character of the basic motive itself. Due to the nature of these continuing shifts in register, attempts to show smooth voice-leading between parts in Op. 53 can be challenging for any theorist since a direct succession of tones is often broken up throughout the range of the keyboard. Moreover, one must differentiate between a transfer of register that simply introduces an octave displacement into the outer voice (a superficial event) versus a transfer of register that actually moves an inner voice into an outer voice position (a more structurally important event). To address these issues, in the voice-leading graphs that follow I have made an effort to normalize the register of the voices to more clearly show the basic counterpoint underpinning each section; in these cases, the notated register of the parts in the score is merely a shallow skin on the surface of the piece beneath which we can quickly delve to plumb the actual voice-leading

of the piece as it propels the music forward. Similarly, where the transfer of an inner voice to the position of an outer voice occurs, I have also been careful to indicate such an event accordingly.

As an illustration of this registral normalization procedure, the opening bars have been graphed out in Example 2 in order to make the voice-leading of this section more explicit. The entire passage has been transposed up an octave for clarity of reading. Also, the upwards octave shift of the motive in bar 4 has been normalized back down to a range that lets us see more plainly the possible derivation of this variation: the upper D in the consequent fragment of bar 4 appears to arise out of a superposition of an inner voice from the previous measure. Such a structural use of registral transfer occurs even more frequently in bars 8 and 9 as Beethoven increases motion while moving towards the stopping point of a cadence.

Example 2: Voice-leading for mm. 1-9

With the factor of register having been removed, the contrapuntal derivation of the opening bars is now clear. A chromatically descending bass line leads the harmonic progression smoothly from tonic to dominant. Over this descent in the bass, Beethoven layers a slight embellishment of a simple 5-6 progression, using the $\frac{4}{2}$ chord as a mid-point stepping-stone. Bars 5-8 are basically a sequential repetition of the first four measures. These consequent bars also introduce the second technique of motivic development, which is that of mixture. The $A\flat$ in bar 8 alters what would have otherwise been an exact repeat of the opening antecedent phrase, changing the expected prolonged sounding of the first inversion F-major chord into a first inversion F-minor chord. Perhaps unsurprisingly, this $A\flat$ was not a feature in the early sketches of this passage, originally written as a strict sequence.⁷ The use of mixture, though perhaps

⁷ Barry Cooper, *Beethoven and the Creative Process* (Oxford: Clarendon Press, 1990), p. 145.

subtle in this single measure, pervades throughout the piece and becomes structurally crucial in later sections. The $A\flat$ in bar 8 therefore provides not only a filling in of the chromatic space between C and G but also a foreshadowing of developmental techniques to come. For the rest of these opening measures, mixture takes an even stronger foothold as bars 9-13 imply a solid sense of C-minor, the parallel minor of our tonic C-Major.

The third technique of motivic development exposed in this primary theme is the technique of compression. By the term compression, I mean the quickening of the harmonic or melodic rhythm; in other words, compression occurs when the temporal interval between chord changes or motivic repetitions becomes shorter. For example, bar 8 sees an increase in the pace of the stepwise bass note descent from every two measures to every measure, a pace that continues to increase through measures 9 and 10 until the bass note is changing with every quarter beat. Along with the aforementioned harmonic compression, these bars also display melodic compression as the motivic kernel from bar 4 becomes squashed and combined with its own inversion to become the undulating pattern of sixteenth notes in bar 10.

After laying out his primary theme and methods of development, Beethoven in bar 14 begins the harmonic transition from the tonic of the First Subject to the contrasting tonal area of the Second Subject. Looking ahead, we can see that the Second Subject's theme in bar 35 appears in E-major, a relatively remote key area when compared to C-major. Despite the potential difficulty in affecting such a modulation, the method by which Beethoven approaches this foreign key is rather simple as shown in the reduction of Example 3 below.

The image shows a musical score for Example 3, which is a harmonic transition from the tonic (I) to the dominant with a lowered third (V/iii). The score is written in two staves: a treble clef staff and a bass clef staff. The bass line is annotated with figured bass notation: 4/2, 6, 6, 4/2, 6, 6, 6+, 3. A circled measure number '20' is placed above the treble staff. A dashed line with an arrow below it indicates the transition from I to V/iii. The treble staff contains chords and melodic lines, with some notes marked with a circled '20'.

Example 3: Transfer of register with double neighbor in mm. 14-23

The modulation begins with a restatement of the opening theme in bar 14, now in a normalized register with different figuration. This restated theme becomes harmonically altered in bar 18, for instead of moving down a whole step to B \flat -major as in measure 5, Beethoven moves sequentially up a whole step to D-minor. The chromatic descent of the bass in the opening phrase has now actually become a double neighbor-note motion around C. This C in the bass functions as a pivot point, with the $\dot{\text{IV}}_3^6$ in measure 21 becoming an II_3^{6+} chord in measure 22 through the simple raising of the inner-voice A to A \sharp .

As the augmented-sixth chord in bar 23 resolves through expansion to a dominant pedal on B, Beethoven completes the harmonic transition away from C-major. Initially, though, through its alternation of $\frac{5}{3}$ and $\frac{6}{4}$ chords, this dominant pedal implies a resolution on E-minor instead of the E-major key area of the Second Subject. E-minor, of course, is a key more closely related to C-major, being the mediant or the relative minor of the dominant. To facilitate a shift to the parallel major of E-minor, mixture becomes an important structural tool for Beethoven here as he seamlessly modulates via a transition from V/iii to $\text{V}/\text{III}\sharp$. Furthermore, the seamlessness of this transition is nurtured through the prolongation of the dominant pedal using the familiar technique of compression: at bar 27, we see an increase in the harmonic rhythm of the alternations between the $\frac{5}{3}$ and $\frac{6}{4}$ chords. The melodic pace is quickened here as well, to the point where the arpeggios in the bass overtake the motivic embellishments in the treble clef by bar 28. In the example of this dominant pedal area, therefore, we see Beethoven's techniques of motivic development becoming structurally crucial methods in enabling his basic formal motions.

Exposition: Second Subject:

When the Second Subject's theme begins in bars 35, Beethoven has by this point convincingly modulated to E-major, the altered mediant of the Sonata's tonic key. The choice of such a relatively remote key area for this theme departs from the stereotypical textbook key area of dominant harmony that more traditionally supports Second Subject themes in pieces with a major-key First Subject. The use of major tonality mediant harmony for Second Subject material, however, is quite common for pieces with First Subject themes in minor keys. In a sense, we can perhaps view the appearance of the theme here in E-major as a lower level use of mixture despite the mediant for the parallel key of C-minor being E \flat -major (not E-major). Schenker views a structurally important mediant key area for major-mode works as carrying the

function of a third-divider, creating an arpeggiation in the movement of the tonic to the dominant through the third in the overall harmonic motion;⁸ Schenker's conceptual view becomes important later as we attempt to boil down foreground elements to their fundamental background structure. However one conceives the derivation of this E-major tonal area, Beethoven's choice certainly adds variety to the key centers of Op. 53, this variety increasing the harmonic richness of the work. Perhaps unsurprisingly, the use of mediant or submediant harmonies for Second Subject themes is not uncommon in other Beethoven works from this post-*Eroica* era (Op. 106 or 127 for example) as such remote key areas potentially "create a long-range dissonance against the tonic and provide the tension for a move towards a central climax."⁹

The Second Subject's theme itself introduces another important structural concept, the concept of interruption, that will have broad implications for later investigations into the piece's overall fundamental structure as well. Ignoring the octave shift in register that occurs in bar 39, we may view the overall melodic motion in bars 35-42 as descending from $\hat{3}$ to $\hat{1}$, a high-level foreground fundamental line. In this descent and at the exact point of this octave displacement, we also find an interruption of the local fundamental line. This division by interruption, as shown in Example 4, serves to prolong the harmonic and melodic drive towards the cadence in bar 42 through what Schenker refers to as a dominant divider.¹⁰ In this example, moreover, the technique of registral transfer at bar 39 becomes an important foreground element to accent and emphasize the interruption itself.

Example 4: Division by interruption for mm. 35-42

⁸ Schenker, p. 29.

⁹ Charles Rosen, *Sonata Forms* (New York: W. W. Norton & co., 1980), p. 282.

¹⁰ Schenker, p. 36.

The contrapuntal underpinning of this Second Subject theme shows voice-leading not far removed from the immediate surface level itself due to the theme's plain, unembellished initial statement. Such an unadorned theme, surely an intentional contrast by Beethoven to the rhythmically active theme of the First Subject, demands an organization of the foreground tones into levels of structural importance. The initial unfolding of a fifth in the upper voice is matched by a similar fifth descent in the bass. Beethoven uses this fifth to immediately create forward harmonic motion, placing both consonant tenth sonorities arising between the outer voices at rhythmically weak positions in each measure. The chain of first-inversion chords in bar 37 prepares the $\frac{6}{4}$ suspension in bar 38, a suspension whose resolution also appears in a more rhythmically weak portion of the measure and thus reinforces the structural interruption. This string of delayed and offset resolutions continues until the final bar of the theme in measure 42, a clear prolongation of the harmonic motion until the eventual cadence.

Bars 43-50 present an exact harmonic reiteration of the Second Subject's theme. The left-hand part for these eight bars copies note-for-note the left-hand part from the previous eight bars (excluding a tiny bass run at the end of measure 46). The structural purpose of this thematic repeat seems questionable unless we appreciate that this variation balances the Second Subject area with the First Subject area since the First Subject's theme was also followed by its own restatement. The restatement of the Second Subject's theme fulfills a motivic purpose as well. The right-hand part, following the same trajectory as the previous eight-bars, includes an embellishment of triplet figuration. These triplets serve as a transitional rhythmic figure between the slow moving chords of bars 35-42 and the reintroduction of the undulating sixteenth-note pattern derived from bars 9-10 that dominates most of the motivic work in the Codetta to follow.

The methods by which the triplets in this thematic restatement change into the sixteenth-note pattern recall an earlier section of the piece. Following the restatement of the Second Subject's theme, bars 50-59 show strikingly similar techniques of development to bars 23-29. In both sections, Beethoven uses a single static harmony (or pedal) to pause structural development and thus allow motivic development to take control. Compression drives this motivic development in the Second Subject pedal area just as it drove the motivic development in the First Subject pedal area. Before this compression occurs, however, Beethoven prepares his

triplet motive with what Donald Tovey calls "primitive double counterpoint" in bars 50-53.¹¹ What is perhaps more significant about these four bars than Tovey's technical observation is that Beethoven draws upon a transfer of register, specifically a transfer of register between hands, to prolong his motive and thus extend an already established technique of motivic development. The compression of the triplet figuration begins in bar 56 as the phrase changes from a two-bar pattern into a single-bar pattern. This compression continues to act on the motive in bar 58 as the triplets turn into sixteenth-notes and the harmonic rhythm increases from an alternation between tonic and dominant every half-measure to an alternation every quarter-measure. Finally, the harmonic flip-flopping becomes compressed to what sounds like a breaking point with tonic and dominant switching every two sixteenth-notes in bar 59. While many theorists may label the bars following measure 50 as the beginning of a Codetta, the similarity of these bars in motivic and harmonic techniques to those at the end of the First Subject area makes measures 50-59 appear more like a transition to the Codetta than a section within the Codetta itself.

Exposition: Codetta:

At bar 60, a change occurs derailing the expected cadence prepared through the pedal and compression techniques of the previous bars: a $D\sharp$ is introduced into the upper voice. This compromised cadence begins the Codetta section, leading the music through a series of averted closes until Beethoven successfully modulates back to the home key of the First Subject. Bar 60, a pivotal measure in the middle of a cadential phrase, may seem like an odd location to demarcate the beginning of a formal section. It is exactly this pivotal nature however, with the first hint of a return to C-major tonality, that structurally separates this measure from its preceding measures despite no ebb in the freely-flowing surface level figuration.

The overall structure of this Codetta displays a much deeper-level use of compression than seen as of yet in the piece. The entire Codetta can be viewed as simply a string of cadences that become progressively shorter in duration. A primary extended cadence spans bars 60-73, harmonically outlining a simple I^6 to IV to V_{4-3}^{6-5} motion in E-major (with the first-inversion tonic functioning as an applied dominant to the subdominant). Beethoven overlays motivic work derived from earlier passages on top of this basic $I-IV-V$ cadential motion, a connection which

¹¹ Donald Francis Tovey, *A Companion to Beethoven's Pianoforte Sonatas* (London: The Associated Board of the Royal Schools of Music, 1931), p. 151.

becomes obvious when comparing the figure on the first beat of bars 64-65 to the figure on the first beat of bar 43 and 47 or to the figure on the third beat of bar 24 and 26, all of which trace back to bars 9-10 and ultimately the original motive in bars 3-4.

The first compression occurs when this extended cadence becomes compacted into the four-bar cadential phrase of bars 74-77. This phrase outlines a simple tonic-subdominant-dominant harmony and supports a motivic pattern plainly derived from the upper voice embellishment in bars 9-10. As this compression begins, Beethoven reintroduces his familiar developmental tools of mixture and registral transfer here as well. The transfer of register via a downward octave shift in bar 78 allows Beethoven to more smoothly transition back to the bass-clef sonorities of the opening chord. Mixture weakens the finality of each cadence and pushes the music onward, facilitating the fundamental structural harmonic purpose of this Codetta by engendering both a modulation back to the Exposition and a modulation ahead to the Development. This transition begins in bars 74-77 as the harmonic center moves to E-minor, the parallel minor of the Second Subject. With this easy shift to E-minor, a simple Deceptive cadence enables the modulation back to C-major as shown in Example 5.

80

5 6 6 5
4 3 4 3

5 6 6 5
4 3 4 3

5 6 6 5
4 3 4 3

e: I⁷₃ iv V[#] i iv V[#] C: I IV V

Example 5: Modulation with compression in cadences of bars 78-86

Example 5 also shows a further level of compression that drives this shift back to C-major. This compression begins in bar 82 as the previous four-bar cadence becomes shortened to occupy only two-measures. Also in bar 82, a motivic compression accompanies this harmonic compression with the previously florid upper voice being stripped down to only its most essential tones. While bar 85 marks the end of the first Exposition, Beethoven continues this sequence of cadential patterns to affect a modulation to F-major in bar 90 after the repeat of the Exposition.

Bars 86-89, despite being found after the double-bar, prolong and extend the transitional function of the Codetta and thus belong solidly to the Exposition.

Development:

Goetschius states that the Development of Sonata-Allegro form is "devoted to a more or less extensive and elaborate manipulation and combination of such figures, motives, phrases or parts of the Exposition as prove inviting and convenient for the purpose."¹² Interestingly, the Development section of Op. 53 remarkably lacks any such noticeable combination of motives. Beethoven instead sets up a stark delineation between motivic developments derived from First Subject material and motivic developments derived from Second Subject material. This strong sectional demarcation adds credence to the overall form as outlined in Table 1 where each unique section traverses a path of First Subject material, followed by Second Subject material, and closed by a Codetta. The reason Beethoven avoids interweaving the material from the First and Second Subject areas stems perhaps from the close relationship that the motives in each area have to the opening motivic kernel itself. Much as Beethoven needed to use a transfer of register to contrast similar melodic fragments in the opening bars, he also possibly needed here to use clear formal divisions to help identify the different permutations of motivic developments derived from similar melodic origins.

In *Structural Hearing*, Felix Salzer remarks that the structural purpose of the Development is to "carry the composition from the end of the exposition to the beginning of the recapitulation, i.e. from the prolonged chord constituting and supporting the second theme of the exposition to the dominant which immediately precedes the recapitulation."¹³ Since the prolonged chord that supports the Second Subject's theme in Op. 53 is E-major, and since the dominant that immediately precedes the Recapitulation will be a G chord to prepare the Recapitulation in C-major, we should not be surprised that Beethoven chooses F as a tonal center in the Development of this movement. F, of course, is a natural stepping-stone between E and G. F-major appears as a tonal center immediately at the beginning of the Development in bar 90 while supporting a version of the theme from the First Subject. Moreover, the long-range goal of

¹² Goetschius, pp. 125-6.

¹³ Felix Salzer, *Structural Hearing: Tonal Coherence in Music*, 1952 (New York: Dover Publications, Inc., 1982), p. 211.

this initial developmental section is another F chord, albeit F-minor, which emerges in bar 104 and holds sway until bar 110 (as shown in Example 6).

The choice of F as a midway point to underpin most of the Development section also potentially serves as a harmonic foil. The extremely "hard" tonality of a four-sharp key signature implied during the Second Subject is now balanced in the Development by the "soft" key area of one flat. Furthermore, this balance is more fully realized with the later shift to F-minor where a four-flat key signature and minor mode provide a harmonic distance away from the tonic of C-major equal, in terms of the circle of fifths, to that of E-major.

Example 6: Voice-exchanges during circle of fifths in mm. 95-104

The harmonic method by which Beethoven stretches the F tonality from bar 90 to 104 is through a simple circle of fifths progression. The G-minor key area in bar 96 leads to a C-minor area in m. 100 that passes to F-minor in m. 104. The choice here of minor key areas again adds Beethoven's characteristic effect of mixture, for these keys are the direct parallel minor keys of the dominant, tonic, and subdominant chords of the movement respectively. During this parallel-minor circle of fifths, a voice-exchange between the bass and an inner voice prolongs each tonality. The linearity of this inner voice is concealed in the surface level of these bars through motivic play and transfer of register, but I have normalized this passage and stripped away passing notes in Example 6 to show the basic voice-leading. With this simplification, we can see that a four-note ascent gets passed from the bass to the inner voice and back, offset by two beats. This offset phrase exchange happens in both the G-minor and C-minor sections, as shown with the brackets in Example 6. Along with motivic development through registral transfer and mixture, Beethoven here too relies on compression. As each key area progresses to the next, Beethoven drops the antecedent phrase of the motivic kernel and begins to repeat the consequent

version, seen in bars 99 and 103, thereby heightening the sense of arrival as each new minor key is reached.

The second half of the First Subject material's development extends this F tonality even further. From bars 104-110, an F-minor key area is prolonged through a quite beautiful chain of dissonances. Salzer and Schachter correctly label these dissonances as 9-10 suspensions,¹⁴ but their labeling does not address the derivation of this contrapuntal sequence. A more complete spelling of these suspensions in figured bass would categorize them as $\frac{4}{2}$ chords followed by $\frac{6}{3}$ chords. With this identification, we can readily see that these bars recall and develop not only the motives from the opening bars of the piece, but also the harmonic underpinnings; the $\frac{5-4-6}{3-2-3}$ progression of the opening bars has been compressed down to just this $\frac{4-6}{2-3}$ sequence.

The image shows a musical score for Example 7, consisting of two staves (treble and bass clef) and figured bass notation. The music is in F minor. The bass line is chromatically descending. The figured bass notation is as follows: 6, 4/2, 6, 4/2, 6, 4/2, 6, 4/2, 6, 4/2, 6, 4/2, 4/3, 6. A circled '110' is placed above the staff, and a dashed line connects it to the end of the sequence. Roman numerals IV and I are indicated below the staff with arrows.

Example 7: Chain of suspensions leading to tonic in mm. 104-112

Following these twenty-one measures of F prolongation (in both major and minor modes), a chromatically descending bass line in bar 111 brings Beethoven to the development of motives from his Second Subject. Interestingly, Beethoven draws the material for the coming measures not from the theme of the Second Subject itself but from bar 50. Beethoven's reason for not explicitly alluding to the theme of the Second Subject in the development can only be guessed at, but one can perhaps surmise that since the theme itself is originally presented so devoid of figuration in the Exposition, such a stark harmonic progression of chords would not lend itself to variations that produce adequate forward motion required for the middle of a Sonata's Development section. Instead, Beethoven chooses the simple figuration from bar 50 to

¹⁴ Felix Salzer and Carl Schachter, *Counterpoint in Composition*, 1969 (New York: Columbia University Press, 1989), p. 368-71.

melodically develop the harmonic motion leading towards the dominant that precedes the beginning of the Recapitulation.

Despite the multitude of notes during the triplet work in the measures leading up to the dominant chord in bar 136, the music travels through relatively few chord changes as shown in Example 8. Throughout this twenty-four bar journey from tonic to dominant, Beethoven relies on the familiar methods of mixture, transfer of register, and compression to build tension towards the inevitable harmonic goal. Registral transfer, similar to bars 50-53, prolongs the chords at the beginning of this passage during the short circle of fifths progression. This circle of fifths ends by bar 123, at which point Beethoven has moved to the relatively remote dominant chord on B \flat . Mixture, in the form of 6-5 sequences, facilitates the smooth move to the Neapolitan sixth chord in bar 134 and eventually the dominant in bar 136. Finally, compression heightens the sense of drive toward this dominant. The rate of four bars per chord-change beginning this section becomes shortened to a chord every two bars by measure 124. By bar 134, the rate further compresses to a chord per bar with the dominant itself arriving just two measures later.

The image shows a musical score for Example 8, spanning measures 112, 120, and 134. The score is written for piano, with a treble clef staff and a bass clef staff. Measure 112 shows a tonic chord (C major) in the treble and a bass line starting on C. Measure 120 features a triplet of notes in the treble: B \flat , A, and G. The bass line continues with a descending line: F, E, D, C, B \flat , A, G. Measure 134 shows a dominant chord (F major) in the treble and a bass line starting on F. Fingerings are indicated below the notes in measure 120: 5/3, 6/4, 6/5, 5/6, 5/6, 6/7, and 5/3. A dashed line indicates a register shift in the bass line between measures 120 and 121.

Example 8: From tonic to dominant in mm. 112-13

This eventual dominant, however, is in the wrong register to herald the Recapitulation. A downward octave shift of the material in bars 136-137 to bars 138-139 affects a necessary change in register. This downward motion is continued and coupled with compression in bars 140-141 as the rhythmic pacing of the upper melodic line increases from a note change every half measure to a note change every quarter. Beethoven thereby brings himself down to the fundamental dominant pedal of G that upholds the rest of this static harmonic area. This pedal extends until the Recapitulation through motivic play that spans almost the entire register of the keyboard while continuously introducing higher and higher levels of compression. To

understand the derivation of the small fragments of melody interspersed throughout the right-hand part, we have only to look ahead to bar 154 where the progressively further compressed pieces of this melody turn into the freely-flowing pattern recalling bar 10 in the Exposition. The grand descending line in bar 155 mimics the motion of bar 11 quite convincingly. One may even now infer that the unfolded fourth in the bass pattern throughout this section springs from this melodic pattern since the contrary motion in bar 154 very much shows how each is a mirror of the other.

Recapitulation:

As is typical for Sonata-Allegro form, the Recapitulation of Op. 53 mostly duplicates the material of the Exposition note for note. The textbook exception to a literal repeat would be the transposition of the Second Subject material into the home tonic of the piece, with alterations as needed to the transitional measures preceding the Second Subject to affect such a change. For the *Waldstein* Sonata, we might expect the Second Subject therefore to appear in C-major during the Recapitulation instead of the E-major key area in which it was presented during the Exposition. Looking ahead to bar 204 (and including those measures which follow), we do in fact find a literal repetition of Second Subject material now transposed to C-major. The first appearance of the Second Subject in the Recapitulation at bar 196, however, is solidly in A-major. Moreover, the modulation from the First Subject strongly prepared this A-major theme with a move to the dominant pedal on E in bar 184. Beethoven has thus set up a reflection of sorts, where the Second Subject in the Exposition is a third above C-major and the Second Subject in the Recapitulation is a third below C-major. The reasoning behind this atypical initial key area for the Second Subject died of course with Beethoven himself, but we can say that this decision has created a formal tension in that the unembellished theme of the Second Subject is never fully stated in the tonic of the piece during the Recapitulation. The second half of the unadorned theme in bar 200 modulates directly to the parallel key of A-minor, thus facilitating a quick transition from the relatively remote key of A-major back to C-major where the Recapitulation can undergo a transposed, exact repeat. It is this easy shift from A-major to A-minor where Beethoven employs mixture, a technique used throughout the movement, now as a structurally crucial technique. In a sense, the more subtle instances of mixture up until this point in the piece have been foreshadowing and preparing this pivotal instance.

Another change in the Recapitulation from a direct repeat of the Exposition occurs during bars 168-173. This short section inserts a seemingly tangential episode into the literal repeat of the First Subject. The structural purpose of this apparent tangent is questionable at best: Tovey, for example, refers to the appearance of an $A\flat$ (instead of the expected G) in bar 168 as "a mysterious accident."¹⁵ Charles Rosen offers the explanation that these few bars are "the place for the traditional injection of subdominant harmony that the eighteenth-century musician felt necessary at the beginning of a recapitulation," reasoning that Beethoven's outlining of the $D\flat$ -major and $E\flat$ -major chords in this section acts as a substitute which makes "a more exotic but even more effective subdominant tone."¹⁶ Rosen calls this traditional infusion of subdominant harmony the "Secondary Development,"¹⁷ a term that implies more length and motivic manipulation than these few measures show. The term "Secondary Development," which Rosen describes as typically occurring shortly after the beginning of the Recapitulation, also bears a striking similarity to Goetschius's term "second Development" that Goetschius uses to describe an extended Coda at the end of the Recapitulation. We are faced thus with the same term, albeit as used by different authors, for motivic and harmonic elaboration at opposite ends of the same broad formal section. Is there any way to reconcile these two conflicting definitions? In Op. 53, at least, both definitions seem to hold true; perhaps both developmental parts are even related to one another. If we notice that the Coda at bar 249 begins with the theme of the First Subject squarely in $D\flat$ -major (the same foreign chord that was outlined in the beginning of the tangent at bar 168), this relation appears not unfounded. Moreover, as the harmonic motion in the Coda and this tangent both traverse a progression from $D\flat$ -major to the dominant chord on G (a $\flat\Pi$ - V motion), the few bars of measures 168-173 can arguably be seen as a foreshadowing of the Coda. This foreshadowing not only helps to formally tie the Coda to the Recapitulation but also serves to emphasize the structural importance of the Coda itself. Sketches by Beethoven strengthen the probable conceptual importance of this move to $D\flat$ that, like the F-major and F-minor tonalities of the Development, functions perhaps as a harmonic foil to the E-major key area of Second Subject in the Exposition. As proof, a melodic fragment resembling bars 168-173 appears as one of among only half a dozen ideas notated for this movement.¹⁸

¹⁵ Tovey, p. 153.

¹⁶ Charles Rosen, *Beethoven's Piano Sonatas: A Short Companion* (New Haven, CT: Yale U. Press, 2002), p. 184.

¹⁷ Rosen, *Sonata Forms*, p. 277.

¹⁸ J.-G. Prod'Homme, *Les Sonates pour Piano de Beethoven*, (Paris: Librairie Delagrave, 1937), pp. 154-7.

Before arriving at this $D\flat$ harmony to begin the Coda, Beethoven makes one more significant change to the Exposition's material in the Recapitulation. Specifically, bar 239 sees a turn of the cadence pattern in the Codetta away from the minor tonality used in the Exposition and back to a major key area. In the Exposition, this shift to minor helped smooth the transition from E-major back to C-major. In the Recapitulation, however, this modulation is ostensibly unnecessary as the Codetta of the Recapitulation is already firmly grounded in C-major.

Coda:

The Coda begins, as does every other large formal section in this movement, with a version of the theme from the First Subject. Like the appearance of this theme in the Development, the entrance of the theme here in the Coda quickly departs from a literal repetition of the theme's opening statement at the beginning of the movement. Moreover, the theme in bar 250 is set in $D\flat$ -major, an extremely remote key for C-major, which contributes to the sense of instability and forward motion that begins and continuously defines this Coda section. Beethoven's choice of $D\flat$ -major makes more sense if we examine the short-term harmonic goal for the subsequent bars. As Example 9 shows, this $D\flat$ -major chord leads eventually to the dominant of C-major and thus acts in a pseudo-Neapolitan function. Example 9 also shows how Beethoven facilitates this harmonic motion to V , a motion constructed around a chain of first-inversion chords starting in bar 254 overtop a chromatically rising bass line.

bII —————→ V

Example 9: Movement from bII to V in mm. 249-259

While affecting this move to the dominant, Beethoven continues to draw on familiar tools for motivic development. Transfer of register, which melodically defined the initial statement of

the opening theme, further elaborates the basic motivic kernel during mm. 251-258 as the right-hand notes continuously jump back and forth between upper and middle parts of the keyboard. This transfer of register is also coupled with compression in bar 255 where we see not only an increase in the rate of harmonic motion from every measure to every half measure but an increase in the rate at which the melodic leaps occur in the right hand. This heightening tension creates an ensuing release with the advent of the G-chord in bar 259.

This G-chord in bar 259 precedes about two dozen measures of embellished motivic work up to the return of a strong and obvious dominant-function G-chord in measure 282. Realizing this similar medium-scale goal, we may conclude that the following bars until measure 282 act as an extension and prolongation of this dominant tonality. The harmonic accentuation of the dominant chord through this large prolongation rivals not only the length of the dominant prolongation preceding the Recapitulation but also the extent and complexity of the harmonic and melodic ornamentation in the Development itself. For these reasons, Goetschius's label of the Coda as a "second Development" seems particularly appropriate for this section of the movement.

The characteristics that contribute to this sense of a secondary Development begin with the inversion of the First Subject's theme in bar 261. By inversion, I mean specifically that the motivic kernel that has heretofore only appeared in the right hand throughout the piece now appears as left-hand material. This inversion arises out of an extreme example of transfer of register, where the motive has not only been transferred to a different register but also to a different staff in the music. On top of this inverted thematic material, Beethoven overlays florid scalar passages in the right hand as he moves backwards through the circle of fifths in a harmonic sequence as shown in Example 10.

The musical notation shows a grand staff with two systems of staves. The right-hand system (treble clef) contains a scalar passage moving backwards through the circle of fifths. The left-hand system (bass clef) contains a sequence of chords. A circled '265' is positioned above the fifth measure. Below the staff, two arrows point to the Roman numerals 'ii' and 'I'.

Example 10: Harmonic sequence of mm. 261-267

After reaching the tonic tonality in bar 267, Beethoven begins a long cadence to the dominant chord in measure 282. This extended cadence outlines a basic **I-IV-V** cadential motion that, at least in terms of scope, recalls the extended cadence from mm. 60-71. To prolong this cadential motion, Beethoven stretches the tonic tonality through to its first inversion in bar 275 via a linearly ascending bass line. This rising bass line, interestingly, derives from the grace note embellishments to the motive in the left-hand during these measures, a grace note which has acted in only an ancillary function thus far in the movement. Overtop of this bass line of grace notes, Beethoven drapes a sequence of 7-6 suspensions (as shown in Example 11) hidden underneath scalar figuration before reaching the arpeggiations of the first inversion tonic chord in measure 275.

The musical score for Example 11 (mm. 267-276) is presented in a grand staff format. The bass line is annotated with figured bass notation: 5-6, 6, 6-6, 6, 7-6, 7-6, 7-6, 7-6, 6. A circled number '270' is placed above the first measure of the sequence. A dashed line connects this circled number to the first inversion tonic chord (I⁶) in measure 275. Below the score, a harmonic diagram shows the progression from I to I⁶ IV.

Example 11: mm. 267-276

Another example of compression drives this harmonic motion through to the first inversion tonic chord. Beginning in measure 269, the four-bar figure in the left-hand drops the first half of its pattern, leaving only the melodic fragments to repeat. By bar 271, Beethoven drops the first of these melodic fragments as well, setting up the further level of compression that appears in measure 272. In mm. 272-274, this left-hand fragment is squashed down to a half-bar motive, repeated sequentially through a rising line. Under the increasing pressure of this compression and the ascending tenths in the left-hand, the bass gives way in bar 275 to the rolling tonic chord. From this tonic, an embellished **IV-V₄₋₃^{6 5}** progression in bars 276-283 prepares the statement of the Second Subject's theme in measure 284.

When the theme from the Second Subject arises in measure 284, we find the sole example of its clear statement in the tonic of the movement. Since the Second Subject's theme never made a proper, unembellished entrance in the tonic during the Recapitulation, one may argue that an important purpose of this Coda section is to facilitate the missing traditional restatement of the Second Subject. Certainly, the flourishes and ornamentations of dominant chord material in the bars that precede this restatement herald something substantial and significant besides simply the end of the movement. So while this Coda section shares qualities that echo the Development section (such as complex harmonic and melodic elaboration), the clear Second Subject thematic iteration contributes to the Coda's appearance as an emulation of the Recapitulation. In a sense, the Coda may act as some combination of the two functions (secondary Development and secondary Recapitulation), but in either case, the Coda rises above its extraneous structural role to play a crucial part in the complete motivic developments and thematic statements for the first movement of Op. 53.

Conclusion:

Having carefully stepped through the harmonic goals for the *Allegro con brio* of Beethoven's Op. 53 Piano Sonata and simplified the underlying voice-leading which prolongs these goals, we can attempt to unveil the fundamental structure of this movement. Schenker provides many forms for the fundamental structure in his landmark text *Free Composition*, those forms mostly differing in the choice of the fundamental line. The choice of which fundamental line most accurately reflects the large-scale voice-leading for a musical work can be complicated, especially in the case of long and extended movements in Sonata form such as the first movement of the *Waldstein* Sonata. Moreover, Beethoven's heavy reliance on transfer of register as a motivic developmental tool in this movement has obscured linear voice-leading from section to section, even after taking into consideration the reductions presented in this paper.

Example 4 showed that the theme for the Second Subject clearly displays a local level fundamental line of $\hat{3}-\hat{2}-\hat{1}$ with division by interruption. One testimony to the "organic nature of a well-composed tonal work" is the reflection of a piece's fundamental line in the piece's themes.¹⁹ Since we know that "only the prolongation of a division (interruption) gives rise to

¹⁹ Allen Forte and Steven E. Gilbert, *Introduction to Schenkerian Analysis* (New York: W. W. Norton & Co., 1982), p. 132.

sonata form,"²⁰ at least one characteristic of this movement's structure is reflected in the theme from the Second Subject. With this clue, we may guess that the fundamental line of the movement also transverses a $\hat{3}-\hat{2}-\hat{1}$ descent like this Second Subject theme. As further proof, we may notice that the uppermost note in the right-hand for the opening chord of this piece is an E, the $\hat{3}$ of our C-major key. Having a fundamental tone dwell in such a low register may be odd, but we also see an example in bars 21 and 22 of the E quickly escaping to the highest register of the opening, trumped only in altitude by the neighbor note F in bar 9. With this theory of the fundamental line for Op. 53 being a case of $\hat{3}$, we may turn to Schenker again for examples of the "structural consequences" of this case. One of Schenker's examples in particular seems especially applicable to Op. 53 and is shown in Example 12.

Example 12: Ideal Middleground, First Level²¹

Example 12 shows the arpeggiation of the fifth in the bass through the third, including a passing note between the two. This basic form seems particularly pertinent to the first movement of Op. 53 since the Second Subject's theme is solidly in E major and the Development significantly prolongs an F tonality (both in major and minor key areas). From this basic First Level Middleground graph, we can develop a more appropriate First Level Middleground graph (as shown in Example 13) that more closely resembles the Sonata form of this movement.

²⁰ Schenker, p. 134.

²¹ A two-voice reduction of Fig. 15, Ex. 2b, Schenker, pp. 32-33.

I (III[#]) V I I V I

Exposition — Development — Recapitulation — Coda —

Example 13: Middleground (First Level) with Division of the Fundamental Line for Op. 53²²

The graph in Example 13, a variation of a Sonata form graph by Schenker, depicts a Middleground structure that supports the outline of form in Table 1 for this movement. In this graph, we see how the function of the Coda plays a crucial role in enabling the final descent of the fundamental line. The strong dominant harmony prepared in the Coda section, coupled with how this dominant harmony leads into a clear statement of the Second Subject theme in C-major, adds evidence to the structural importance of the Coda on a level matching that of the other main divisions in Sonata form. Whether this Coda acts as a balance of the Development, a mirror of the Exposition's repeat, or some combination of these two functions is a distinction left unanswered. But in whatever function one chooses to view the Coda, the preceding reduction of the first movement from the *Waldstein* Piano Sonata has hopefully shown how such a form is possible and the motivic methods through which Beethoven develops this form.

²² Inspired by Fig. 21b in Schenker, p. 36.

Bibliography

- Beethoven, Ludwig van. *Complete Piano Sonatas*. Vol. 2. Ed. Heinrich Schenker. New York: Dover Publications, Inc., 1975.
- Cooper, Barry. *Beethoven and the Creative Process*. Oxford: Clarendon Press, 1990.
- Forte, Allen and Steven E. Gilbert. *Introduction to Schenkerian Analysis*. New York: W. W. Norton & Co., 1982.
- Goetschius, Percy. *Lessons in Music Form*. 1904. Melville, NY: Belwin Mills, n.d.
- Prod'Homme, J.-G. *Les Sonates pour Piano de Beethoven*. Paris: Librairie Delagrave, 1937.
- Randal, Don, ed. *The New Harvard Dictionary of Music*. Cambridge, MA: Harvard University Press, 1986.
- Rosen, Charles. *Beethoven's Piano Sonatas: A Short Companion*. New Haven, CT: Yale University Press, 2002.
- . *Sonata Forms*. New York: W. W. Norton & Co., 1980.
- Salzer, Felix. *Structural Hearing: Tonal Coherence in Music*. 1952. New York: Dover Publications, Inc., 1982.
- Salzer, Felix, and Carl Schachter. *Counterpoint in Composition*. 1969. New York: Columbia University Press, 1989.
- Schenker, Heinrich. *Free Composition [Der freie Satz]*. Trans. and ed. Ernst Oster. Hillsdale, NY: Pendragon Press, 1977.
- Tovey, Donald Francis. *A Companion to Beethoven's Pianoforte Sonatas*. London: The Associated Board of the Royal Schools of Music, 1931.