FORMAL FUNCTIONS IN THE MUSIC OF ARNOLD SCHOENBERG

by

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DISSERTATION ABSTRACT

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Musical form has undergone a significant revival in the past twenty years, largely due to Caplin's *Classical Form*. However, most of this attention has focused on tonal forms in the Classical and Romantic eras. This project establishes a form-functional approach for analyzing the music of Arnold Schoenberg. Drawing on Schoenberg's own theoretical writings throughout his career, I show how his concept of form can be applied to without relying on the traditional harmonic signs. This project expands form-functional analysis into the 20th century while finding its roots in Schoenberg's thought. I begin by climbing up the formal hierarchy, beginning with smaller formal units and combining them into larger sections and movements. I do this by identifying prototypical functions in Schoenberg's tonal sextet *Verklärte Nacht* Op. 4 and the twelve-tone *Suite for Piano* Op. 25. From there, I show how themes can be combined into ternary movements and larger sonata forms using Op. 25 as well as the *Klavierstück* Op. 33b. Chapter 6 examines the Third String Quartet Op. 30, which shows how Schoenberg expands the prototypical forms into much larger pieces. Chapter 7 demonstrates the analytical technique with the first two movements of Op. 11, showing how less typical forms still convey temporality and formal functions.

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CHAPTER I: INTRODUCTION

The reception of Arnold Schoenberg's music is currently caught in a strange position. On one hand, aesthetics in our time are shifting away from Modernism's dissonance and serial organizations. Contemporary composers might not explicitly use the harmonic language of the so-called Common Practice, but they are finding new ways to express tonality, drawing influences from Copland, Stravinsky, and Hindemith among many others. Consonant harmonic structures are being prioritized again while composers organize their pieces around a central pitch. While this style of composition never really disappeared, it has only recently earned respect as contributing to high art. On the other hand, the post-War avant-garde disowned Schoenberg rather quickly. Boulez famously declared the death of Schoenberg's influence in 1953, even though the older composer first inspired his own use of the serial technique. The Ultra-Modernists criticized Schoenberg for being unable to let go of traditional forms and rhythmic devices. They claim that because Schoenberg was still looking backwards, he couldn't integrate every feature of the music with the serial structure of the piece. Schoenberg even argued for this characterization himself, claiming that he was the spiritual successor of the Beethoven and Brahms tradition even as he advanced radical developments in harmony. When first describing his new 12-tone method of composition, Schoenberg says "you use the row and compose as you had done it previously. That means: 'Use the same kind of form or expression, the same themes, melodies, sounds, rhythms as you used before'."[1]

[1] Schoenberg (1975, 213). Originally published as "Schoenberg's Tone-Rows" in 1936.

Theorists' responses to these aesthetic polemics have been particularly curious. Analyses in the 1970s and 80s, particularly those by Forte and Lewin, embraced Schoenberg's new harmonic language. They developed mathematical and computational models to better describe the new chords and harmonic relationships that Schoenberg was creating in his atonal and twelve-tone languages. Many of the techniques from this era were also equally useful for analyzing Ultra-Modernist music, and thus conceptually grouped Schoenberg with later composers under the Modernist umbrella. In the 1990s and 2000s, analysts such as Richard Kurth and Michael Cherlin started to point out traditional aspects in Schoenberg's music, although they continued to focus on the pitch material. They fixated on isolated passages that suggest a key or consonant chord, even as the rest of the texture points in a completely different direction. Surprisingly few went out of their way to analyze form in dialogue with all of the other traditional features that Boulez claims are there. When Martha Hyde responded to Boulez with "Schoenberg is Alive," she attacked the idea that Schoenberg wasn't radical enough, arguing that the form and serial processes are in fact integrated in Schoenberg's music.[2] She concluded that Schoenberg recreates the traditional forms but in an entirely new way by manipulating relationships of the tone row. Even if they disagreed with Hyde's secondary harmonies, many other theorists continued to define the form of twelve-tone music in terms of different serial relationships.[3] That is not so surprising, considering that tonal *Formenlehre* at the time was similarly focused on key relationships and contrapuntal-harmonic structures. If tonal forms are defined by their harmonic structure, then twelve-tone music should be no different. However, Hyde conceded that the "clichés of

[2] Hyde (1980, 1).

[3] See Alegant (1996), Boss (2014), Haimo (1990; 2002), and Mead (1987).

Romanticism" remain: the "accompanied melody, counterpoint based on principal and subsidiary voices, rhythmic structure based on strong and weak beats, false appoggiaturas, broken chords, and repetitions."[4] It wasn't until Caplin that theorists really started to observe how these rhythmic and melodic vestiges are essential for traditional forms. However, the new *Formenlehre* has been slow to turn its attention to the 20th century.

It is particularly confusing that we focus on harmony's structural functions when we consider Schoenberg's own thoughts on form. While he clearly understood the constructive function of harmony, he argues that most people grossly overestimate it: "That the harmonic alone is form-determining is a widely spread delusion."[5] Within both the older style and Schoenberg's new harmonic style, there must be other features that also define the form. Main themes must be written in specific ways that cause them to contrast with their secondary themes, and transitions behave differently than codas not only because of their harmonic relationships. Each section of a form must somehow convey its function, and Schoenberg is adamant that can be done without recourse to harmonic processes. If harmony alone did not organize the forms of 'the old masters' then theorists also seem to "expect too much from the mere application of a set of twelve tones. […] Doubtless these other formative forces which produce the configurations and variations are *even more important*."[6] The problem is that Schoenberg is rather scarce with details here.

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[4] Hyde (1980, 2).

[5] Schoenberg (1975, 255). Originally published as "Tonality and Form" in 1925.

[6] Schoenberg (1975, 246). Originally published as "Composition with Twelve Tones 2" in 1948, emphasis added.

> Who can say today how a principal subject must be built up? What must one do that it may hold together, so that one does not find oneself suddenly on the wrong track? Who can say how a fluid form is solidified, how an introduction or a development must be evolved? He who can do these things and knows will not be in doubt as to whether or not tonality must be restored to achieve form.[7]

While he certainly achieved his polemical goals, Schoenberg had not done much to clear up the musical details that create such an aesthetic. It wasn't until Schoenberg started teaching American undergraduates at UCLA that he created a textbook, *Fundamentals of Musical Composition*, which really digs into the details of form. *Fundamentals* describes exactly how a young composer can create similar patterns to the prototypical formal patterns of the German master composers. Schoenberg begins with two different types of four-bar phrases, before progressing to larger and larger formal units. These four-bar phrases can be combined into eight-bar themes, which can be combined into 16-measure minuet forms, and so on. And true to form, Schoenberg does not rely on just harmonic progressions, but also rhythmic and motivic tools. The title alone speaks volumes about how essential these devices are to Schoenberg, but very few people have tried to look at form in Schoenberg's music through this lens. That is not to say that his formal theories haven't been influential, however.

A few of Schoenberg's disciples went on to write about musical form: principally Erwin Ratz, René Leibowitz, and Leopold Spinner. Ratz was a Viennese scholar who enrolled in Schoenberg's composition seminar around 1920 while he studied musicology with Guido Adler at the University of Vienna. He would go on to teach at the Academy of Music and the Performing Arts in Vienna after the Second World War, where he wrote *Einführung in die musikalische Formenlehre*. Ratz's *Introduction* became the foundation

[7] Schoenberg (1975, 257). Originally published as "Tonality and Form" in 1925.

for William Caplin's *Classical Form*, which sparked renewed interest in *Formenlehre* for English-speaking scholars. This line of influence from Schoenberg to Caplin is blatant when comparing their two formal treatises. Each focuses on the two-bar unit as the basic building block, although they call it by different names. They construct the same theme-types: sentences, periods, binary and ternary. The few differences result from their slightly different aims. Schoenberg is primarily interested in teaching students how to compose their own tonal music, drawing on all of the great German composers. As such, he relies on a broad spectrum of musical examples from Bach to Brahms and everything in between, and his directions allow for plenty of compositional possibilities. Caplin, on the other hand, is narrowly focused on a few instrumental genres from only three Viennese composers: Haydn, Mozart, and Beethoven. This focus allows him to make much more precise observations than Schoenberg, but it means that his research will require more adaptations when applied to other musical styles.

René Leibowitz and Leopold Spinner, however, were more interested in applying the same formal concepts to serial composition. How Leibowitz learned of these Schoenbergian forms is not well understood. Claims that Leibowitz studied composition with Schoenberg and Webern around 1930 remain unsubstantiated. However, there are records of correspondence between Schoenberg and Leibowitz following the Second World War, in which Leibowitz already shows familiarity with Schoenberg's terminology. Leibowitz began a pedagogical treatise on composing with twelve tones that used Schoenberg's formal ideas, but he never completed it. In an article, John MacKay summarizes many of the principles from Leibowitz's unpublished manuscript and provides over a dozen musical examples that place Schoenberg and Webern right

alongside Beethoven and Brahms.[8] Leibowitz's primary goal seems to be tying row manipulations to the traditional formal patterns to provide models for new composers in the twelve-tone style. After presenting Leibowitz's examples, MacKay applies the technique to entire movements: Schoenberg's "Minuet" from *Suite* Op. 25 and the *Klavierstücke* Op. 33a. Unfortunately, MacKay does not explain the reasoning behind his analyses in great detail. Instead, he applies the labels to the score as if they are self-evident and focuses on "tonal innuendos" that he claims point to tonal centers.[9] My analyses will dig more into the details of the Minuet, as well as the Musette from the same Suite, and use them as a twelve-tone prototype for analyzing other works that do not conform as neatly to the formal prototypes.

Leopold Spinner's connection to the Second Viennese School, on the other hand, is well understood. Spinner studied with Anton Webern in Vienna from 1935-39 before emigrating to England. He found a home in London, working for Boosey & Hawkes and continuing to compose. During this time, Spinner also wrote and published a *Formenlehre* treatise in English: *A Short Introduction to the Technique of Twelve-Tone Composition*. Much like Leibowitz, Spinner focused on applying Schoenberg and Webern's terminology to twelve-tone composition. The structure of his book is very similar to Schoenberg's *Fundamentals*, beginning with the two-bar phrase and building the same sentence, period, binary and ternary forms. However, almost all of Spinner's examples are twelve-tone and composed just for the book. Only a few very short examples are drawn from Schoenberg and Webern's actual compositions. However, these

[8] MacKay (1996).

[9] MacKay's article predates Caplin's *Classical Form* by only two years and reflects how much *Formenlehre* has changed as a result of Caplin's influence.

real examples do not neatly conform to his 8-bar theme-types, which may explain why he had to compose so many examples for the book. Comparing this work to Leibowitz, Spinner focuses more attention on the complete row count rather than drawing specific pitch-classes out of the texture.

As I mentioned above, Schoenberg's *Fundamentals* draws on musical examples from the late Romantic period, in addition to the Classical. This book was created for his undergraduate students so that they could model their own compositions after the old masters. Just like his students, Schoenberg is as likely to draw formal inspiration from Wagner as Bach. Luckily, many other scholars have been expanding Caplin's theories for the music of Romantic composers, fleshing out the compositional models that were afforded to Schoenberg. Mark Richards and Poundie Burstein discuss functional abnormalities within the Classical style; Stephen Rodgers, Harald Krebs, Nathan John Martin and Steven Vande Moortele adapt the formal functions of the sentence to account for syntactical developments by the early Romantics Schubert and Schumann; and Steven Vande Moortele and Matthew BaileyShea have described the expansion of acceptable harmonic progressions in the late Romantics Liszt and Wagner.[10] While I will cite her work only a few times, how I think about form is heavily influenced by Janet Schmalfeldt and her recent book *In the Process of Becoming*. It is all too easy to revert back into a grouping structure approach with new form-functional labels. I aspire to match Schmalfeldt's attention to thinking about musical form as it unfolds in time before the listener. This study seeks to continue this larger formal discussion into the 20th century by providing formal models for Schoenberg's own compositions.

[10] Richards (2011), Burstein (2014), Rodgers (2014; 2017), Krebs (2015), Martin and Vande Moortele (2014), Vande Moortele (2011; 2013), BaileyShea (2002–2003).

Methodology

My formal types are primarily derived from Schoenberg's *Fundamentals of Musical Composition* and Caplin's *Classical Form*. Schoenberg's textbook focuses on compositional pedagogy for basic forms, from two-bar units up to entire movements. In chapters 2 and 3, I discuss Schoenberg's four types of four-bar phrases: the presentation, antecedent, consequent, and continuation.[11] When a presentation and continuation are combined, they form a theme-type called the sentence. A presentation is made of a statement and repetition: two two-bar units that sound like the same material. Sometimes they are an exact repetition, featuring the exact same pitches and harmonies, but more often the repetition has been altered to fit another harmony or pair of chords. The continuation typically features a process of fragmentation and liquidation. Fragmentation occurs when material from the two-bar basic unit is broken down into smaller chunks, and often sequenced. Liquidation occurs when characteristic material, which distinguishes one theme from another, is slowly replaced by more conventional patterns that are often required for evoking a clear cadence at the end of the theme. The other main theme-type is the period, which consists of an antecedent and consequent phrase. The antecedent is made of two contrasting two-bar units and leads to an inconclusive cadence. The consequent phrase will begin with the same material as the antecedent phrase, but alter the ending to create a more conclusive cadence. Both the presentation and antecedent phrases are initiating phrases that occur at the beginning of a theme. The consequent and continuation usually do not begin a theme but instead follow other phrases and lead towards the end of the theme. Organizing themes into sentences and

[11] They are presented in that order, too. It is surprising that the 8-bar sentence (presentation and continuation) has been divided.

periods is so common in the Classical and Romantic literature that it is best to think of them as types. However, they do not account for all of the themes in that music, as composers typically flaunt their formal ingenuity.

As I mentioned above, Caplin's work is an intellectual descendant of Schoenberg's that has been refined and honed for studying the music of Haydn, Mozart, and Beethoven. He begins with the same sentence and period as Schoenberg, but has much stricter harmonic requirements. For example, Caplin insists that a presentation phrase must prolong the tonic harmony. Schoenberg shows no concern over this as many of his own examples, especially in Wagner's music, do not follow this rule. Caplin provides specific cadential progressions that must be used to define the continuation phrase, and these cadences must occur in the home key. Schoenberg instead says the sentence ends with some kind of cadence to some degree.[12] Most of the restrictions that Caplin adds are harmonically oriented, which does not apply to my analyses as I'm looking at music that uses an entirely foreign harmonic language. The only question that may rise is: are Caplin's harmonic requirements necessary in some way for recognizing the theme-type? One of the primary theoretical arguments I will make is that other musical features are common to these theme-types across a broad spectrum of harmonic languages. These other musical features bind musical examples from different harmonic styles together, such as rhythm, dynamics, contour and energetics. No single feature is a necessary condition for recognizing a theme, but rather enough musical features combined help a listener recognize them as such. As such, we should perceive these formal types as a whole across musical languages. While pitch organization changes

[12] Schoenberg (1967, 114).

considerably over time, these formal patterns can be unified through many other musical domains.

There are two main challenges in applying these formal concepts to Schoenberg's music. First, Schoenberg seems to refuse writing simple repetitions. Instead, he heavily disguises repetitions behind a thick layer of variations and embellishments. This often makes recognizing simple patterns like presentations much more difficult. Second, the boundaries between sections are often difficult to discern. This is partially because it is harder to distinguish differences in the harmonic language, but it also results from peculiarities in Schoenberg's compositional style. In the same way that Schoenberg does not leave repetitions unmodified, he is also constantly seeking out the most interesting variations of the primary motivic material. This aesthetic philosophy is partially worked out in the unpublished manuscript *The Musical Idea and the Logic, Technique, and Art of its Presentation*.[13] The treatise primarily focuses on Schoenberg's concept of the Musical Idea, largely drawing on a Hegelian dialectic laid out by A.B. Marx almost a century earlier. However, a large amount of the book focuses on form as a tool for making the musical idea comprehensible. Severine Neff and Patricia Carpenter, who edited, translated, and provided commentary to the manuscript, focus on coherence and how it relates to comprehensibility. However, Schoenberg also argues for a theory of "articulation" in form. Not in the sense of *staccato* or *tenuto*, but rather that formal sections are attached by joints and move in relation to each other.

The manuscript emphasizes coherence and comprehensibility, but it represents an earlier stage of Schoenberg's thought. Shortly after abandoning his book project,

[13] Schoenberg (2006).

Schoenberg describes coherence and articulation as opposing musical forces.[14] It is better to understand coherence and articulation as two sides of the same comprehensibility coin. Coherence reflects how musical sections are similar, while articulation distinguishes between sections. When the music is both coherent and articulated, then it is comprehensible. On the phrase level, articulation is about recognizing the beginnings and endings of phrases, i.e. the seams and joints that connect them. On a larger level, articulation is about contrasting thematic content and how different themes must be constructed in different ways. This compositional technique must manifest in some aurally salient way, usually through contour, texture, dynamics, rhythm, and meter, so that a new listener can follow the form as it unfolds. However, it should be clear that if recognizing repetition and hearing boundaries between themes is difficult in Schoenberg's music, then by his own standards he is not being particularly comprehensible. This is in fact intentional. Like many Modernists that follow him, Schoenberg prides himself in writing difficult music and even argues that if the masses can understand music then it must be worthless.[15]

In chapter 4, I discuss the inter-thematic formal functions: Schoenberg's stability and Caplin's tight-knit formation. Schoenberg's primary distinction between main themes, subordinate themes, and transitions is stability, which evolves into Caplin's concept of tight-knit vs. loose. "A statement is stably formed when its smaller components do not have the tendency to move away from a perceptible center (for example, a harmonic one) but instead arrange themselves around it (concentric

[14] Schoenberg (1975, 278). Originally published as "Problems of Harmony" in 1934.

[15] Schoenberg (1937, 51). Originally published as "How One Becomes Lonely" in 1937.

tendency)."[16] It is easy to read this statement as just harmonic instruction: i.e. modulating themes are not stable. Again though, the harmonic realm alone is not form-determining. These stable themes also feature clear beginnings and endings that separate them from the surrounding material. In other words, they are well-articulated. Further, stable themes are more regular in hypermeter, using the more typical two- and four-bar phrasing. In contrast, secondary themes are less stable and more loosely organized. They might appear unexpectedly from developmental or transitional material and they might disappear as suddenly as they first entered. Loose themes often feature irregular phrase lengths or include additional phrases before cadencing. So a secondary theme constructed as a sentence may feature multiple continuations before finally cadencing.

I am not only focused on the theme-*types*, but rather formal functions generally at work in Schoenberg's music. Most of Schoenberg's music does not neatly conform to the types he presents in *Fundamentals*. In his *Models for Beginners*, Schoenberg presents some sparse guidelines on creating unique themes that do not conform to a type. Focusing only on the order of motivic content, a sentence can be understood as [aabc] and a period as [abac]. In his commentary for the published edition of *Models for Beginners*, Gordon Root shows that Schoenberg presented a nearly exhaustive list of different motivic orderings in Alban Berg's homework, of all places.[17] However, I will use more generalized musical processes, such as liquidation and fragmentation, to help define phrasing. For example, a presentation is an initiating function that is less rhythmically active than the continuation, a medial function. In the continuation, the

[16]Schoenberg (2006, 133).

[17] Schoenberg (2016).

material is shortened and repeated in quick succession. Fragmentation does not just shorten the motivic content; it also accelerates and drives forward, like a speaker becoming more insistent.

These generalized formal functions are closely related to and can easily be supplemented by the concept of energetics, first posited by Ernst Kurth and later picked up by Steve Larson, Robert Hatten, Matthew BaileyShea, and Seth Monahan.[18] The general idea is to consciously exploit a metaphor where musical events are physical objects and force is exerted on them to create musical gestures. When motivic material is fragmented, it accelerates and builds energy as it drives towards a musical goal. We have mapped pitches onto a vertical space where sounds are higher and lower. This allows a melodic line to climb up to higher notes or fall down to a lower pitch. Furthermore, we can understand these musical motions with as much nuance as our own physical motions. We might characterize an ascent as a laborious climb, or it might float delicately along with little resistance. One descending melody falls precipitously while another is ground down under a slow crushing weight. These sorts of observations are intuitive to most musicians and concert-goers, but they still play a significant role in how we engage with music. Performers construct phrases out of these gestures and shapes so that audiences can follow along and understand musical meaning. In the context of formal functions, initiating functions feature the most characteristic motivic content, that which we use to distinguish one theme from another. In addition, beginnings will establish the baseline energy with which one can compare the rest of the phrase. Medial functions develop and liquidate motivic content while the music intensifies, building in energy, and driving the

[18] Kurth and Rothfarb (1991), Larson (2012), Monahan and BaileyShea (2018).

music forward. Ending or cadential functions must somehow expend the energy that is built up over the course of the theme. They could drop in energy by lowering the dynamic, thinning the texture, and slowing down rhythmic activity. Or they could do the opposite, similar to a triumphant final coda in most symphonic works, building in energy to one final exclamatory hurrah.

To help identify fluctuations in energy from rhythmic processes, I have developed a concept I call "rhythmic density." In its simplest form, I count up the number of note attacks in a measure and compare that to the number of note attacks in another measure. For instance, if the accompaniment is playing a constant 8^{th}-note pattern in 4/4, there will be eight attacks in a measure. If that phrase accelerates and moves to constant triplets, then there will be twelve attacks in a measure. This increase in rhythmic density thus corresponds to an increase in energy that is probably matched by louder dynamics, increased range, and other sorts of medial processes. In real examples, there are often rhythmic embellishments, similar to grace notes, that might need to be ignored. In more sophisticated examples, I care less about the number of attacks per measure and more about the idea of pulse-stream, adapted from John Roeder. Take our earlier thought experiment, our accompaniment with a constant 8^{th}-note pattern can be understood as a stream of eighth note pulses. Rather than shift directly from 8^{th}-notes to 16^{th}-notes, Schoenberg is more likely to disrupt the constant flow of 8^{th}-notes with the occasional 16^{th} note. This creates a series of syncopated rhythms until eventually all of the durations are replaced with 16^{th}-notes. As such, Schoenberg creates a more gradual accrual of energy as the pulse-stream shifts from one level to another.

The reader has probably noticed that I have not mentioned the usual approaches to analyzing twelve-tone music. I will not be using a row count of the piece as a primary tool in my analyses. As Richard Kurth has pointed out, "Schoenberg discouraged serial analyses of his twelve-tone music."[19] When Schoenberg first presented his twelve-tone method of composition, he was fearful that his audience would pay undue attention to the method rather than the music.

> Although I had warned my friends and pupils to consider this as a change in compositional regards, and although I gave them the advice to consider it only as a means to fortify the logic, they started counting the tones and finding out the methods with which I used the rows. Only to explain understandably and thoroughly the idea, I had shown them a certain number of cases. But I refused to explain more of it, not the least because *I had already forgotten it and had to find it myself*. But principally because I thought it would not be useful to show technical matters which everybody had to find for himself and could do so.[20]

The emphasized line is particularly revealing. Even for the composer, understanding the final state of the composition was not related to the row and how it is manipulated. The row is merely a tool for the composer. In that same article Schoenberg is clear, "I did not call it a 'system' but a 'method', and considered it as a tool of composition, but not as a theory."[21] While Kurth was the first to argue for "Dis-Regarding Schoenberg's Twelve-Tone Rows," he proceeded to analyze Schoenberg's music in a method that was entirely reliant on the row-count and parsed forms based on row manipulations. Kurth claimed that he was trying to compromise between a "compositional grammar" and a "listener's grammar."[22] I share his concerns, but I want to extend his line of reasoning even further

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[19] Kurth (1996).

[20] Schoenberg (1975, 214). Originally published as "Schoenberg's Tone-Rows" in 1936, emphasis added.

[21] Schoenberg (1975, 213). Originally published as "Schoenberg's Tone-Rows" in 1936.

[22] Kurth borrows these terms from Fred Lerdahl (1983; 1988).

by focusing on the listener's perspective and emphasizing all of the processes that delineate form while *ignoring* row counting. When I listen to a piece of music, I cannot tell which row-form is being used at any given time or describe what partitions are being applied to that row. I can only attend to the motives on the musical surface that have been created by those processes. But I *can* attend to these motives and they are sufficient enough for hearing the formal patterns.

While the details will be worked out in the following chapters, I want to give a general outline of my analytical process here. When beginning my analyses, I focus on a middle-level of the form at about the level of the theme. Where do the significant cadential moments occur? These are marked with significant *ritardandos*, sudden switches to very long note lengths, and often complete textural breaks. Like a late-Romantic composer, Schoenberg often uses cadences sparsely in his longer compositions. Often, the main themes' most conclusive moments occur about 32 measures into longer pieces. These cadential moments help me to break down the entire movement down into smaller sections. Having done that, I reverse focus building up from the smallest pieces. I try to find the smallest two-bar ideas as well as larger phrases that cannot be reduced.

Once the small formal articulations are marked, my analysis focuses on how these pieces are strung together into a coherent whole. I begin with intra-thematic functions, trying to find repetitions of basic ideas within the theme-sections. I also look for the fluctuations in energy that accompany shifts between functional areas, initiating, medial, and conclusive. I look for increased rhythmic density as a specific marker, as well as accelerations of tempo, expansions in range, and a tendency toward louder dynamics. When I have a good understanding for how each theme is constructed, I then compare

them, looking at inter-thematic functions. How are secondary and interior themes less stable than the main theme? Is there a recapitulation and how is it effected? How are the transitions functioning between theme areas? How are the developmental sections structured?

Like Caplin's work, this project is limited to instrumental music. These formal functions are conceptualized for making meaning in instrumental works with no text. That is not to say that texted pieces cannot use formal functions. Rather, I mean that instrumental works are not structured around a poetic form and must somehow construct their own forms. Furthermore, issues such as declamation and text-painting present an additional dimension that complicates the sense of purely musical form. However, I do want to analyze music from all three of Schoenberg's compositional styles. I will provide analyses of excerpts from the string sextet *Verklärte Nacht* Op. 4, composed in 1899. The sextet provides many straightforward examples of formal types that use functional harmonic progressions, as well as experiments in Wagnerian-styles of non-functional harmonies. Thus, while Schoenberg only began writing about these formal types in the 1930s, the sextet shows us that Schoenberg was familiar with these form types even in his earliest compositions.

There are surprisingly few purely instrumental pieces from Schoenberg's middle period. I will provide formal analyses of the *Drei Klavierstücke* Op. 11, no. 1 and 2. These two movements both work extremely well with formal functions. The third movement of the set is an entirely different sort of piece formally, and I don't know that formal functions are the best tool for analysis of it. In a similar vein, I won't provide analyses of the Op. 19 piano pieces, as many of them are so short that they don't even

form complete themes. Those two published works, along with the orchestral pieces Op. 16, are the only instrumental pieces from Schoenberg's middle, "atonal," period.

When Schoenberg started experimenting with the twelve-tone method, he wrote three sets of piano pieces in parallel, composing a movement or two for one set and then bouncing back to the other two. In this way, he composed Opp. 23, 24, and 25. Five of the seven movements from Op. 25 are modeled on a Baroque suite and make use of extremely typical formal functions. Many of these movements have already shown up in others' work. MacKay has provided a full analysis of the Minuet, and Spinner uses several excerpts from throughout the set.[23] However, I want to provide complete analyses of the Minuet and Musette, as well as dig deeper into how these movements can inform analyses of his other less-typical compositions. Continuing with the piano pieces, I will analyze Op. 33b, even though Brian Alegant and others have already analyzed it, so that I can show how parameters other than pitch contribute to articulating form. Moving back to the string works, I want to provide an analysis of parts of the Third String Quartet Op. 30, the first written in a twelve-tone language because it helps link Schoenberg to a very old tradition of Viennese composers.

It should be clear that I am downplaying the importance of pitch as a requirement for theme-types, even though formal divisions are sometimes correlated with the row form. These theme-types have been in use for hundreds of years, and their sense of form, rhythm, and dynamics are all used in very similar ways across generations, despite the drastic changes in pitch organization. I strongly agree with Richard Kurth that theorists have over-emphasized manipulations of the twelve-tone row, but I want to go even

[23] MacKay (1996); Spinner (1960).

further than he did. It isn't that I want to completely ignore a row count, as I label some of the row forms in the Musette analysis. But I want to focus on all of the other ways that forms are defined besides pitch content, especially those techniques that are clearly perceptible to a listener. My analysis of *Verklärte Nacht* includes harmonic progressions not just because they help clarify form, but also because they a listener can attend to those progressions. How the row is manipulated is not so aurally perceptible, and thus does not directly engage with the "listener's grammar." Sometimes, exacting pitch analyses and detailed row counts obscure our obvious intuitions of form. However, I still believe that my approach will be extremely valuable for analysts interested in how the the row forms are manipulated. If the form helps make the idea comprehensible, as Schoenberg claims, then a purely formal approach should highlight those moments that are most crucial for pitch structure. Thus, by starting with form we can simplify the row count and more easily find the heart of the matter.

That theory got to this over-emphasis on row-counting was certainly helped along by Ultra-Modernists like Boulez and Babbitt. They further emphasized the serial method by embedding it into multiple facets of the music and consequently extracted serial music from the traditional forms and rhythms that Schoenberg insisted upon. But the current state of twelve-tone analysis still comes down to the theorists. For so long, theory has primarily looked for meaning in pitch and pitch-class structures. By focusing on Schenker graphs, twelve-tone row counts, and set-class complexes, theorists elevated music for its intellectual rigor. Or at least, allowing theorists to demonstrate intellectual rigor. As Susan McClary argued in her article "Terminal Prestige: The Case of Avant-Garde Music Composition", these analytical systems are designed to appraise "difficult"

music created within an insulated scholastic community and prove its inherent value. I'm not particularly interested in continuing that tradition. So as I analyze this music by a so-called "difficult" composer, I want to highlight how Schoenberg made his music comprehensible using parameters other than pitch. I want to emphasize how he imitated earlier musical languages and thus provide a kind of listener's and performer's guide so that Schoenberg's music is less difficult and more understandable.

At the height of serialist popularity in 1958, Peter Stadlen published a polemical critique of twelve-tone theory arguing that the harmonic language did not suggest shaping in the same way that tonal music demanded.[24] While I won't argue against him with respect to later composers, it seems clear to me that Schoenberg wanted performers to use the same basic shapes and gestures they always have. It may be that the harmonic language itself doesn't suggest them, but these gestures are still an integral part of Schoenberg's compositional language. Furthermore, listening to Schoenberg's music in this way greatly helps with listener appreciation. As Schoenberg pointed out so often, the primary goal of form is comprehensibility. I hope to show that these formal functions are a valuable tool for performers to make the music comprehensible and for listeners to follow along.

[24] Stadlen (1958).

CHAPTER II: TRADITIONAL FORMS AND *VERKLÄRTE NACHT*

In this chapter, I will discuss the theory of formal functions as it is laid out by Caplin and place it in the context of Schoenberg's seminal writings on form. For each form type, I will discuss theoretical writings and then compare them to excerpts from Schoenberg's Op. 4 *Verklärte Nacht*. The string sextet is a prime candidate for a study in Schoenberg's formal functions because it helps us bridge the gap from common practice tonality to Schoenberg's later harmonic language. Published in 1899, *Verklärte Nacht* features many normative theme-types that make clear use of tonal harmonic functions, showing that Schoenberg had already internalized these formal patterns early in his career. However, we also see that Schoenberg was already experimenting with non-functional harmonic progressions and dissonant chord combinations within these traditional phrase patterns. I will not provide an analysis of the entire sextet because my larger project focuses on Schoenberg's atonal and twelve-tone compositions. Instead, I have selected excerpts that will be most relevant for the following chapters. These excerpts will begin with the most traditional type of phrases, those that have typical formal and harmonic functions, before progressing into the stranger and more experimental excerpts. Overall, these excerpts will demonstrate formal functions for sentences, periods, small ternary forms, and the developmental Core technique.

It will seem odd that so many of these theme-types and formal patterns appear in different places throughout the piece. At some point, the reader will probably wonder "why is there a small ternary *here* of all places?" The problem, as Frisch has already

pointed out, is that the larger form is not so simple to tease apart.[25] While Schoenberg never discussed the larger form, Webern characterized it as a "free fantasy." However, like Frisch, I find Egon Wellesz's five-part rondo more compelling, as it parallels the structure of Richard Dehmel's poem.[26] Unfortunately, distinguishing five parts in a piece spanning 400 measures does not give much detail about the local forms. To tie this rondo structure to the musical surface, Frisch emphasizes the thematic and motivic relationships as they develop organically over the course of the piece. Frisch compiles what he calls the 19 principal themes, and highlights the motivic relationships between them all. I don't disagree with any of Frisch's analysis, but he is really only identifying the basic idea (or a characteristic *gestalt* within the basic idea) that begins a theme or theme-group. However, just like the two lovers in Dehmel's poem wander the woods at night, the music seems to wander from theme to theme. These themes are stably marked against the brief but frequent transitions. The overall effect is a free fantasy that still loosely reflects the drama of the original poem.

The Sentence

The Theory

It is not too surprising that Schoenberg would compose with sentences, given that he seems to be the first theorist to identify the theme-type.[27] However, it is still difficult to draw direct parallels between his theories and his own compositions. Schoenberg delves into the theme-types only in his posthumously published textbooks where the

[25]Frisch (1993, 112–113).

[26] Wellesz (1925, 76).

[27] Schoenberg first wrote about the sentence in *FMC* (1967), however it is clear that he taught the sentence to students such as Erwin Ratz in Vienna in the early 1920s.

material has been deliberately pared down for undergraduate students. He explicitly cautions that his "school-form is an abstraction which differs, often considerably, from reality."[28] The composer's textbooks also share another distinct feature with more recent scholarship in the *New Formenlehre*: they are all focused on tonal music. While Caplin exclusively uses Mozart, Haydn and Beethoven as the foundation for his theory, Schoenberg is broader in his pool of musical examples placing Bach, Brahms, and many others alongside the Classical canon. The strong emphasis on pedagogy and broad repertoire base leads to Schoenberg's startlingly simple definition for a sentence in *Structural Functions of Harmony*:

> The school-form for the sentence (eight measures) begins with a two-measure unit, followed by a repetition (mm. 3–4) which can be a sequence or else a more or less contrasting repetition. The sixth measure will be a sequence of the fifth, and mm. 7 and 8 will be cadences to various degrees.[29]

By focusing the definition on metric proportions and thematic similarity, he can introduce undergraduate students to the concept before adorning the structure with other musical features. The majority of the discussion following Schoenberg's definition provides details for creating possible harmonic progressions. The types of presentations he describes are ultimately the same as Caplin's (repetition, sequence, and response). Unfortunately, Schoenberg does not discuss the degree to which the second unit may contrast with the first or even what specific musical characteristics may be varied but still retain a sense of repetition, largely because the options available seem limitless. Caplin begins there and adds two specific musical markers to the basic idea with its repetition: a

[28] Schoenberg (1967, 114).

[29] Schoenberg (1967, 114).

tonic prolongation, and melodic content that is "characteristic as opposed to conventional."[30] Defining presentation function with tonic prolongation is made more tenuous over the course of the 19th century as Liszt and Wagner favor sequential presentations that move to the functionally pre-dominant supertonic chord.[31] Furthermore, Caplin's dichotomy of characteristic and conventional is a distillation of Schoenberg's discussion of liquidation. The beginning of a theme is marked characteristic or thematic material, but this thematic character is attenuated out and replaced by conventional formulae to evoke a cadence. This process is often accomplished through fragmentation.

Caplin's use of the basic idea as the foundation for his theory is a more striking deviation from Schoenberg's work.[32] The basic idea "fits somewhere between motive and phrase that can be integrated into larger formal units as well as disintegrated into smaller motivic elements."[33] Defining this two-measure segment in this way has not always been the norm, though, for Schoenberg's only criteria here are that "the opening segment of a theme must clearly present its basic motive" and that the repetition must only "meet the requirements of comprehensibility."[34] However, Schoenberg claims that "the distinction between the sentence and the period lies in the treatment of the second phrase, and in the

[30] Caplin (1998, 35–37).

[31] BaileyShea (2004), Vande Moortele (2011).

[32] The term "basic idea" is clearly drawn from Schoenberg's *Grundgestalt*, but they do not refer to the same thing. Caplin's basic idea is a common formal division within a piece and a practical analytical tool. Schoenberg's *Grundgestalt* is the Idea that the entire piece is structured around and related to. It is a philosophical and aesthetic concept as much as it is a single passage near the beginning of the piece.

[33] Caplin (1998, 37).

[34] Schoenberg (1967, 21).

continuation after it."[35] Knowing that Caplin's presentation is two statements of a basic idea and that an antecedent is a basic idea followed by a contrasting idea, it seems likely that Schoenberg's "phrase" is analogous to Caplin's "idea." It is also clear from his subsequent discussion of presentations as well as from his earlier discussion, in "Connecting Motive-Forms," that most phrases are comprised of multiple motives. [36] Thus, while Schoenberg's minimum definition requires only the presentation of a single motive, his description clearly relies on the same concept of two sub-units within the presentation, although his specific terminology is not still in use.

With all of that said, Schoenberg does not share Caplin's concern that a basic idea must be at least "two real measures" and normally will not exceed that.[37] Indeed, Caplin goes to great lengths distinguishing between "a real, experiential measure and a notated measure," in order for all basic ideas to fit his archetype. Schoenberg, on the other hand, only shows concern regarding length by stating that "in the simplest cases these structures consist of an even number of measures, usually eight or a multiple of eight"[38] but that this is not as fixed a principle as what Caplin observes in the Classical style. This conclusion should not be surprising though, considering that Schoenberg uses the late Romantics as models and that BaileyShea has demonstrated a Wagnerian sentence with the metric proportions of 3+3+3+9.[39]

[35] Schoenberg (1967, 21).

[36] Schoenberg (1967, 21–24 and 16–19).

[37] Caplin (1998, 37).

[38] Schoenberg (1967, 21).

[39] BaileyShea (2004).

While Caplin's presentation provides more requirements, his continuation is not so different from that of his predecessor. Schoenberg cites three specific musical features that are common to a continuation: liquidation, shortening of the phrase, and sequential harmonic progressions. Liquidation is the process of "gradually eliminating characteristic features, until only uncharacteristic ones remain" which remains central to Caplin's definition.[40] As I mentioned above, Schoenberg's conception of "phrase" is analogous to Caplin's "idea," thus Schoenberg's "shortening of the phrase" is identical to Caplin's "fragmentation."[41] However, that specific phrase implies that the musical material needs to be related to the presentation, even though "the continuation demands more varied motive-forms."[42] Caplin reinforces the point, maintaining that motivic connection between presentation and continuation is typical, but "it is just as possible for the melodic material to change significantly at the beginning of the continuation phrase."[43] Both theorists also emphasize sequential harmonies in the continuation. Writing to budding composers, Schoenberg encourages the use of sequences as they are "very useful" and are "usually a transformation or condensation of preceding motive-forms."[44] Caplin notes that "the use of sequence is rare in sentences that conform to the eight-measure model" but are common when the continuation "is extended beyond its conventional four-measure limits."[45] Caplin brings forward two more musical criteria to identify continuation phrases: an increase in surface rhythmic activity and an acceleration of

[40] Schoenberg (1967, 58).

[41] Caplin (1998, 41).

[42] Schoenberg (1967, 58).

[43] Caplin (1998, 41).

[44] Schoenberg (1967, 59).

[45] Caplin (1998, 42).

harmonic rhythm. Taken together, these processes are meant to disrupt the stability established in the presentation and create a build in energy with a necessary drive forward to the cadence.

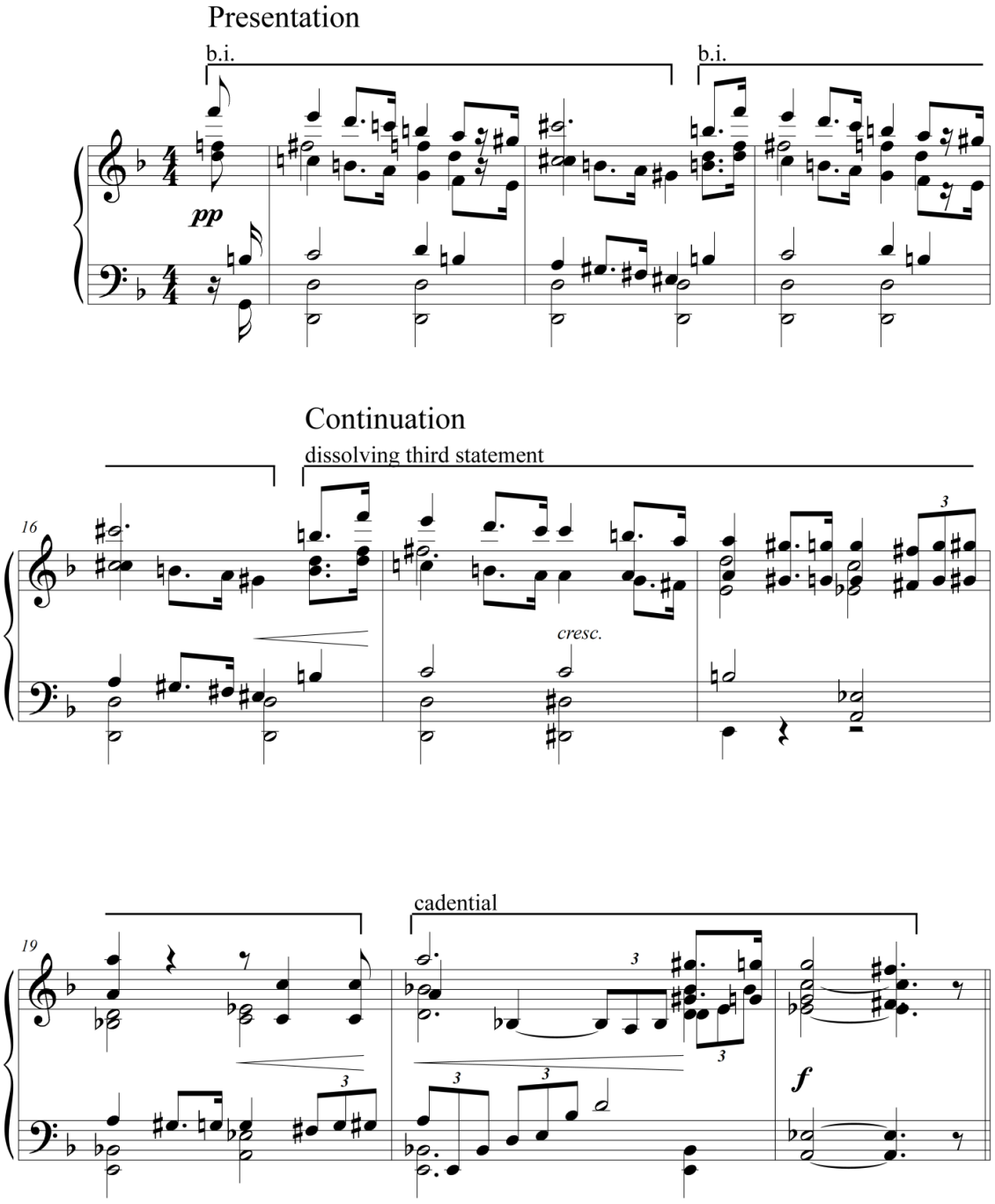
BaileyShea's formal study establishes a typology of continuations from many different stylistic periods. [46] He argues that the greatest divergence between sentence examples is which type of continuation is used. His four types are: a dissolving third statement, a sentential continuation, AABA sentences, and *Fortspinnungtypus*. Of these four, the sentential continuation is the most familiar, not only matching Schoenberg's definition above but also the well-known prototype: Beethoven Op. 2/1. Perhaps more important to the present study, however, are BaileyShea's concluding remarks concerning the limits of what he calls 'sentential failure.' He argues that while statement-repetition is incredibly suggestive of the beginning of a sentence, it cannot be synonymous with the notion of sentence. This is because statement-repetition is so ingrained in the Western musical art world that it would cast almost every non-period musical utterance as being the presentation of a sentence. I can't help but agree, as the statement-repetition only creates the presentation function. It would be extremely convenient to have a thematic connection between presentation and the subsequent phrase to link them together into a single sentence theme-type. However, as I mentioned above, Caplin asserts that this is not a necessary requirement of sentences in the strict Classical style, and Schoenberg claims the continuation simply requires more distant motive-forms. Instead of relying on some sort of thematic or motivic relationship between the two phrases, I find myself relying on

[46] BaileyShea (2004).

Caplin more and more. It is the fact that a continuation follows a presentation that creates the sentence and thus excludes any other interpretation.

Following the continuation, both Schoenberg and Caplin assert that sentences end with a cadence. However, through Caplin's influence, the term cadence has become heavily associated with specific cadential content that is defined entirely through common-practice tonal harmonic progressions.[47] This ebb and flow of tonic and dominant harmonies is simply not present in Schoenberg's atonal and twelve-tone music, which is not surprising given that one of the specific reasons for the system's creation was to preclude the possibility of accidentally creating a tonal center. I will discuss how Schoenberg creates cadential function in more detail in the chapter on Op. 25. For now, I want to bring forth specific examples of sentences in Schoenberg's *Verklärte Nacht* and accept that conclusions about cadential function will be inductively drawn from these prototypical examples later.

[47] Caplin's Classical Cadence (2004) is defined by specific harmonic cadential content. Although Caplin (2018) introduces new types of cadential content, they are still ultimately defined by harmonic progressions. In chapter 3, I will define cadential function for Schoenberg's non-tonal progressions.



Example 2.1 – Schoenberg Op. 4, mm. 13–21

The most prototypical and most stable theme in all of *Verklärte Nacht* is a sentence near the beginning of the piece in mm. 13–21, shown above in **Example 2.1**. It

begins with a four-measure presentation where the two-measure basic idea is repeated exactly. Exact repetitions of two measures of music are exceptionally rare in Schoenberg's music, and nonexistent in his mature twelve-tone style. The entire presentation prolongs the tonic with a strong pedal D played in octaves between second viola and second cello. The long cascading lines in the upper voices only lightly reinforce the tonic chord. Instead they linger on accented passing tones and appoggiaturas, almost sounding Mahlerian. The five-bar continuation starts in m. 17 with a third statement of the basic idea that dissolves into a one-bar fragment in mm. 18–19. This fragmentation coincides with a shift to predominant function as the inner voices block out a ii^{ø}7 chord over an E bass. The continuation is marked with several crescendos, often a new one in every measure as the passage surges forward and erupts into the *forte* half-cadence in m. 21.

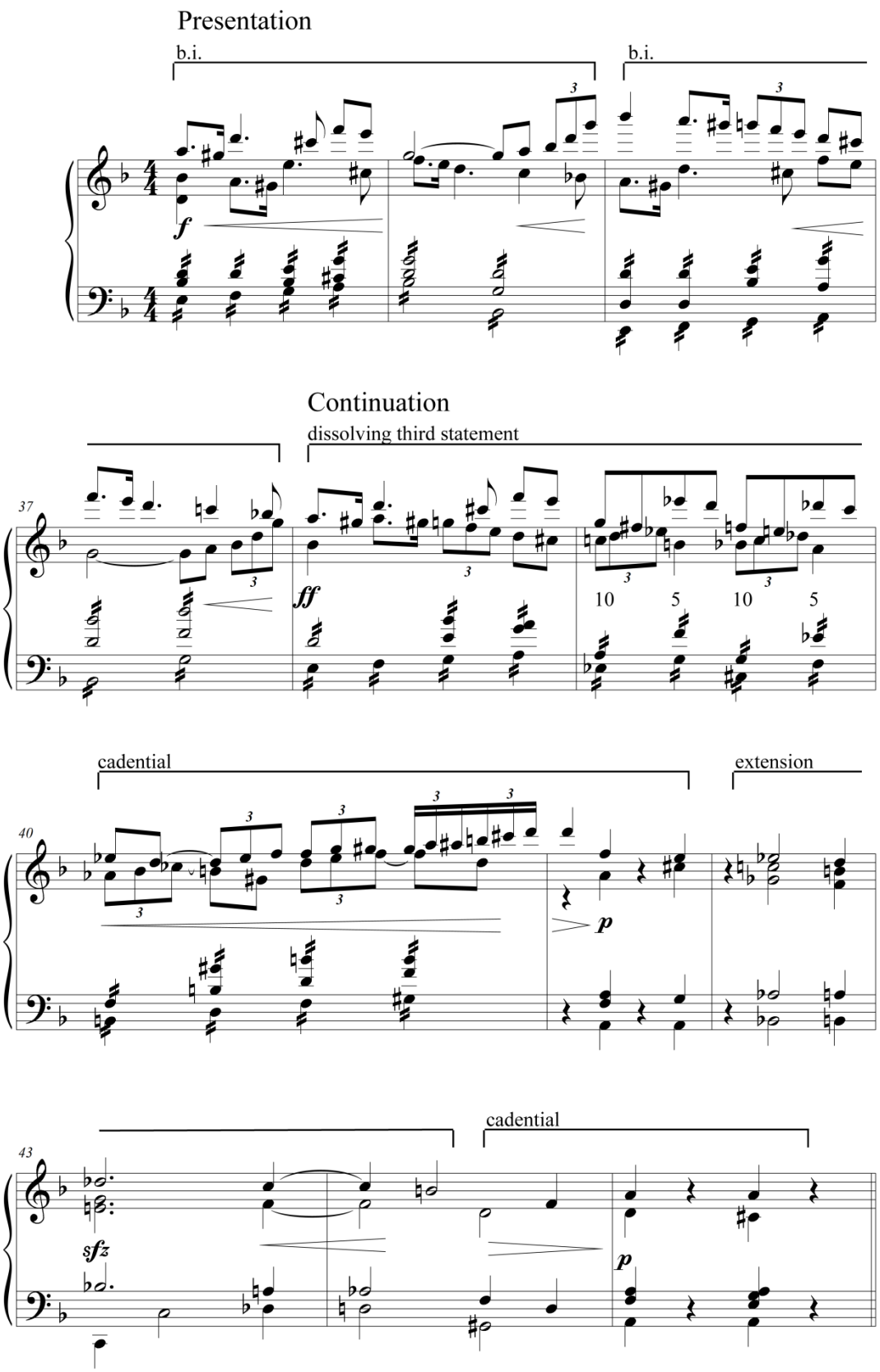
But just as in the tonic presentation, the upper voices don't agree with the bass on exactly what chord they should be harmonizing. In the ii^{ø}7 chord, we can only be certain of the E, B ♭ , and D. The third is ambiguous as the 4-3 suspension in the melodic line resolves to G# instead of the diatonic G-natural. This would create an inverted French augmented sixth chord pointing to the dominant key. I rather hear the G♯ as a chromatic passing tone on the way to the expected diatonic G♮, Except that by the time the melody reaches that G, the chord underneath it has shifted away. This is simply a suspension over a change of bass, a very old contrapuntal device. However, Schoenberg deftly weaves this traditional device into his neo-Wagnerian style, heightening the sense of harmonic ambiguity. The cadence in m. 21 features similar harmonic confusion as the dominant bass note is harmonized with a fully-diminished seventh chord. It even features a 7−6

suspension as if revealing a leading tone, but it points to a key area where the piece never goes. It is the blatant bass progression that really marks the tonal progression I-ii-V, even though the actual harmonies it supports are much more chromatic than you would expect. Boss (2019) points out the use of a similar technique in Op. 2/2, where Schoenberg uses standard outer-voice contrapuntal structures that still have unusual but consonant harmonic support. Thus, creatively altering the typical harmonic structure is a hallmark feature of Schoenberg's tonal music.

This theme is also stable because it is clearly articulated from the surrounding material. The preceding two measures are a transition from the introduction, which established the motivic material for this section but did not actively progress through the harmonic functions. The transition is marked by its repetition of much shorter fragments, without the sense of developing from something. In other words, despite being fragmentary, it is not fragmentation. In addition, the high trill in the violin creates quite a pause in the melodic line leaving room for new material to begin. Or in Schoenberg's terms, mm. 11–12 are an upbeat, approach, or preparation for the main theme. The cadence at the end is even more marked than its initiation, as detailed above. Altogether, this theme in mm. 13–21 features a very clear sense of beginning, middle, and end, all while progressing through the harmonic functions tonic, predominant, and dominant.

There are a few things here that will continue to appear in Schoenberg's music throughout his career. When the harmonic language is more dissonant and not bound to a tonal key, these features will become the primary markers for identifying formal functions. First, the melodic line often crosses multiple instruments. This is so common in *Verklärte Nacht* that it is almost a defining feature, depicting the conversation between

the two lovers from Dehmel's poem. It is also done rather simply here, evenly trading off every measure or half-measure so that it is extremely clear where the melody is. However, in many of Schoenberg's atonal and twelve-tone pieces the melody is better understood as a composite of multiple instruments or voice-lines. Second, fragmentation does not just condense and accelerate the motivic material. It also occurs with a build in energy: every part has a large crescendo, the sweeping lines begin to climb rather than fall, and the rhythmic density increases. This rhythmic density can be seen when comparing the number of articulated notes per beat. During the presentation, the accompaniment is all in half notes while the melody uses either quarters or dotted-eighth plus sixteenth patterns. The continuation, on the other hand, introduces a triplet figure in m. 18 that takes over the texture, resulting in an arpeggio of triplets in m. 20. Where the presentation's melody only has six note attacks in each measure, m. 20 has thirteen, more than double. Third, this build in energy is almost completely dissipated in the cadence. The rhythmic motion stops entirely and Schoenberg even marks a *ritardando* over the half-notes. The huge arrival on the downbeat of m. 21 fades away and the next measure begins *piano*. This creates an arch out of the formal energy where the entire sentence seems designed to build towards the cadence where all of that tension can be released. This generic shape in energy will be seen in many different guises throughout Schoenberg's compositional career.



Example 2.2 – Schoenberg Op. 4, mm. 34–45

A similar sentential pattern is found later in mm. 34–45, seen in **Example 2.2**, although this example is more harmonically peculiar. Like the last example, the presentation is a simple four measures, however the repetition of the basic idea is not identical. Instead, the violin and first viola melody continues while the second violin and first cello enter in canon two measures later. This entire presentation is not harmonized by the D-minor tonic but the predominant E half-diminished seventh instead.[48] This phrase in fact continues the harmonic progression from the five-bar phrase leading into it with the tonic introduced in m. 29. The basic idea returns to the first violin in m. 38 but is immediately fragmented above a roving sequence, marking this as another 'dissolving third statement' type of continuation. This sequence creates a 10-5 linear intervallic pattern to lead into a vii7/V before the phrase erupts through a sextuplet into a cadential 6/4 in m. 41. This cadential promise is evaded into complex contrary motion between a descending chromatic scale in the first violin and an ascending chromatic line in the second cello. The theme finally ends with a "one more time" technique when it returns to the vii7/V leading into a cadential 6/4 and half cadence at m. 45.

The fact that the harmonic progression is expanded beyond the bounds of the theme is really the only strange feature of mm. 34-45. The presentation is a clear two-bar basic idea with an exact repetition, despite the canonic imitation. The 'dissolving third statement' and sequence in the continuation is popular for many Classical and Romantic composers. The shape of energy over the course of the theme is also especially normal. While the presentation begins in a higher energy state than the last example, it still maintains a regular pulse of 8 attacks per measure. Most of the additional agitation comes

[48] In fact, the same E-A-B♭-D predominant from mm. 18–20.

from the higher dynamic level and tremolo in the second cello and viola. The end of the presentation crescendos into the continuation, which is marked fortissimo, while the accompaniment accelerates its rhythms to triplets. This means that m. 39 has a rhythmic density of 12 attacks. This rhythmic acceleration reaches a peak in m. 40 with the sextuplet scale but is abruptly halted in m. 41 when the texture switches to two or three attacks per measure. Furthermore, the theme is well-articulated from the surrounding material. The theme is preceded by a five-bar miniature sentence with tonic and predominant harmonic functions. That phrase is extended with a large sweeping arpeggio which provides the approach or preparation for the theme to begin. Harmonic function clearly marks the end of this phrase, but the material following the half-cadence is particularly transitional. It features one-bar repetitions and liquidation without a continuation while completely expunging the remaining energy left over from such an intense theme.

The Period

The Theory

In the context of the Schoenberg-Caplin line of theories, the period is primarily defined in opposition to the sentence. This may ultimately stem from Schoenberg's own prejudices about the theme-types: "The sentence is a higher form of construction than the period. It not only makes a statement of an idea, but at once starts a kind of development."[49] He also notes that "only a small percentage of all classical themes can

[49] Schoenberg (1967, 58).

be classified as periods. Romantic composers make still less use of them."[50] He argues that contemporary theorists of the Classical style associated the period with symmetry and mistakenly assumed that symmetry creates beauty. Instead, he claims that symmetry, like other issues of form, only contributes to intelligibility.[51]

Schoenberg's school-form of the period hinges on two features: the use of two four-bar phrases and the contrast between the caesura at the end of the antecedent and the full cadence to end the consequent. In this case, a caesura is merely "a type of musical punctuation comparable to a comma or semicolon" and therefore has less stringent requirements than the half-cadence, but could be considered one of Poundie Burstein's "slippery events" which do not convey a strong sense of closure.[52] He also notes that "generally, one or two measures of the beginning [of the antecedent] will be retained [in the consequent]."[53] That a parallel beginning of the two phrases is not required is reminiscent of Koch's and Marx's periods, which are simply strings of any number of phrases. As with the sentence, he describes the normative metric structure, without considering it defining. Caplin echoes Schoenberg's earlier statements regarding the "nature of the second phrase." Ultimately, "in a sentence, the basic idea [mm. 1-2] is immediately repeated [mm. 3-4], but in a period, the basic idea [mm. 1-2] is juxtaposed with a contrasting idea [mm. 3-4]."[54]

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[50] Schoenberg (1967, 25).

[51] This intelligibility, and the subsequent association to the simple and popular, is more fully discussed in Rodgers (2017).

[52] Burstein (2014).

[53] Schoenberg (1967, 25).

[54] Caplin (1998, 49).

Caplin, however, delves much deeper into the general musical features that can be associated with antecedent and consequent phrases than Schoenberg. While both theorists are concerned with the melodic-motivic difference in what Caplin calls the "contrasting idea," Caplin also argues that the basic idea normally prolongs tonic while the contrasting idea in an antecedent will initiate the cadential progression. Where Schoenberg claims that "one may expect an increase in small notes in the continuation of the antecedent,"[55] Caplin goes further arguing that the contrasting idea "contains characteristics of continuation function, such as fragmentation, an accelerated harmonic or surface rhythm (or both), and even a hint of sequential harmonies."[56] This even allows for the antecedent to become a miniature sentence when the basic idea contains a bifold repetition of a motive, although in strict Caplinian terms it cannot be a sentence theme-type because it does not meet the minimum number of "real measures."

The Music

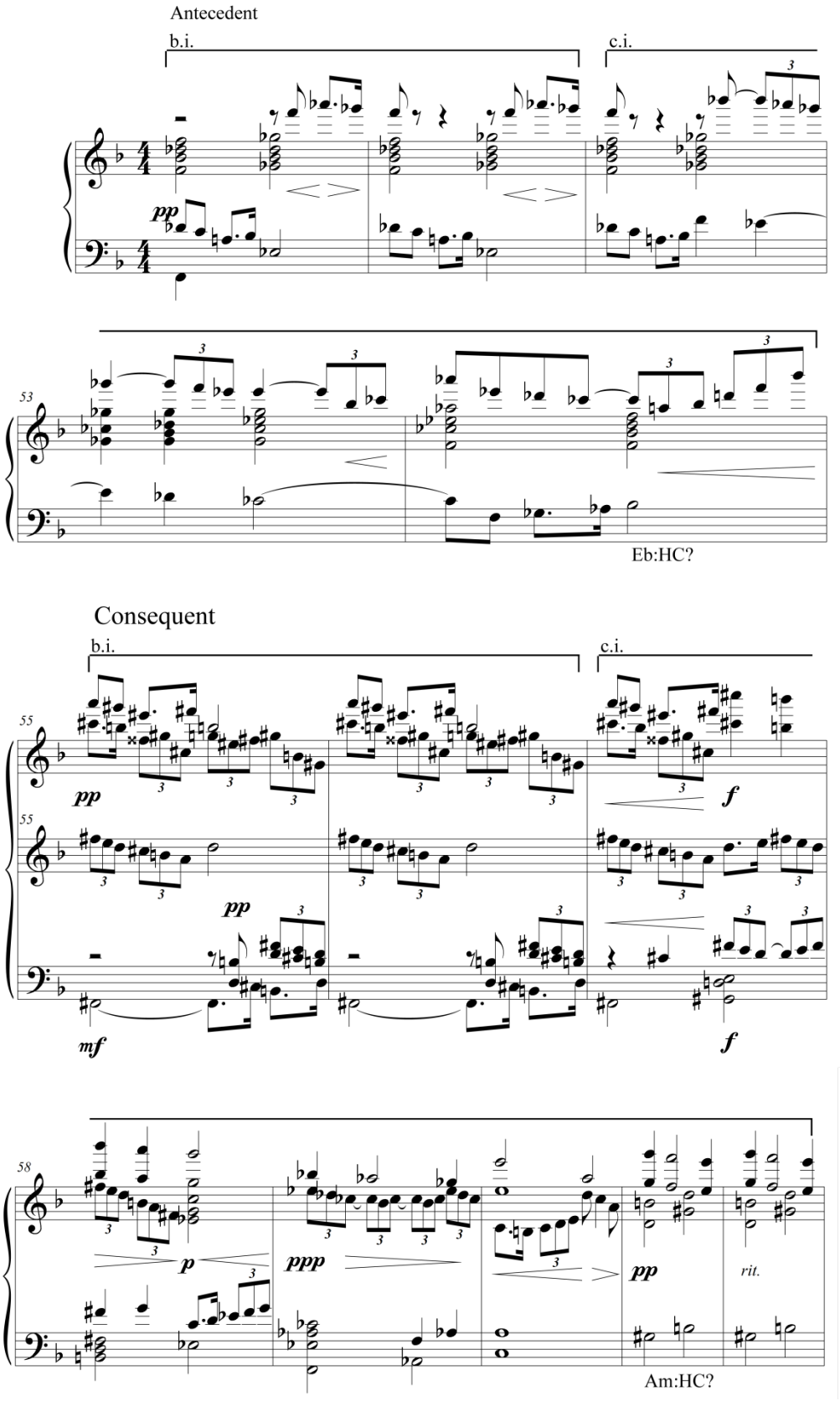
Measures 50–62 demonstrate the formal functions of a period, see **Example 2.3** below, although they do not clearly establish a tonic. The antecedent phrase is five measures long, and constitutes a miniature sentence with a one-bar basic idea in m. 50. This antecedent phrase seems to begin with a tonic prolongation in the key of B♭ minor with a plagal neighbor, but we do not stay in this key for long. The continuation of the miniature sentence begins in m. 52 with a third statement but the violin breaks off into a long melodic line that accelerates into triplets while the harmonic rhythm doubles. The harmonies at the end of the antecedent phrase strongly suggest a half cadence in E♭

[55] Schoenberg (1967, 27).

[56] Caplin (1998, 51).

minor, although the melodic activity never ceases. Rather than come to a point of repose, the harmonic arrival is contradicted by a sweeping arpeggio by the violin and first viola that leads into the consequent phrase. This consequent also significantly varies the beginning of the antecedent phrase. The cello and violin trade motives in their dialogue so that first violin begins with the primary motive well above the staff. The cello retrogrades and inverts the first three notes of the violin, which does not disguise it as much as you might think. Further, the sense of tonic prolongation is weakened as the chords alternate between F♯m7 and G♯ø7. The end of the consequent does not accelerate and instead immediately grinds down to half notes after the violin's third motive statement at m. 57. These two phrases also demonstrate the two main types of closure in Schoenberg's music: those that build to exciting climaxes and those that extinguish all energy. In the case of Schoenberg's style, closing functions that deplete the energy are almost always more conclusive than those that are exciting or invigorating. There is no inherent reason for this: we can easily imagine all the symphonic codas that loudly declare the final conclusion of the entire piece. However, Schoenberg does not do this very often. Most of his pieces end very softly, and exceptions are usually early movements within larger sets. This makes a certain amount of sense considering Schoenberg's intellectual indebtedness to A.B. Marx who generalizes all musical forms into a pattern of rest-motion-rest.[57] High energy represents a state of motion, so closure at high energy levels is almost an oxymoron. Thus we must reconcile it as closure on a more local level that will be resolved by a larger scale process: the end of the middle as it were.

[57] Marx (1997).



Example 2.3 – Schoenberg Op. 4, mm. 50–62

Small Ternary

The Theory

Schoenberg and Caplin disagree on how to categorize the small ternary form. Caplin considers it a tight-knit theme in its own right and includes it alongside the sentence and period. On the other hand, Schoenberg leaves the sentence and period alone under the category of "simple themes" while small ternary begins the section on "small forms." This is indicative of a larger problem in the theory of formal functions. There is a fundamental principle that formal functions are grouped hierarchically, such that a phrase is a grouping of basic ideas, themes are groups of phrases, sections are groupings of themes, and full movements or pieces are groupings of sections. Furthermore, each section expresses its formal functions with different specific musical techniques. For example, Classical phrasing is expressly concerned with the specific chords used in a harmonic progression while large sections are organized around tight-knit and loose themes linked with transitions. The problem is that the small ternary form exists simultaneously across multiple levels. As Caplin points out, "the small ternary can constitute the main theme of any full-movement form" but it also "can replicate the basic formal and tonal plan found in the full-movement minuet and sonata forms."[58] This isn't an issue of sloppy theory, but rather stems from actual musical practice. Small ternary, minuet, and large ternary forms have more elements in common than differences. However, this also means an analyst must be careful when drawing principles from musical examples that the conclusions they draw are operating on the correct form-functional level.

[58] Caplin (1998, 71).

The three parts of a small ternary form are the exposition, contrasting middle, and recapitulation. Grouping-wise they can be called A-B-A'. True to form, Schoenberg's criteria for the small ternary are much simpler than Caplin's. For Schoenberg, the exposition "may" be a sentence or period and he lists some typical chords to end with.[59] His recapitulation "is a more or less modified repetition" though it only needs to end on tonic if it is completing the entire piece. The final piece is extremely straightforward: "the second part is organized as a contrast." However, he cautions his students against "incoherent contrast":

> Contrast presupposes coherence. Incoherent contrast, though tolerated in 'descriptive' music, is intolerable in a well organized form. Contrasting sections, therefore, must utilize the same processes by which motive-forms are connected in simpler formulations.

For Schoenberg, the most effective source of contrast is in harmony. Emphasizing a closely-related harmonic area provides the necessary contrast and guarantees coherence when that harmonic tension is resolved. Rather than provide a school-form definition, like with sentences and periods, Schoenberg extracts a model from the Adagio of Beethoven Op. 2/1, which "reveals a structure from which a practice form can be abstracted."[60] The exposition is a non-modulating period of eight measures with a half-cadence, or "caesura on V," in m. 4. The A' section is only four measures long, recapitulating a single phrase rather than the entire period. The contrasting middle is "the simplest possible model of an effective contrast," using two two-measure phrases over a dominant pedal in the bass.

[59] These descriptions are all taken from *FMC* (1967, 119–120).

[60] Schoenberg (1967, 120).

Caplin's small ternary is not quite so restricted as his other theme-types, though he attempts to be more exhaustive in the form's possibilities than Schoenberg. His exposition is a "relatively tight knit, self-contained theme, one whose internal harmonic and melodic processes are brought to a close by means of a perfect authentic cadence, in either the home key or a subordinate key."[61] This tight-knit theme is often a period, or at least periodic if it is a non-conventional hybrid theme. The main function is expressed with a tight-knit organization, which Caplin summarizes here as "symmetrical grouping structure, emphases on tonic harmony, unity of melodic-motivic material."[62] This claim drastically differs from many of the examples that Schoenberg provides in *FMC*, but is again a result of the different purposes in their texts. Caplin is specifically focusing on the small ternary forms that are either the main theme of a larger movement or make up the entire movement on their own. Schoenberg, however, specifically selected non-typical examples "because they differ, in all three sections, from the scheme of the practice form, thus indicating the great variety which is possible, even within so simple a basic structure."[63] This is not to say that Caplin's claim is wrong. The point is that the small ternary form as a single structure can serve many different formal functions at the thematic level. When used as a main theme, as Caplin categorizes it, the small ternary's exposition will more closely resemble Caplin's description. However, it can be adapted to serve other formal functions without annihilating the small ternary formal structure.

Caplin provides much more detail on how contrasting middles are constructed. While he will ultimately orient the function around his concept of loose organization, he

[61] Caplin (1998, 73).

[62] Ibid., 73.

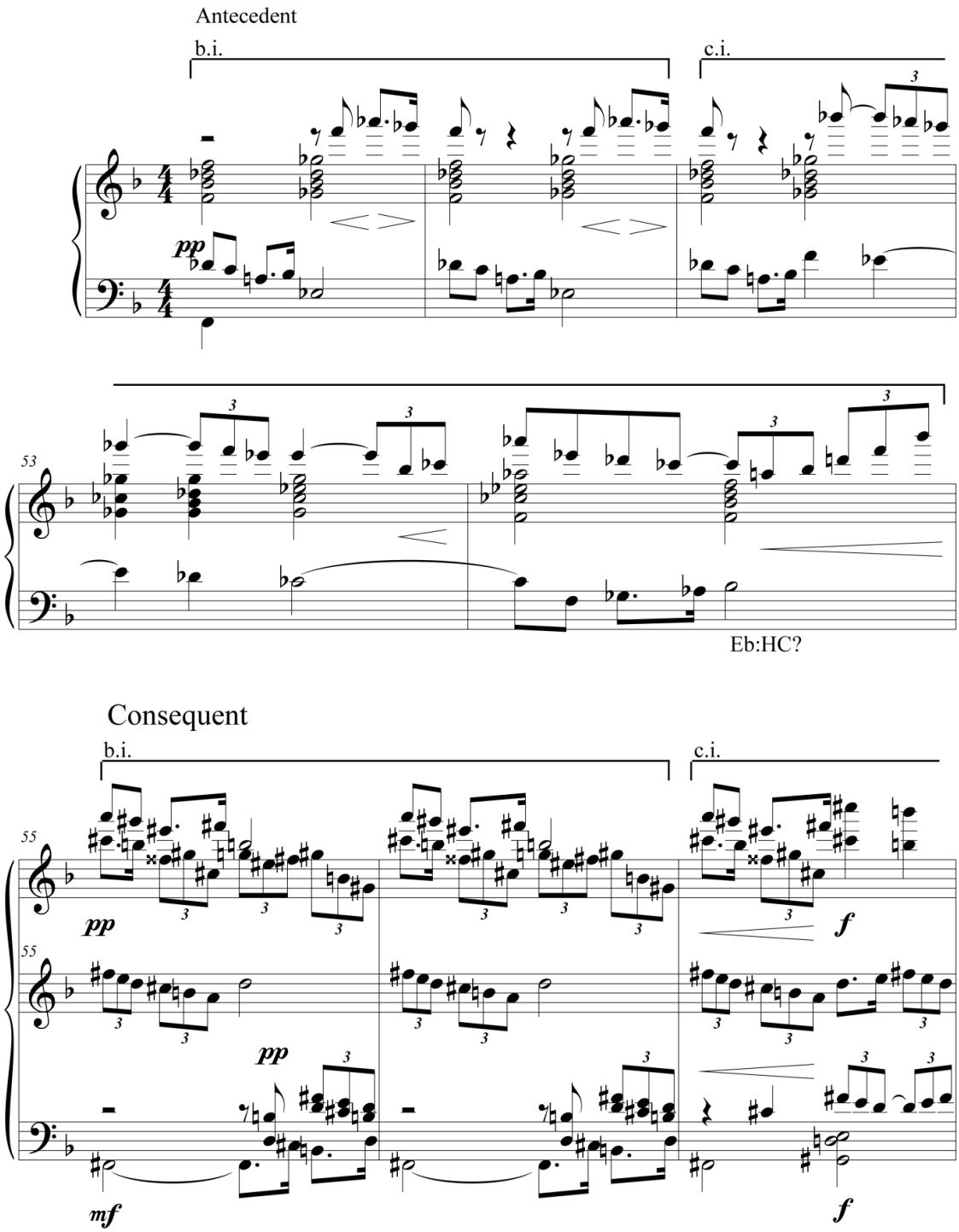
[63] Schoenberg (1967, 121 fn. 1).

waits to introduce that concept until after discussing the small ternary form in full. This is because all of his criteria for establishing the contrasting middle will be used as examples in his following discussion. Caplin provides six specific techniques that are typical in contrasting middles: standing on the dominant, model-sequence technique, looser sentential form, post-cadential standing on the dominant, subordinate key, and non-cadential ending. Most of these techniques concern how the dominant is emphasized. Standing on the dominant is demonstrated in Schoenberg's model, Beethoven Op. 2/1 ii, where there is an unmoving pedal on V. This lack of progression often leads to ending without a cadence, which Caplin terms a dominant arrival. On the other hand, the dominant could be further emphasized by completely modulating to the dominant and establishing it as a subordinate key. Even when this happens, composers would often still use the standing on the dominant technique after the cadence.

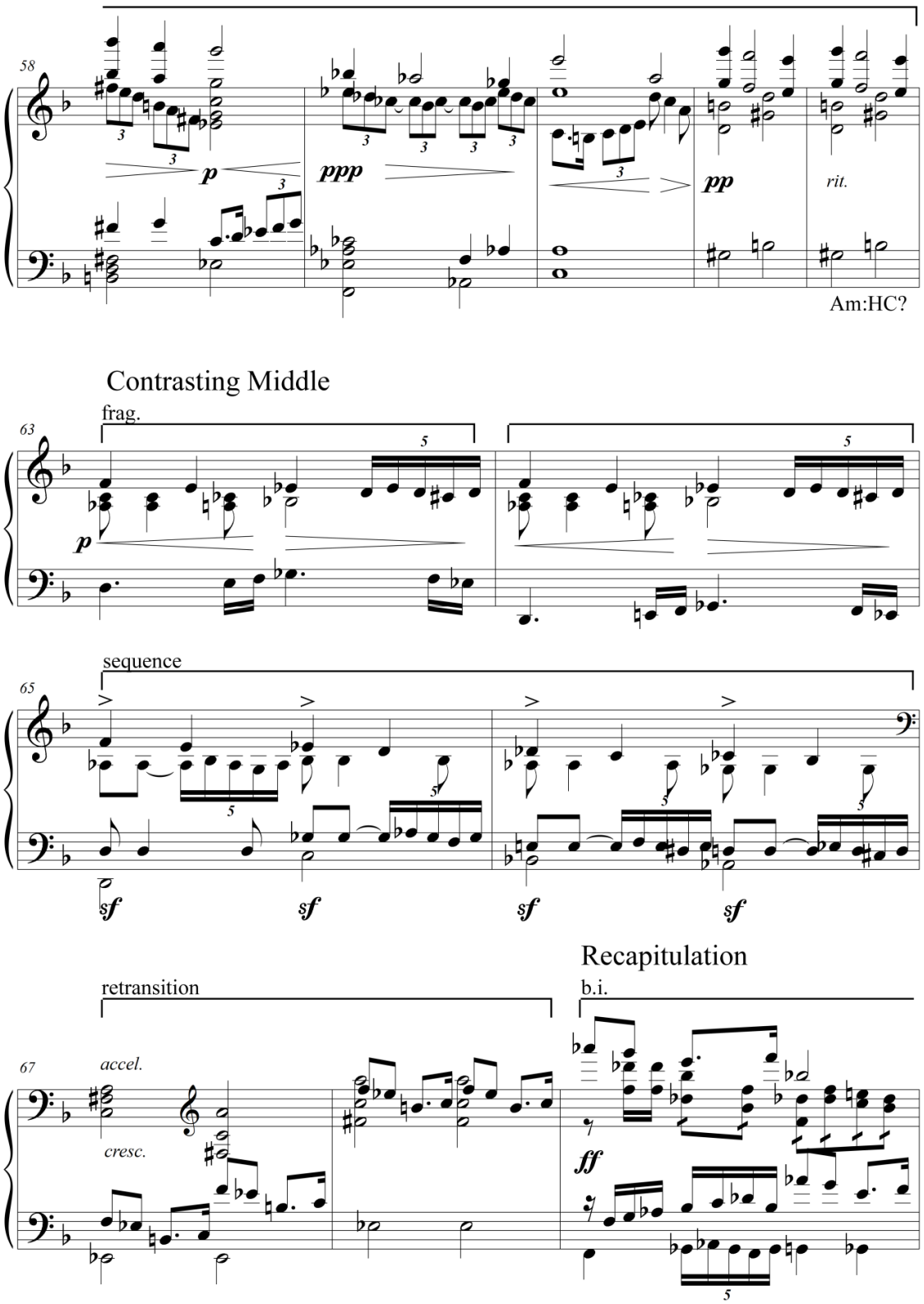
However, the model-sequence technique and the looser sentential design are particularly interesting for this project because they do not specifically rely on the dominant harmony to establish contrast. These contrasting middles usually contain two-measure ideas which so closely resemble the presentation phrase that Caplin has to caution us that they cannot be "basic ideas" if they do not begin on tonic harmony. Despite this, he still admits that Classical composers would draw on this resemblance. Sometimes the harmonies move through sequence rather than solely establishing the dominant. Caplin even notes these sequences may closely resemble a continuation phrase if they lead into a half-cadence. More rarely, the contrasting middle may contain a complete sentence although Caplin argues these must rely on harmonic progressions that do not firmly establish the tonic. He draws an example from Haydn's Piano Sonata in E-

flat which features a full-fledged 8-measure sentence but the presentation begins on the V chord and only uses inverted tonic chords.

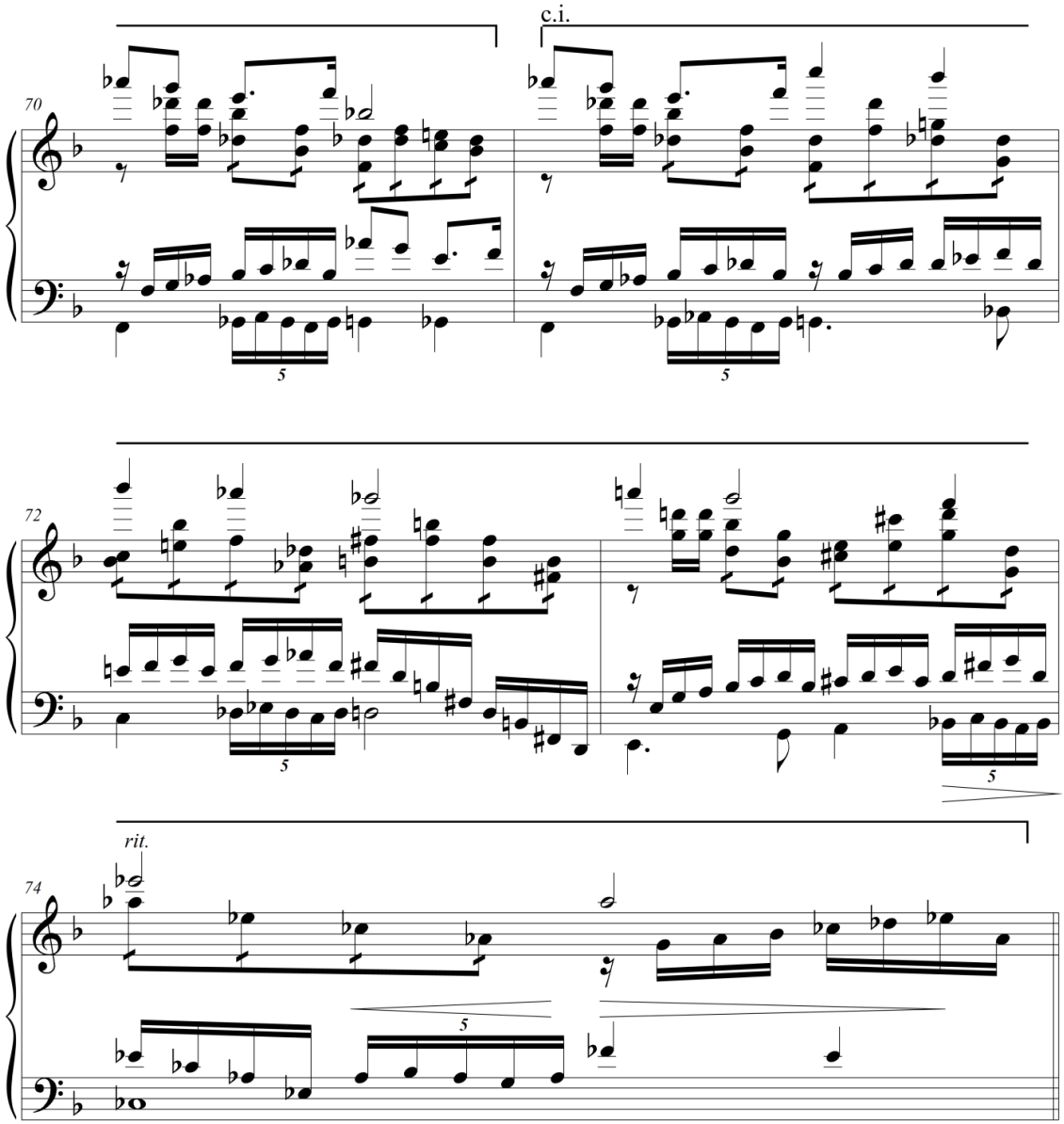
The Music



Example 2.4 – Schoenberg Op. 4, mm. 50–74



Example 2.4 cont. – Schoenberg Op. 4, mm. 50–74



Example 2.4 cont. – Schoenberg Op. 4, mm. 50–74

In *Verklärte Nacht*, measures 50–74 feature a self-contained small ternary form, shown above in **Example 2.4**. I have already described the exposition in my section on the period. While this exposition is organized in a relatively tight-knit parallel structure, it does not clearly establish a single tonic. The E♭ minor half-cadence in m. 54 isn't prepared at the beginning of the antecedent and is completely abandoned in the

consequent. The exposition ends on a G#º7 which could point towards four different tonal centers. Because there is not a stable harmonic region, the contrasting middle (m. 63) cannot be clearly distinguished through purely harmonic means. Instead, this formal shape is mostly accomplished through the motivic process of developing variation.

The basic idea of the exposition introduces two primary motives in the first cello and first violin. The consequent phrase trades these motives between the instruments and introduces a slight variation in the cello. The lowest cello line draws on its motive from the consequent phrase by retaining the D and F# as pitch classes and inserting the preceding intervals in between the two. While this connection is admittedly tenuous, it would satisfy Schoenberg's desire for contrast that preserves coherence. Furthermore, the contrasting middle features more intense fragmentation and sequencing than the exposition. While all three phrases start out with exact repetitions of one-measure ideas, the contrasting middle cuts down to just the quintuplet turn and repeats it four times stepping down a whole step each time.

The recapitulation features a return of the exposition's motivic content in m. 69, but it leans towards being more varied rather than less. This recapitulation is structured as a 6-bar sentence when the basic idea from m. 50 returns in the upper octave of the first violin. However, rather than alternating two different motives between high and low again, the recapitulation only repeats this motive four times, alternating between first violin and first cello. During all of this, the second cello brings back the quintuplet turn from the contrasting middle. The continuation begins in m. 71 with another dissolving third statement where the highest violin again breaks into offset half-notes. The

harmonies in m. 73 taunt us with another possible cadence in D minor but it is entirely ignored by moving to a final chord on A♭ minor.

Core Technique

The Theory:

This next section on core technique will be a little bit different. Core technique is not explicitly enumerated in *FMC* because Erwin Ratz first defined the concept in the 1970s well after Schoenberg passed away. However, I will show that Schoenberg clearly understood Core technique, even if he did not isolate it from other developmental techniques. It appears amongst many other techniques for thematic development but wasn't given its own name. Furthermore, he uses a passage that could easily b identified as a developmental core in *Verklärte Nacht*, proving that he was already familiar with the technique in 1899.

The core refers to a specific formal unit within the larger development section. The core is most commonly associated with the Sonata-Allegro form, but can be generalized into other contexts like any other formal function. Caplin identifies four major functions within the core: model, sequence, fragmentation, and concluding function with standing on the dominant.[64] The model provides a relatively stable beginning to the entire Core, but is usually not a fully-fledged theme-type. Many of Caplin's examples strongly resemble presentation phrases, although he avoids the term because the model usually prolongs the dominant. The entire model is then sequenced at least once, though often more than that. After a complete sequence, motivic content

[64] Caplin (1998, 141–147).

within the model is then fragmented and liquidated. The fragmentation destabilizes the entire section and does not have to relate to tight-knit phrase lengths. As the characteristic material is liquidated out, the section usually ends by standing on the dominant. This complete liquidation and unresolved harmony allows the core to easily lead into the recapitulation or possibly another core section.

As I said above, Schoenberg did not separate core technique from the other developmental techniques and give it an explicit name. However, the way he describes his first example of *Durchführung* (from Beethoven Op. 13-I) could have been inserted into *Classical Form* with very little editing:

> [Model] A six-measure segment (m. 137–42) reformulated from elements of the principal theme and the introduction is stated in *e* (relative minor of the dominant). [Sequence] A sequential repetition a step lower follows in m. 143. [Fragmentation] A reduced and simplified version of four measures (m. 149–152) now appears three times. Though the dominant of *c* is reached in m. 157, an extended cadential progression, liquidating most of the features of the theme, intervenes before the dominant is finally confirmed in m. 167. [Standing on the Dominant] A long passage ensues over a pedal point on the dominant (m. 167−87), which includes two more references to the theme-form used earlier.[65]

Just by inserting some of Caplin's technical jargon alongside Schoenberg's, we can easily see that Schoenberg is identifying the core of the development. This time around, Caplin and Schoenberg are similarly loose on harmonic requirements for the form. Even in the relatively rigid Classical style, the development section is an opportunity for composers to show off their harmonic ingenuity. Core technique is an excellent means for emphasizing more distant key relationships. Because the entire model is repeated, each sequence will emphasize a key with a relatively stable beginning. However, that key does

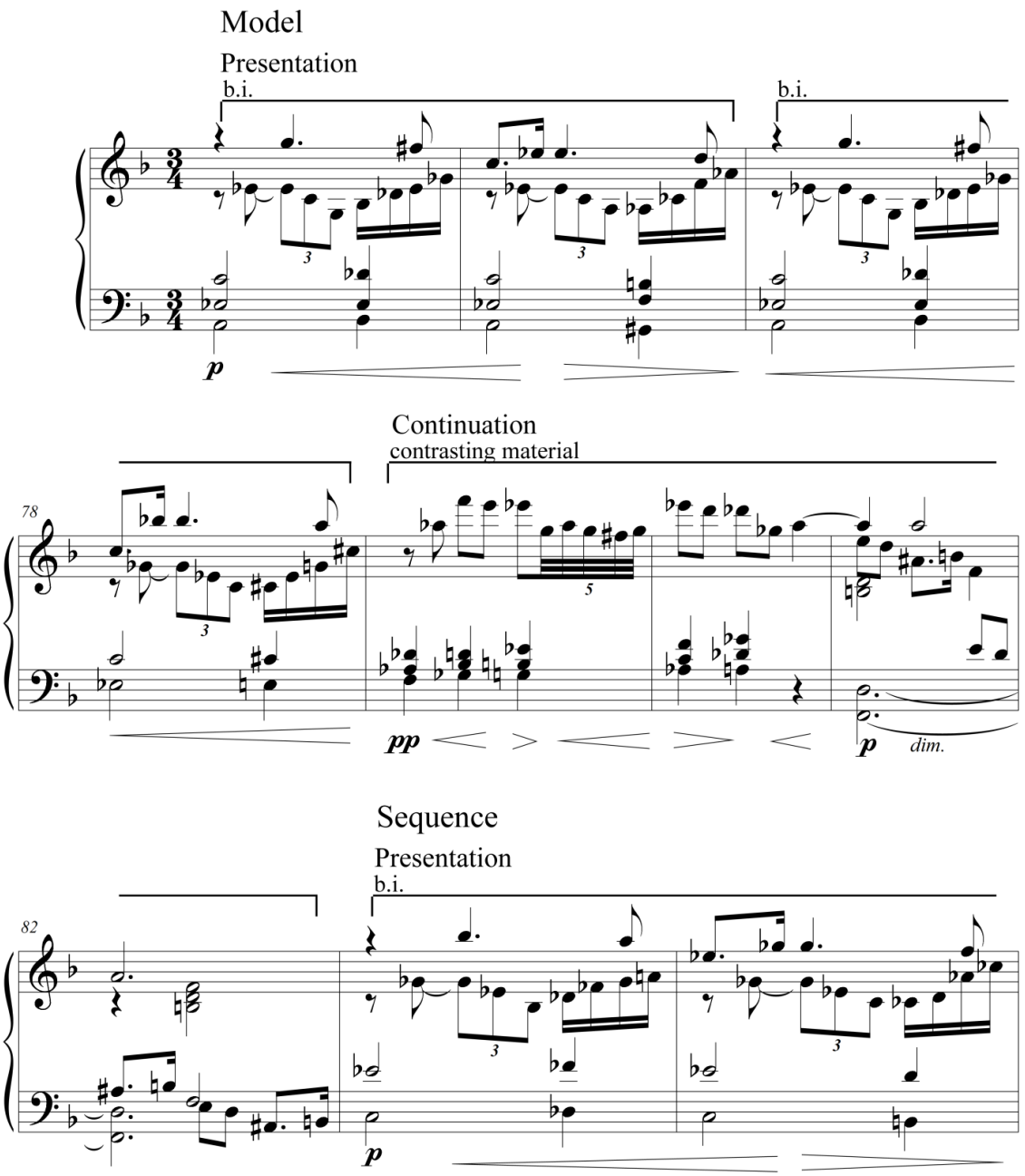
[65] Schoenberg (1967, 207). My additions are in brackets.

not require as much preparation as a full-blown modulation with an affirming cadence. Instead, it just gets swept along in the larger harmonic pattern without requiring the same treatment as an exposition's secondary theme.

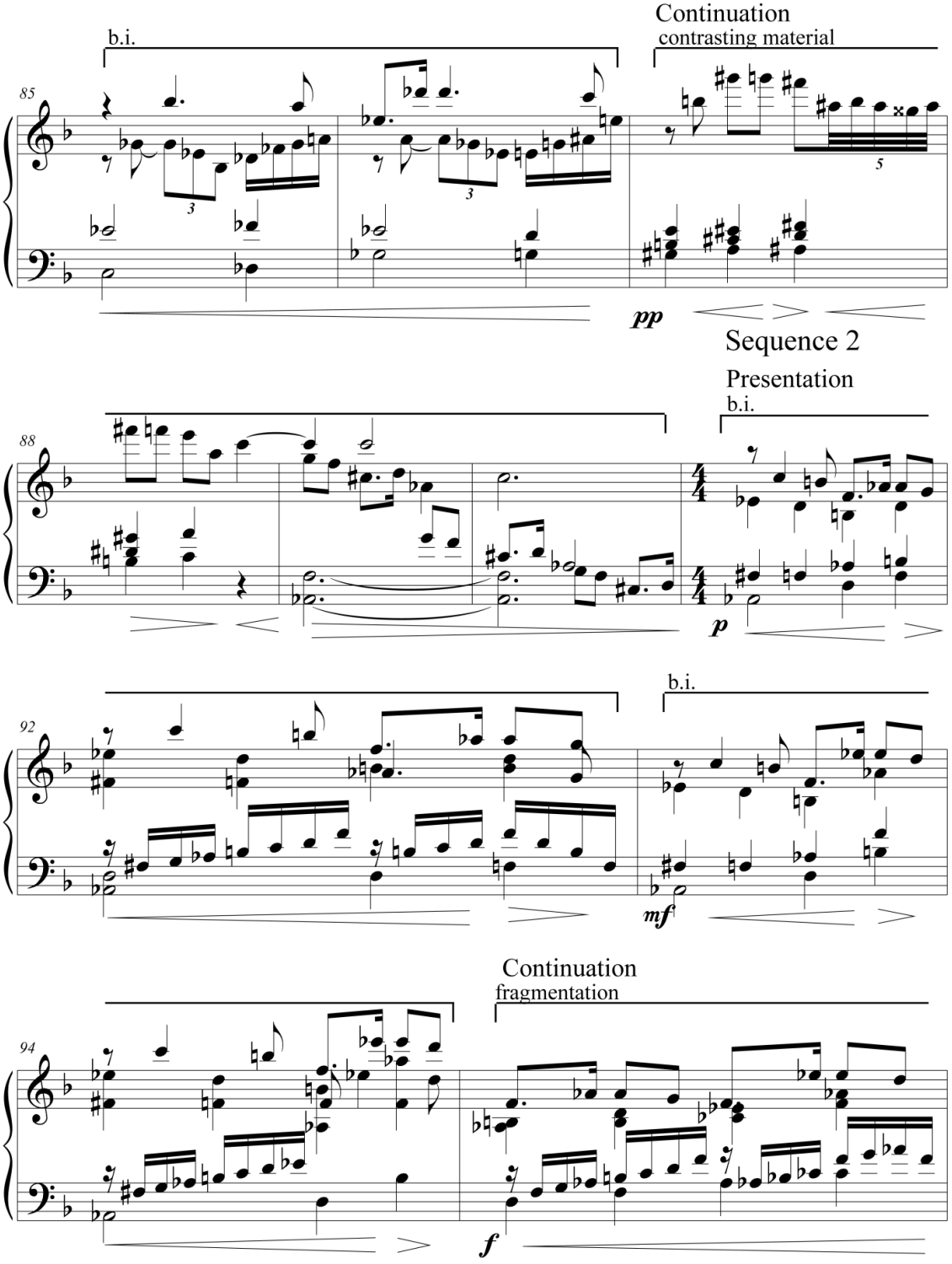
The Music:

Turning to *Verklärte Nacht*, we can see a developmental core in mm. 75–104, seen in **Example 2.5**. While I do not believe there is a sonata form embedded in *Verklärte Nacht*, the analysts who argue for it are probably reacting at least in some part to this technique's strong association with the sonata.[66] This specific example represents one of the most unstable sections of the larger B section. The model of this core uses a clear eight-bar sentence structure, albeit without tonicizing a key area similar to many previous examples. The presentation phrase in mm. 75-78 uses an exact repetition and derives motives from Frisch's motive 3a, part of the small ternary in the previous example. The continuation of the model begins in m. 79 by drawing on the quintuplet turn from the contrasting middle of mm. 63–66 while the fragmentation repeats an unvaried motive from the exposition in mm. 50–62 (see Ex. 2.4). The first sequence begins in m. 83 and is repeated exactly up a minor third.

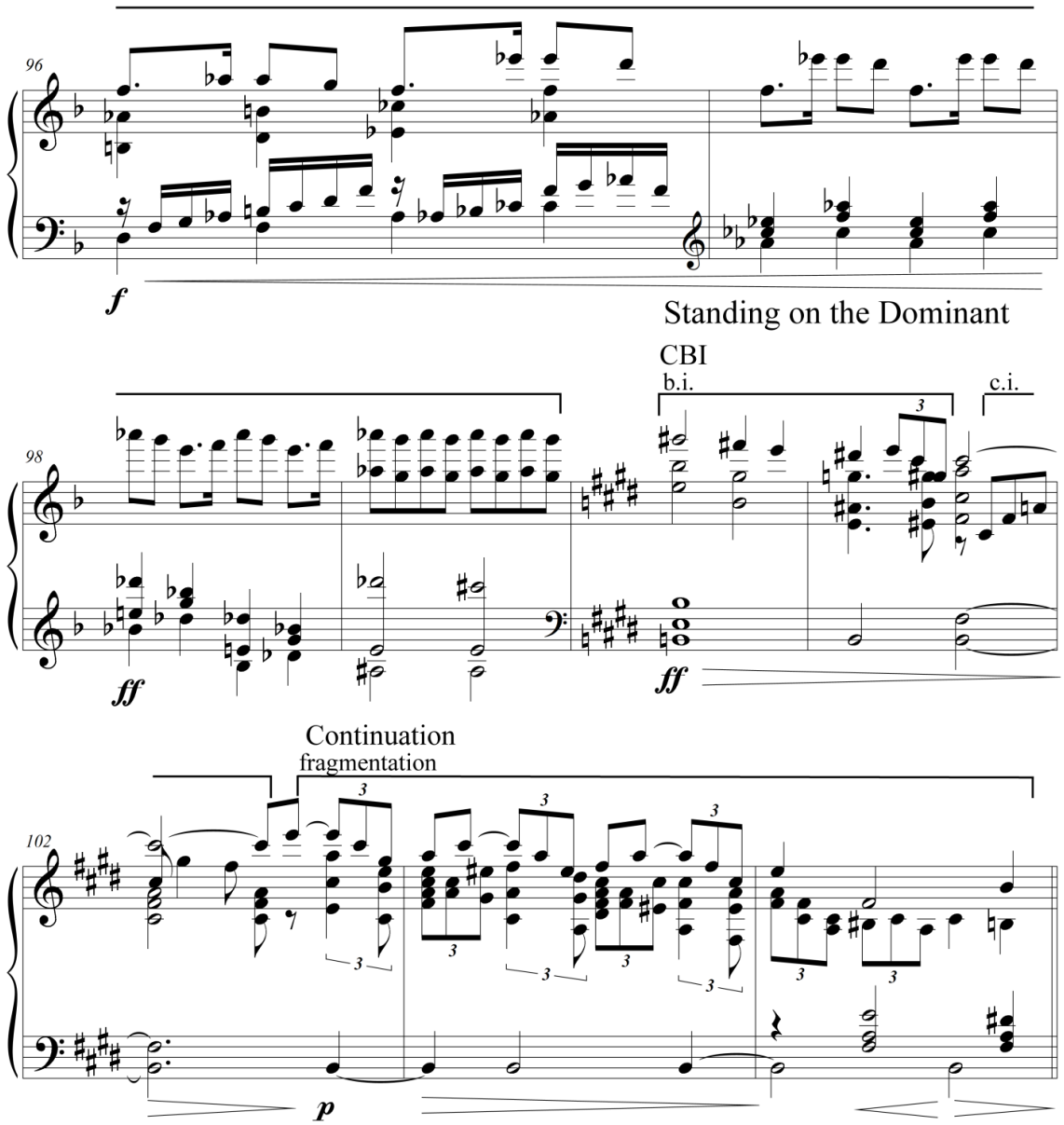
[66] Wilhelm Pfannkuch claims the entire piece is in sonata form, while Richard Swift argues that it contains two complete sonata forms. My identification of this core lends some credence to Swift's interpretation as it suggests a full development in the middle of the B section. However, it would make up the bulk of Pfannkuch's transition before the Secondary theme even enters, which would be an unusual location for a core.



Example 2.5 – Schoenberg Op. 4, mm. 74–104



Example 2.5 cont. – Schoenberg Op. 4, mm. 75–104



Example 2.5 cont. – Schoenberg Op. 4, mm. 75–104

The model returns in m. 91 as if it's starting another sequence, this one rhythmically varied. The meter shifts to 4/4 and Schoenberg rhythmically compresses the original basic idea into a single measure. However, he establishes a four-bar presentation where each basic idea contains a dialogic repetition between the two violins. This is very

similar to the recapitulation of the small ternary in m. 69. The continuation then features an extended fragmentation and liquidates motives out until the repeated eighth-note semitones in m. 99. This is followed by five measures of standing on the dominant for E-major, establishing the first clear tonal area since the D-minor half cadence in m. 45. This standing on the dominant resolves to E major, but does not lead into a recapitulation but an entirely new theme instead. I find it particularly fascinating that Schoenberg blurs the line between fragmentation and another sequence in the core. In effect, he has achieved a sentence of sentences modeled after a relatively standard technique in the Classical sonata. If we consider each eight-measure chunk the "basic idea" of a much larger compound sentence, then m. 91 would be a dissolving third statement. This aggressive fragmentation gives way to an exceptionally long dominant pedal that is proportionally balanced to the length of the compound sentence. This large-scale structure then leads into one of the most tender and tonally clear passages in the entire piece. Wellesz characterizes the following E-major section as a "tender *cantilena*" that represents the woman's "longing for maternal happiness."[67] Schoenberg intensifies the entire passage by borrowing one of the most leading and directional techniques from sonata form: the drive towards the recapitulation. This is the highest energy passage in the piece so far, and its resolution is the outpouring of the woman's hopes and fears.

Concluding Remarks

These examples show that even in 1899 Schoenberg was very familiar with traditional formal functions and he was already experimenting with non-functional harmonic progressions. While his theoretical writings really paved the way for the

[67] Wellesz (1925, 77).

modern study of formal functions, he wrote them very late in his career, well after he started teaching in California. However, *Verklärte Nacht* demonstrates that Schoenberg had already firmly grasped these formal functions long before his experiments with atonal harmonic language. Whether he was taught these formal patterns, learned them from Koch or Marx, or intuited them through score study is irrelevant. I have shown that he embraced these formal patterns in *Verklärte Nacht*.

Second, I want to argue that a theme's stability, or degree of tight-knittedness, is not just a matter of internal properties. Caplin's many parameters for tight-knit versus loose construction are very well-founded in the Classical style. Themes are more tight-knit when they establish a single tonality throughout or exhibit regular hypermeter. Themes are also made stable by the surrounding music. All of the examples in *Verklärte Nacht* feature beginnings and endings that are both clearly marked separating them from the surrounding material. I admit that this is less of a concern in Classical music, but it is taken for granted. For instance, a sonata's secondary theme is often much looser than the primary theme, but it is still usually preceded by a medial caesura that clearly separates secondary theme from the transition.[68] In fact, Hepokoski and Darcy use the MC as a necessary requirement for declaring a secondary theme. In the coming analyses, however, we will see that finding the beginning of a secondary theme without tonality's constructive function can be very tricky.

I must also point out that many of Caplin's formal distinctions completely rely on triadic harmonic functions. For example, the small ternary's contrasting middle is very often constructed out of a two-measure idea harmonized by the dominant chord. Caplin

[68] Hepokoski and Darcy (2006).

cautions us that "it should not be considered a 'basic idea,' which, in principle, is initially supported by tonic harmony."[69] Of course, Caplin's harmonic restrictions are grounded in the compositional output of only three composers. I hope that I have shown that such a requirement is not particularly relevant even in Schoenberg's tonal music. As we move forward with Schoenberg's atonal and twelve-tone compositions this distinction is even more meaningless. However, I will show that these formal functions are still being meaningfully expressed by other musical means, without relying on triadic harmonic functions.

Finally, I do not want to be misunderstood as criticizing Caplin's theory. Simply put, this project would be impossible without his work. It is simply that each of Caplin's definitions must be read with an unstated "in the Classical style" preceding it. Knowing that a Classical main theme's presentation phrase prolongs the tonic harmony makes Wagner's, Liszt's, and Schoenberg's sentences all the more fascinating. It is because of Caplin's context that we can understand exactly how Schoenberg innovates harmonic processes in *Verklärte Nacht*. However, one of my primary purposes is to show just how much Schoenberg's music shares in common with the Classical and Romantic masters despite the harmonic innovation. This can only be done by accepting that Caplin's harmonic restrictions only apply to the Classical style, but nearly everything else still applies to Schoenberg's non-tonal compositional style.

[69] Caplin (1998, 75).

CHAPTER III: ENERGETICS AND OP. 25

In the previous chapter, I outlined Caplin's theory of formal functions and demonstrated its analytical applicability to Schoenberg's *Verklärte Nacht*. While the harmonic language in the sextet is much richer than in the Classical style, we are still able to recognize those formal types. In this chapter, I am focusing on two main points with respect to Schoenberg's twelve-tone music: 1) harmonic properties do not define the formal functions, and 2) the energetic patterns of the theme-types are analytically significant for recognizing formal functions. One important problem with using energetics in this study is that, besides a few key exceptions, energetics is primarily used to study tonal music. It is clear that composers have adeptly wielded tonality's constructive function and that analysts have made very nuanced observations about music within its framework. However, I will show that tonality is not required for us to use energetics and will apply it in an analysis of Schoenberg's Op. 25 *Suite for Piano*. This piece uses very clear theme-types that I use as prototypes for analyzing other pieces in Schoenberg's twelve-tone style.

The area of energetics is quite diverse; however all those who work in this field share two common preoccupations: 1) they are primarily concerned with cognitive and psychological models for how listeners interpret music, and 2) they exploit metaphors by mapping real-world physical processes onto intangible cognitive experiences. Working with Mark Johnson, Steve Larson explicitly embraces the conceptual metaphor that

listeners conceptualize musical motion as physical motion.[70] In this view, we can understand musical events as physical objects that trace a path through space in a particular manner of motion, despite the fact that a melody does not literally move. Over centuries, Western musicians have constructed a conceptual framework in which pitches can be high or low, allowing for vertical distance between them, even though there is no verticality to sound wave frequencies. We conceptualize time in terms of horizontal space, as chords follow from one to the next. Larson goes on to outline musical forces that affect musical motion analogous to how physical forces affect physical motion. For Larson, "musical gravity is the tendency of a note to descend," "melodic magnetism is the tendency of an unstable note to move to the closest stable pitch, a tendency that grows stronger as we get closer to the goal," and "musical inertia is the tendency of a pattern of motion to continue in the same fashion."[71] This all enables Larson to create incredibly rich analyses of music as motion through physical space, depending on how arduously a melody climbs or how precipitously it falls.

Two of Larson's basic premises need further refining for my purposes: how we define stability, and the relationship between meaning and hierarchies. First, Larson defines stability as "a comparative quality that we attribute to a note" within a tonal hierarchy. This allows him to make nuanced observations on how musical forces and expectations affect a melody note-by-note. However, I have already been using stability as a concept on a much larger scale than just a single note. In this case, I am primarily concerned with how *themes* are stable formal units that are marked against transitional

[70] Johnson and Larson (2003). It is important to note that within Johnson's theory of conceptual metaphor, these aren't just curious twists of language. These metaphors reflect our deeply held conceptual models of essentially all abstract reasoning.

[71] Larson (2011, 83, 88, 96).

and developmental sections. In *The Musical Idea* manuscript, Schoenberg defines stability in terms of concentric and eccentric tendencies, using modulating and non-modulating phrases as an example.[72] For the twelve-tone harmonic language, however, we can usefully define stability as a comparative energetic quality that we attribute to groupings of notes. Within a theme, the basic idea and cadence are more stable than the middle between them. The basic idea establishes the baseline metric level, dynamic, and tessitura. The middle of the theme features a rhythmic acceleration, louder dynamics, and larger sweeping gestures in the pitch space. Thematic closure is created by suddenly slowing the rhythms, softening dynamics and ending in a low range. On a larger level, themes are more stable than the transitions between them by virtue of their clear beginnings and endings. My definition of stability is simply incompatible with Larson's definition of stability because they are addressing two completely different phenomena. Larson's stability only concerns a single note's fit within the tonal hierarchy. Even when he addresses higher levels of the hierarchy, Larson explicitly states that a single pitch is representative of all the notes at the lower level. However, I am using stability to define an energetic baseline for a group of pitches or a gesture and this relies more on range, meter, and dynamics than on tonal structure.

Second, Larson defines meaning as "something that our minds create when they group things into patterned relations."[73] The string of numbers "78 9101 1121 314" is meaningless, but "7 8 9 10 11 12 13 14" is meaningful.[74] We easily recall the second

[72] Schoenberg (2006, 133).

[73] Larson (2012, 33).

[74] Not completely meaningless, as the number 9101 is still a sign with meaning, but in comparison, the second string creates a meaningful pattern that is extremely easy to memorize and recall.

string simply because it is grouped into a recognizable pattern. Furthermore, these patterns rely on hierarchies to structure meaning. In order for the string of numbers to have meaning, we need to recognize each individual number as well as the incremental increase in their value. Larson then pivots this point into a polemic against atonality, arguing that the lack of a tonal hierarchy prevents structural hearing. While he does not explicitly state this, he gives the impression that atonal music lacks meaning because it lacks tonality's hierarchical prolongation. Meaning is based on hierarchical patterns, and so the lack of a tonal hierarchy is synonymous with the lack of meaning. However, this is only a concern for Larson because he is focused on the musical forces acting on a single pitch and a listener's expectation for the next pitch. The formal processes that I am describing establish patterns and hierarchies where the lowest level is higher than Larson's single pitch. As such, basic ideas are grouped into phrases, which are grouped into themes, which are grouped into formal sections and then whole pieces. This places my work more in line with Robert Hatten's theory of gesture and Ernst Kurth's waves of energy, discussed below. My point is to show how non-tonal music conveys meaning, as defined by Larson, and that formal functions are one of the primary tools that mediate meaning in Schoenberg's music.[75] Furthermore, these formal hierarchies are just as meaningful as tonal hierarchies.

Before moving on, I want to suggest that the conceptual metaphor that underpins Larson's theory—musical space as physical space—is still very much active in Schoenberg's atonal and twelve-tone music. Matthew BaileyShea and Seth Monahan have already taken up this position in a compelling analysis of Schoenberg's Op. 11/1 as

[75] Larson (2012) all but states that atonal music is meaningless because it lacks tonal patterns and hierarchies.

does Yonatan Malin in an analysis of the Op. 15 songs.[76] While the lack of tonal hierarchy prevents specific pitch expectations for the most part, it does not automatically mean abandoning all of the ways we conceptualize music.[77] The sense of pitch height and temporal distance still allows for mapping musical lines in physical space, and the way these forces interact outside of the tonal system still conveys expressive meaning. According to Matthew BaileyShea and Seth Monahan, Op. 11/1 begins with condensed spacing and a heavy descending melodic line that all speaks to "an atmosphere of heaviness, an abiding sense of encumbrance."[78] After this seemingly normal beginning, however, the texture suddenly erupts into a massive four-octave arpeggiation as if gravity suddenly lost all its pull and the resulting tension sprang out. The fundamental metaphor that physical motion maps onto musical motion still affects how we engage with post-tonal music, even if the exact nature of the forces doesn't conform to and often subverts the tonal system.

As I mentioned above, Larson defines a musical event as a single note or chord. This granular aspect speaks directly to note-by-note expectations within the tonal framework, but it stands in contrast to Hatten's theory of musical gesture. Rather than focus on the individual notes, Hatten specifically states that the "gestural energy of a melody is phenomenologically more fundamental than the sequence of pitches of which a melody is comprised."[79] Despite this distinction in precise methodology, both theories

[76] BaileyShea and Monahan (2018) and Malin (2008).

[77] Regarding pitch expectations in atonal music, there are some specific instances where we might expect a pattern to continue—such as sequencing—or for material to repeat literally, but these are still fundamentally different from the tonal models of pitch expectation proposed by Larson or Huron, for example.

[78]BaileyShea and Monahan (2018), 41.

[79] Hatten (2004, 114).

are grounded by mapping musical motion in terms of physical motion. Comparing the theory of musical gesture to Larson's energetics, gesture allows for a high degree of nuance in the manner of motion and assumes the object in motion is the performer's body. For my purposes, the most important aspect of gesture is how it helps define form. Hatten regularly cites the power that gesture has in establishing the formal sense of beginnings, middles, and ends. Unfortunately, he does not thoroughly explain this process or correlate specific gestures with specific temporal functions, instead choosing to unpack expressive gestures. In a later essay, Hatten explores the "Troping of Temporality," which is "when composers explore the unexpected relationships between the expected location of musical events and the actual location where they appear."[80] Because of his target repertoire, his examples of temporal cues and gestures all rely on tonal harmonic formulae to establish their function. This is all drawn from Agawu's beginning-middle-end paradigm, which asserts that gestures establish these temporal functions but again requires harmonic content to mark gestural function.[81]

However, I must ask: are tonality and harmonic progressions the only means of establishing temporal functions? Harmonic relationships may be significantly marked signs of temporality in the Classical and Romantic styles, but they are not necessarily the only ones. Schoenberg poses a very similar question in his essay "Problems of Harmony" when he asks "must tonality be unconditionally present in every piece of music?" Now, I realize that on the surface it seems that Schoenberg is describing a structural relation of tones in music while Hatten and Agawu are discussing its communicative power.

[80] Hatten (2006, 62).

[81] Agawu (1991).

However, Schoenberg argues that tonality's two main purposes are its ability to unify music through a "definite relation to a tonal centre" and an articulating function that limits and separates parts that were previously unified.[82] As I argued in the introduction, Schoenberg's coherence and articulation are the two facets enabling listeners to comprehend music based on psychological principles. The issue is "that harmony alone, while contributing essentially to unity and articulation, cannot fill these requirements, since it needs other active art means co-operating in the same direction."[83] I will show in my analyses that Hatten's theory of gesture, along with other energetics, helps explain the "other active art means" that establish form and comprehensibility. Specifically, Schoenberg uses gesture to mark temporality in his twelve-tone music, and specifically he creates a conventional *type* of gesture for closing function. These formal processes essentially merge Hatten's theory of gesture with Schoenberg's theory of comprehensibility, as it is the gesture itself that clearly defines form rather than the specific pitch material.[84]

As for Ernst Kurth, his theory of energetics has largely been relegated to historical inquiries and has not seen widespread adoption in contemporary analyses. Lee Rothfarb suggests this lack of attention is because "Kurth left no systematic methodology to build on" and his "complex, often opaque metaphorical prose style" prevented accessible translations.[85] Further, Kurth's approach is particularly personal and introspective, as he

[82] Schoenberg (1934, 278).

[83] Schoenberg (1934, 280).

[84] One thing I should note, Hatten refers to gesture's role in form as a 'structural' function. I will follow Agawu in calling these rhetorical gestures specifically to distinguish the structural as twelve-tone row manipulations and pitch material.

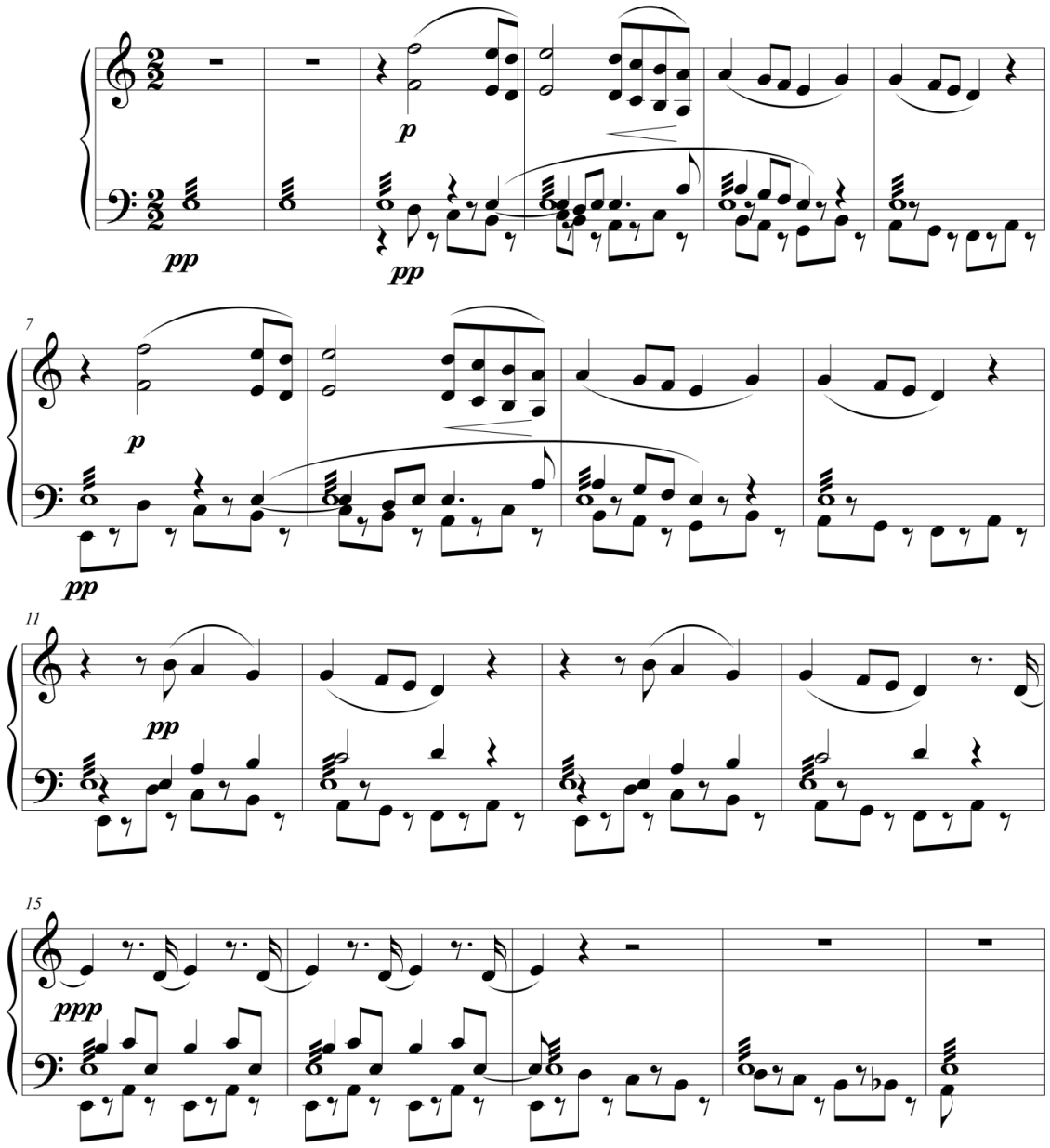
[85] Rothfarb (1991, 2–3).

tries to describe his own cognitive reactions to music. Another issue may be the discipline's reaction to Kurth's insistence on reform in music theory. To Kurth, theory had fallen into a trap of abstraction and schematicism which homogenized and subdued music.[86] In his view, the only way forward was to embrace an explicitly psychological approach to analyzing music by emphasizing what is experientially primary. Naturally, this polemic resulted in a very mixed reception for Kurth, as he received sharp criticism from notable theorists like Hugo Riemann and Heinrich Schenker. Furthermore, neither Kurth nor any of his students emigrated to the United States. As such, Kurth's theory was never established as a school of thought in America the same way as Schenker's or Schoenberg's. It was only Lee Rothfarb's work in the 80s and 90s that uncovered Kurth for the American music theory community.

Within Kurth's prodigious output, we find the most relevant material to my project in his form treatise on Bruckner's symphonies. His central argument is that theorists' obsession with schemas and Classical proportions obscured the otherwise obvious energetic shaping that actually constituted the symphonic form. Rather than proceed with his own formal types, Kurth produces generative analyses of the symphonies that inductively summarize Bruckner's formal style. The excerpts on Bruckner's Sixth Symphony in Rothfarb's translation are particularly illuminating. A reduced score of the opening measures of the *Finale* is presented below in **Example 3.1**.[87]

[86] Kurth (1991, 22–33).

[87] Kurth (1991, 151–177).



Example 3.1 – Bruckner Sixth Symphony, mm. 1–19a

Summarizing Kurth, the *Finale* begins with a quivering tremolo before the melody enters in a "small surge" that quickly fades back into the unceasing tremolo. This first utterance is itself a "de-intensifying" wave of energy as the line descends and dies away, but at the same time it is the first "hint of a large intensification" that ultimately leads to the first theme's entrance in m. 29. This wave is repeated, continuing the forward

development of the larger intensification. Then it is shortened, cutting the descending line while also bringing out the clarinet's rising motion. The shortened version is again repeated in the same sense as the earlier opening measures. Finally "the upper voice is reduced to the residual two-note motives (d'-e')." For Kurth, these waves of motion are metaphors that describe a listener's psychology as they conceptualize the musical passage. Waves are not inherent to the music, but they are a response to the music. Like Hatten's gestures, they describe musical shaping larger than an individual pitch. But unlike gestures, they always describe the combined totality of a musical passage. A wave is not just a single voice, or even a single motive within a single voice. They combine all aspects of the musical surface at once.

There are several key points that we should take away from Kurth's analysis of this short excerpt. First, waves are hierarchical. The shorter "component waves" only span a few measures but all contribute to a larger energetic process over 20 measures, which in turn contributes to an even larger 50-measure wave. When these waves create patterns out of these hierarchies, they easily fall into Larson's requirements for musical meaning. Importantly, Kurth manages to create this hierarchy of undulating waves without any recourse to discussing harmonic progressions or key areas, even though Bruckner's music is tonal. Their meaning is purely a matter of energetic formal shaping and not tonal hierarchies. Second, Kurth distinguishes between energetic level and what he calls *rectilinearity* or the direction of melodic motion. In this case, the melodic line's descent does not paint the entire picture. While it conveys expressive meaning in itself, the descending line also contributes to an overall increase in energy. This is because the energetic wave is not a result of any single musical parameter, but rather results from the

combined effect of every detail of the passage. This recalls BaileyShea and Monahan's analysis in which an ascending line does not suggest an increase in energy; rather the struggle of the ascent evaporates that energy. As Schoenberg's line ascends, each step becomes narrower and never manages to climb any higher as it repeats. Thus energetic shaping is not a simple matter of any single parameter but instead an overall process that synthesizes every aspect of the composition. Third, this excerpt from Bruckner is, in fact, an example of a sentence. The first energetic impulse is a 4-measure basic idea which is followed by its repetition to create a presentation. The sentential continuation follows by truncating the basic idea and then liquidates all of the characteristic material out until just the two-note motive remains, marking the end of the thematic structure. Of course, Kurth denies the importance of formal types and schemas, instead arguing that the energetic shaping is phenomenologically more important. I would suggest, however, that formal types also suggest typical energetic shaping and deviations from the norms allow for more nuanced musical expression and meaning.

Unfortunately, noting that this excerpt is a sentence also puts Kurth's analysis at odds with Schoenbergian and Caplinian formal functions. Kurth claims that mm. 1–19 of the Finale are not a theme, but instead an introduction that slowly gathers steam into the first theme in m. 29 and ends with the second theme in m. 50. However, I would argue that the Finale actually begins with the primary theme, because it is a well-articulated and stable sentence. What Kurth identifies as the first theme I would rather call the transition with its remarkable energy gain into an enormous brass fanfare. This transition even ends with a *medial caesura* in m. 49 that creates space for the secondary theme, where Kurth and I agree. Now this might lead us to think that formal schemas and energetics should

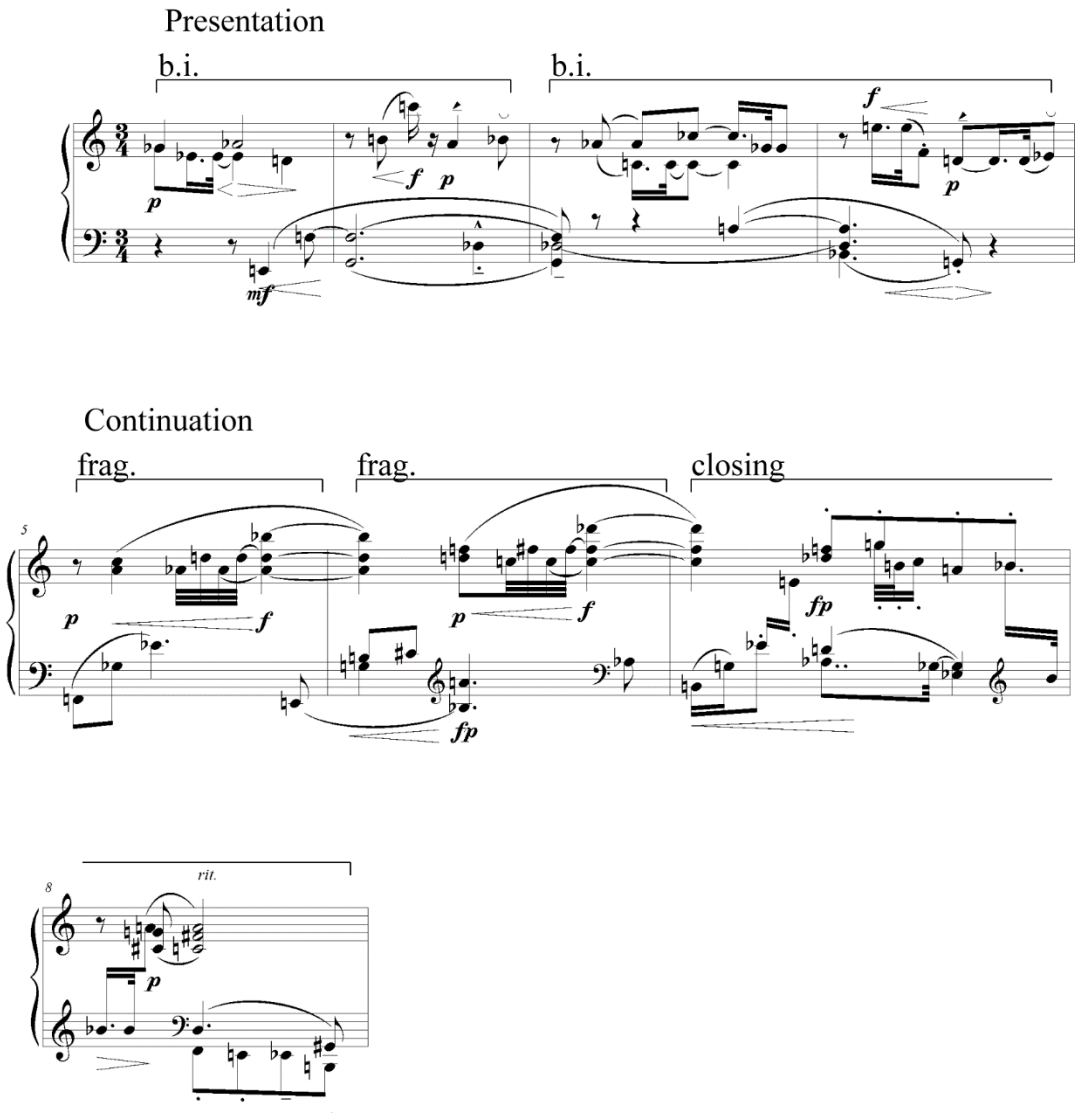
not be linked, but I do not believe this to be the case. Rather, by recognizing the schema and comparing it to the energetic process we can more easily see the nuance in Bruckner's exposition here. Primary themes are typically marked by their boisterous and assertive character, which contrasts with the secondary themes' lyricism. By beginning this way Bruckner both inverts this paradigm, as the primary theme seems distant and exhausted, and also amplifies the energy gain in the transition as the brass fanfare seems to emerge from nothing.

In the next section, I will show how we can adapt tonal energetics to correlate with the formal properties of Schoenberg's Op. 25 Suite for Piano. These pieces will make an excellent transition into his twelve-tone harmonic language as they are the first compositions to entirely use the twelve-tone method and they make use of extremely typical formal structures. Given that these formal types are the "fundamentals of musical composition" in Schoenberg's understanding, we can understand Op. 25 as being a test of his new compositional method. If it were not possible to successfully create the fundamental forms while composing with twelve-tones, then the method would not be worth pursuing. Finally, because these pieces so closely adhere to their formal schemas, I will use them as prototypical examples against which later examples will be compared. Within this set, we will see that Schoenberg articulates formal sections using energetic patterns and marks thematic closure with a specific closing gesture that I call cadential.

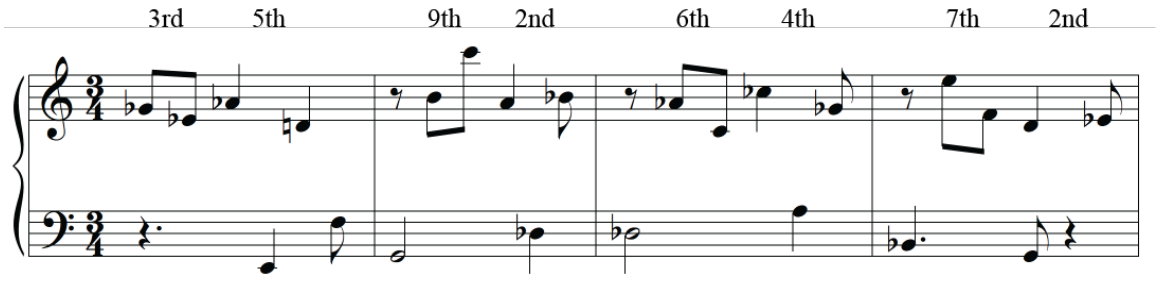
The Op. 25 Suite

Example 3.2, given below, presents mm. 1–8 of the Minuet from Schoenberg's Op. 25 Suite for Piano. Both Boss and MacKay label this phrase a sentence, and it fits the description quite clearly in many ways.[88] The motivic process in the presentation is rigid enough to resemble Caplin's basic idea through the use of contour, a slightly varied rhythmic pattern, and through the treatment of tetrachords characteristic of Op. 25. **Example 3.3** provides a rhythmic reduction of mm. 1–4, simplifying the dotted 16th plus 32nd rhythmic motive and eliminating the harmonies created by sustained notes. Or to put it more simply, the first note ends when the next note begins. By considering the removed 32nd notes as a surface diminution of the underlying rhythmic scheme, we can see that each measure makes use of the same rhythmic duration between attacks, even though in mm. 2–4 they have been pushed back an eighth note's duration later in the metric scheme. The only eighth note in the pulse stream that is skipped over occurs at the end of m. 4 just after the G and D sound at the same time, the first simultaneous attack of two notes. While the rhythmic structure is strictly related, the pitch motives are more loosely related through inversion. The first basic idea presents two descending dyads in m. 1 followed by two ascending dyads in m. 2. The response plays with a sense of inversion here, as the descending third and fifth in m. 1 become a descending sixth and fourth in m. 3. The near octave leap descends in m. 4, but the ascending half step remains.

[88] As in Kurth (1996), I am more concerned with the resultant intervallic motives than the exact row counts. However, should you wish to perform a row count, the basic row form is [4571] [6382] [e09t] and is best conceptualized as three tetrachords unordered between themselves instead of 12 distinct order positions. Detailed accounts of Op. 25's row processes can be found in Haimo (1990) and Boss (2014; 2015).



Example 3.2 – Schoenberg Op. 25 Minuet, mm. 1–8



Example 3.3 – Reduction of mm. 1–4, Minuet

The continuation in mm. 5–8 also exhibits the expected rhetorical devices for continuation function: destabilization of the phrase with fragmentation, melodic sequencing, and increased surface rhythmic activity. A new rhythmic pattern emerges that compresses the pitch-class motives into a smaller time span, aligning the attacks of tetrachord members vertically for the first time and bringing in groups of four 32nd notes, rather than just the dotted-16th plus 32nd grouping. This accelerated rhythmic structure is fragmented into one measure units in mm. 5–6, just as in the archetypal sentential continuation. This ultimately creates an energetic propulsion as each measure climbs up over three octaves increasing in speed as it rockets up. The final two measures of the phrase are a dissolving third statement of the fragments, as the line climbs one last time even more rapidly but does not reach as high. The 32nd notes then occur in the same metric position as in mm. 5–6, but rather than springing upward they pull down to the repeated Bb, dissipating energy. This dotted-16th and 32nd note rhythmic motive is finally stated again before the block chord in m. 8 and descending eighth notes trail off. This moment marks the end of the sentence, as the dramatic energy built in the continuation has been abandoned and dissipated.

First, this analysis mirrors Kurth's analysis of Bruckner in many ways, specifically because the two pieces share the same formal schema: the sentence theme-type. The basic idea, mm. 1–2, forms a single component wave but is not a single directed line in the same way that Bruckner's long descending violin line is. However, its repetition does produce the same forward-driving effect as in the Bruckner. Second, these component waves readily group into larger waves to create hierarchical patterns, thus making 'meaningful' music according to Larson's definition. The basic idea is paired

with its repetition to create a presentation function, which is grouped with the continuation to form a sentence theme-type. By embracing common-practice forms, we can thus engage normative analyses and model listener expectation in meaningful ways. Rather than trying to predict the next pitch, it is more fruitful to try and predict how Schoenberg will develop the motives in the continuation and how he will build energy towards its conclusion. I have already mentioned the increase in 32nd notes as a type of rhythmic motivic variation, but the group of four 32nd notes also mimics the contour of the opening measure. However, by inverting the contour and greatly increasing its speed, Schoenberg uses it to help propel the line higher and further. Finally, while I will discuss cadential function in much more detail at the end of this chapter, pay close attention to how Schoenberg closes this theme. After the melodic line climaxes in the continuation phrase, it slowly drops down into a middle range in the staff before ending on a half note. Meanwhile, the dynamic drops down to piano, the tempo slows down with a marked *ritardando*, and the bass line slowly trails away into the lowest register.

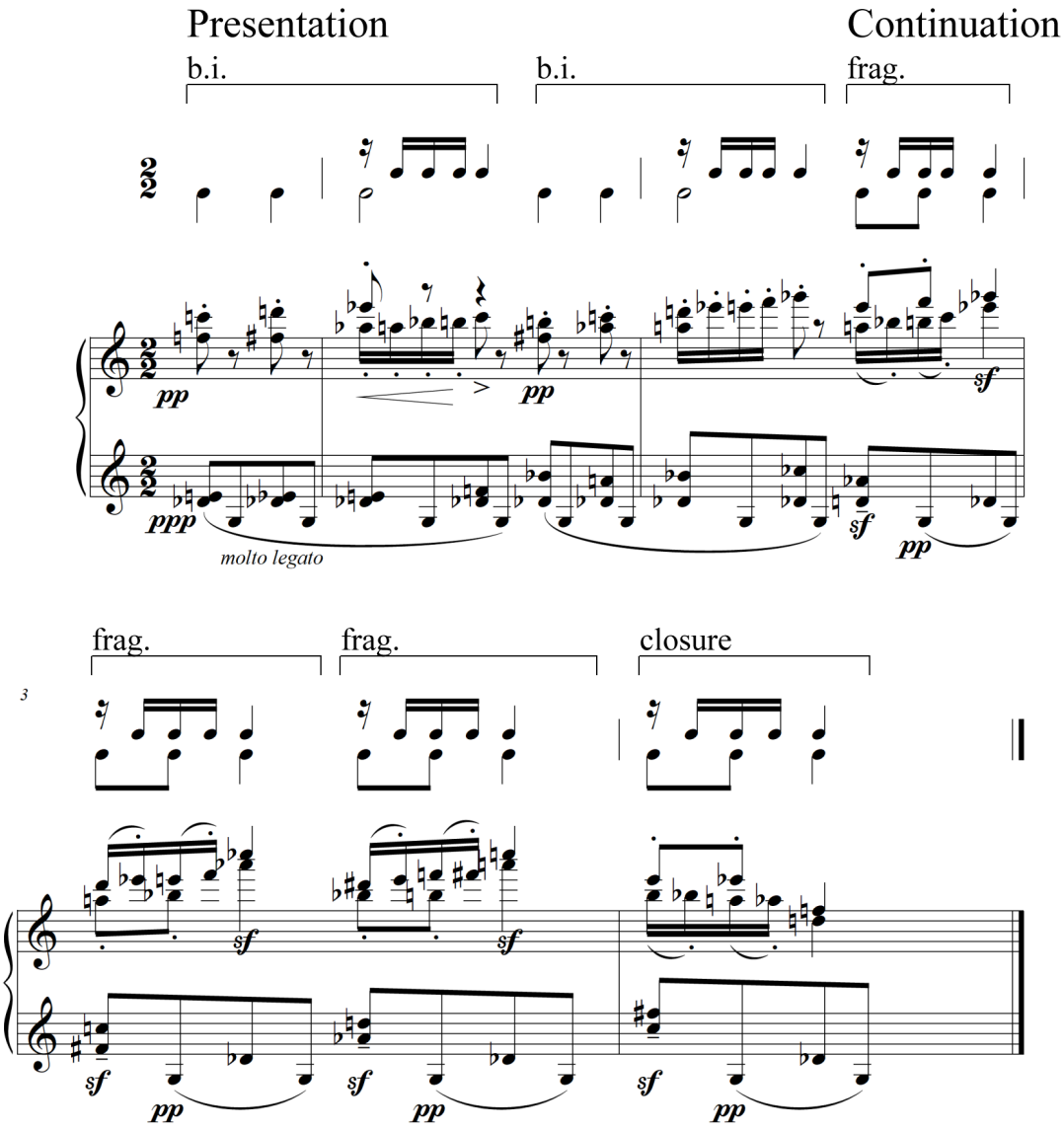
My second example, shown below in **Example 3.4**, is taken from mm. 20–24 of the Musette near the end of the movement. It is notably different from the previous example for not being the principal theme that opens the movement; however, the 4-bar sentence structure is unmistakable. Before delving into the formal properties of the theme though, I want to briefly discuss the characteristic features of this Musette. First and foremost, this Musette is paired with the Gavotte the same way the Trio is paired with the Minuet. Boss has pointed out that Schoenberg's Gavotte is modeled on the rhythmic motives from the Gavotte in J.S. Bach's English Suite no. 3 in G minor, BWV 808.[89]

[89] Boss (2015b, 40–41).

Boss's attention on rhythmic motives here is compelling not only because of the dance character of the movements but also because Schoenberg has stated that "rhythmic features are more easily remembered than intervallic features, [thus] they contribute more effectively to comprehensibility."[90] The comparison is especially striking as the third English Suite's second Gavotte adopts the style of a musette and also connects the two dances in the fashion of Minuet & Trio.

However, a musette is not a dance style comparable to a Gavotte or Minuet, but rather a bagpipe known for its drone and pastoral character. In Bach's English Suite, the second Gavotte is in the style of a Musette. Trios are most often Minuets as well. And in the case of Schoenberg's Musette, he makes use of all of these associations. There is a prominent drone on G throughout the Musette that imitates the bagpipe's drone, and the movement develops the same characteristic dance rhythms of its associated Gavotte. At many points throughout the Musette, Schoenberg uses rhythmic motive variations that were developed over the course of the earlier Gavotte. But at the same time, the Musette also makes use of the pedal drone so characteristic of the instrument. Indeed, it seems it is not just the Gavotte but rather the pair of movements that draws on the Third English Suite.

[90] Schoenberg (1967, 27).



Example 3.4 – Schoenberg Op. 25 Musette, mm. 20–24

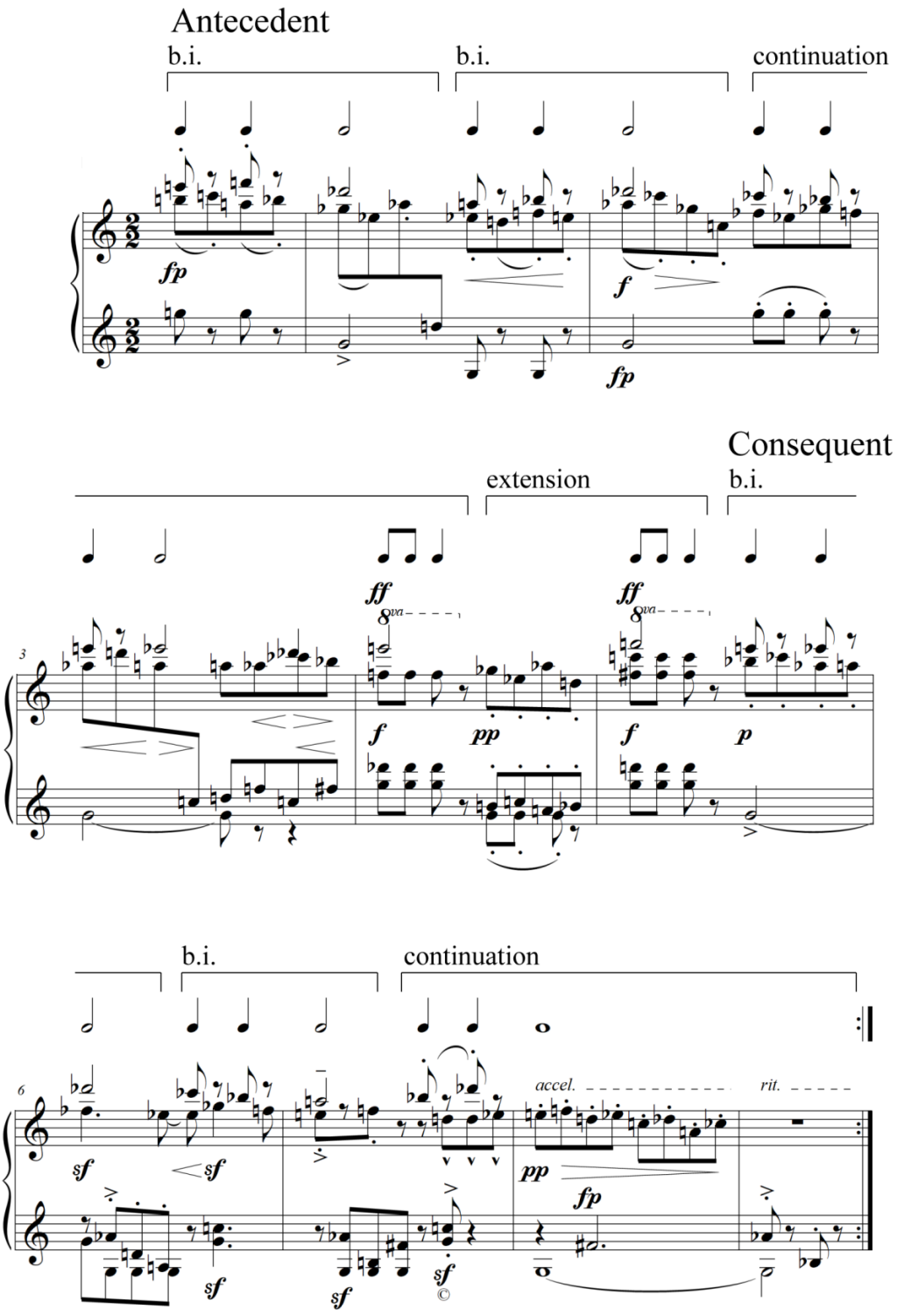
These characteristic features are all on display in this short sentence, seen above in **Example 3.4**. Boss has already demonstrated how the two principal Gavotte rhythms (two quarters and a half across the barline, and three eighths into a half across the barline) are combined into a single unit in both Bach's and Schoenberg's Gavottes. The sentence in question here begins with a variant of this combined form as the basic idea, beginning with the *a tempo* in m. 20. In this case, the three eighths are compressed into sixteenth

notes shifting the accent of the rhythm to the second quarter note, rather than the typical first or third. The net result is that both of the Gavotte rhythms are expressed within a single statement of the basic idea: four quarter notes that create one "real" measure across the barline. The repetition is identical to the basic idea in all ways beyond pitch, and even then many of the intervals remain fixed.

Recognizing the continuation phrase is perhaps easier here than in the previous example. It features rather clear fragmentation of the basic idea's second motive overlapping with a diminution of the first motive. This combined motive form is restated three times, each one reaching a *sforzando* higher and higher as it builds in energy. But then the fourth and final statement drops down an octave, inverts the motive into a descent, and removes the *sforzando*, all while keeping the rhythmic character intact. The entire phrase then is a highly typical example of sentential functions. It begins with a basic idea, presenting two characteristic motives, it repeats the basic idea with slight pitch variation driving the energy forward. The continuation is the 'sentential' type, fragmenting the basic idea into a smaller unit and sequencing it higher and higher to drive towards a cadence. The phrase then ends with a dissipation of energy through the sudden drop in register and the inversion of the pitch motive. Thus, the inverted motive marks the end of the phrase with a closing function, primarily through its location and dissipation of energy.

The opening nine measures of the Musette, provided below in **Example 3.5**, demonstrate all the properties associated with the period, even though the idea of cadence presented here varies drastically from the tonal idiom. In this instance, both the antecedent and consequent phrases consist of miniature sentences of four real measures.

The uppermost melodic line for each basic idea ends on Db and results in set-class 3–3, although the pitch intervals are changed from <+1,-4> to <+1,+3>. The continuation begins with what initially seems to be a third statement of the basic idea, but the downbeat half-note is replaced with another short quarter in the Gavotte's short-short-long rhythmic scheme, delaying the half note off the beat to create a syncopation. The melody reaches its highest and loudest point on the downbeat of m. 4, with the punctuating three eighth notes, another diminution of the Gavotte rhythm. The phrase could easily have featured a normative four-bar hypermeter in a Gavotte style. However, Schoenberg goes on to repeat this concluding gesture one more time and up a step, which extends the phrase into an irregular five bars.



Example 3.5 – Schoenberg Op. 25 Musette, mm. 1–9

The consequent phrase begins in m. 5, again with a miniature sentence with one-measure basic ideas. Each basic idea is another statement of the Gavotte rhythm, in line with Schoenberg's claim regarding consequents that "the preservation of the rhythm allows extensive changes in the melodic contour."[91] Thus, while the pitch material has been varied significantly, especially through row manipulations, the connection of rhythmic motives helps bridge the beginning of the consequent back to the beginning of the antecedent. Indeed, most of the variation is relegated to the lower voices, but the uppermost voice has also been adapted beyond the simple inversions. Rather than the <E,F,D♭> that began the antecedent, the consequent begins with <E,Eb,D♭>. This begins and ends with the same pitch, but alters the middle note, compressing the set-class into a 3–2. The repetition of the basic idea gives <C♭,B♭,A> instead of the earlier <A,B♭,D♭>, which is nearly a retrograde and compresses the motive further into set-class 3–1.

The motivic compression elicited in the basic ideas of the antecedent and consequent phrase is then highlighted in the continuation of the consequent as the only melodic line moves downward primarily by step. The end of the consequent phrase is remarkably different from the end of the antecedent. The antecedent phrase draws on the miniature sentence and its attendant functions to drive up higher and louder as it builds energy into the exclamatory three eighth notes. This outburst of energy at the height of the phrase is then repeated in an emphatic reassertion which helps to create space for previous material to return. This consequent phrase, however, does the opposite. Rather than building up in intensity, the continuation suddenly loses all of its energy and then

[91] Schoenberg (1967, 25).

continues to deflate downward in a long protracted sigh that is closed with two short notes.

The Cadences

Now, I would like to bring together all of these themes to compare how they end and formulate a normative description of cadential function in Schoenberg's serial compositional style. In Hatten's terms, Schoenberg has a typical closing gesture that is defined by its energetic shaping more than its constitutive pitches. Specifically, the essential factor lies in how energy is dissipated to meaningfully mark cadential function. The more conclusive cadences from the Minuet m. 8, Ex 1, and the Musette mm. 8–9, Example 4, are both arrivals at a soft dynamic in the middle-to-low register that feature stepwise descending lines that gradually trail away. On the other hand, the less conclusive caesura in the Musette mm. 4–5, Example 4, is the exact opposite, as it is the high point in the phrase with the loudest dynamic and features an emphatic assertion on the three eighth notes. The example from the Musette m. 24, Example 3, is almost a blend of the two extremes. It is not the high point of the phrase, as in the caesura, but neither does it expunge all remaining energy. In comparison with the driving fragments that lead up to it, it is certainly a deflating moment, but not one that completely undoes all the work leading into it. This is perhaps not so surprising given its function within the larger recapitulation function.

And truly, the location is extremely important here. While analytic theories of the mid- and late-20th centuries saw a turn towards the objectivity of pitch-based structural definitions, the discussion of cadence has ultimately confounded such approaches. Caplin

defines the Classical cadence in terms of formal syntax and harmonic structure, or in other words location and pitch content.[92] In this case, cadences are a closing function and must end a phrase. But for Caplin, they must also contain a root-position V chord and a root-position I chord, for an authentic cadence. In his view, both of these conditions are necessary and together they are sufficient. The root position V–I progression is thus considered cadential content, and when that content occurs outside of the expected cadential location (closing) it cannot be a cadence. Similarly, if the expected cadential location does not contain the root position V–I, then the cadence must have been evaded or the phrase expanded in some way.

I recognize that tonal theorists do not usually distinguish between structure and syntax. However, I am using structure to strictly refer to the pitch content or row count of the music, while syntax refers to the ordering of musical objects within the piece. These musical objects may be chords, motives, gestures, basic ideas, or phrases, as well as entire themes or sections. Agawu and Anson-Cartwright both treat structure and syntax as synonymous, but I believe this is a result of tonal theories also wanting to account for harmonic progressions, or the syntax of tertian objects.[93] Because of this, tonal harmonic theories often conflate the two phenomena out of necessity. Many post-tonal theories do not do this, however. For example, Forte's Kh tables and Klumpenhouwer's recursive networks all describe pitch structures that do not explain or rely on the orderings of the objects. These analytic techniques only demonstrate relationships of the pitch-content that could be made manifest in any ordering. The syntax is specifically the temporal

[92] Caplin (2004).

[93] Agawu (1991) and Anson-Cartwright (2007).

organization of the musical objects, regardless of their content. It is perhaps easier to understand syntax as the location of objects within the piece relative to other objects.

I have already pointed out that Caplin's strict harmonic requirement is more a result of his limited repertoire than a universal truth.[94] However, Richards and Burstein have both noted that half-cadences can be particularly slippery events, even within the Classical tradition.[95] I also strongly agree with Caplin that there is a fundamental difference between music that effectively marks its closure and music that abruptly ceases to be, or what he calls the distinction between an end and a stop.[96] As Richards points out, there are Classical examples of ends that are certainly not cadential. To account for this inconsistency, Richards posits a closural function in which phrases can be loosely concluded without proper cadences. This closural function is in fact very closely related to Schoenberg's idea of "caesura." Schoenberg's antecedent phrase only requires this "type of musical punctuation comparable to a comma or semicolon [that] is carried out in both melody and harmony" and not a cadence proper.[97]

Moving beyond the Classical style, however, yields much greater deviations from Caplin's Classical cadence. Frank Lehman argues that Caplin's "conceptual rigidity does not entirely befit the analysis of music for film" because film music is "stylistically heterogeneous and intrinsically programmatic [lacking] a central normative harmonic idiom (and attendant constraints on cadential syntax)."[98] In place of Caplin's definition,

[94] This line of reasoning is also developed in Nobile (2016).

[95] Richards (2010); Burstein (2014).

[96] Caplin (1998, 51).

[97] Schoenberg (1967, 25).

[98] Lehman (2013).

Lehman suggests that the film cadences he described are primarily defined by their rhetorical function, especially in relation to the visual cues of the film medium. However, in a presentation on cadences in rock music and subsequent article on more general rock harmonic progressions, Drew Nobile argues that these cadences must ultimately be defined by their syntax.[99] While the specific harmonic progressions in rock music are not nearly so tightly prescribed as in the Classical idiom, Nobile argues that resolution to tonic still falls within the syntactical *Stufenkreis* (T–PD–D–T). Recently, Caplin has been cataloging the types of non-cadential closure in Romantic music, such as the Pre-Dominant Arrival, where a phrase or theme clearly ends but is harmonized with the Pre-Dominant chord.[100]

My view is that the Classical cadence can ultimately be understood in terms of all three devices (structural, rhetorical, and syntactical) because the compositional style is rigidly prescribed and over-determined. Romantic closure becomes more loosely defined in terms of harmonic structure, but still readily adapts the rhetorical and syntactical devices to more clearly mark closure. Cadences in rock music can often be understood through all three devices, but as Nobile points out, the syntactical seems to be the minimum requirement for cadence. Lehman points out that film music is extremely different from most other musical idioms because it is best understood in supporting the visual medium through specific rhetorical cues.

In the case of Schoenberg's twelve-tone compositions, I will also argue that the most important feature of a cadence is its syntactical function to close a phrase or theme.

[99] Nobile (2012; 2016).

[100] Caplin (2018).

However, as mentioned above, other formal functions are often defined by their attendant rhetorical functions, and this musical rhetoric provides the distinction between beginnings, middles, and ends. These rhetorical functions are perhaps most easily understood in terms of energetics. As noted above, beginnings are usually quite static in terms of energy as they establish the initial platform from which the rest of the music will grow. Middles typically provide a dramatic increase in energy as material from the beginning is fragmented and sequenced in a drive towards the end. Closing function is expressed through some kind of gesture that responds to this build of energy. More conclusive cadences are marked with a lower energy state, like in m. 8 of the Minuet and m. 9 of the Musette, while less conclusive cadences are marked with residual energy that must still be released, such as mm. 4–5 and m. 24 in the Musette.

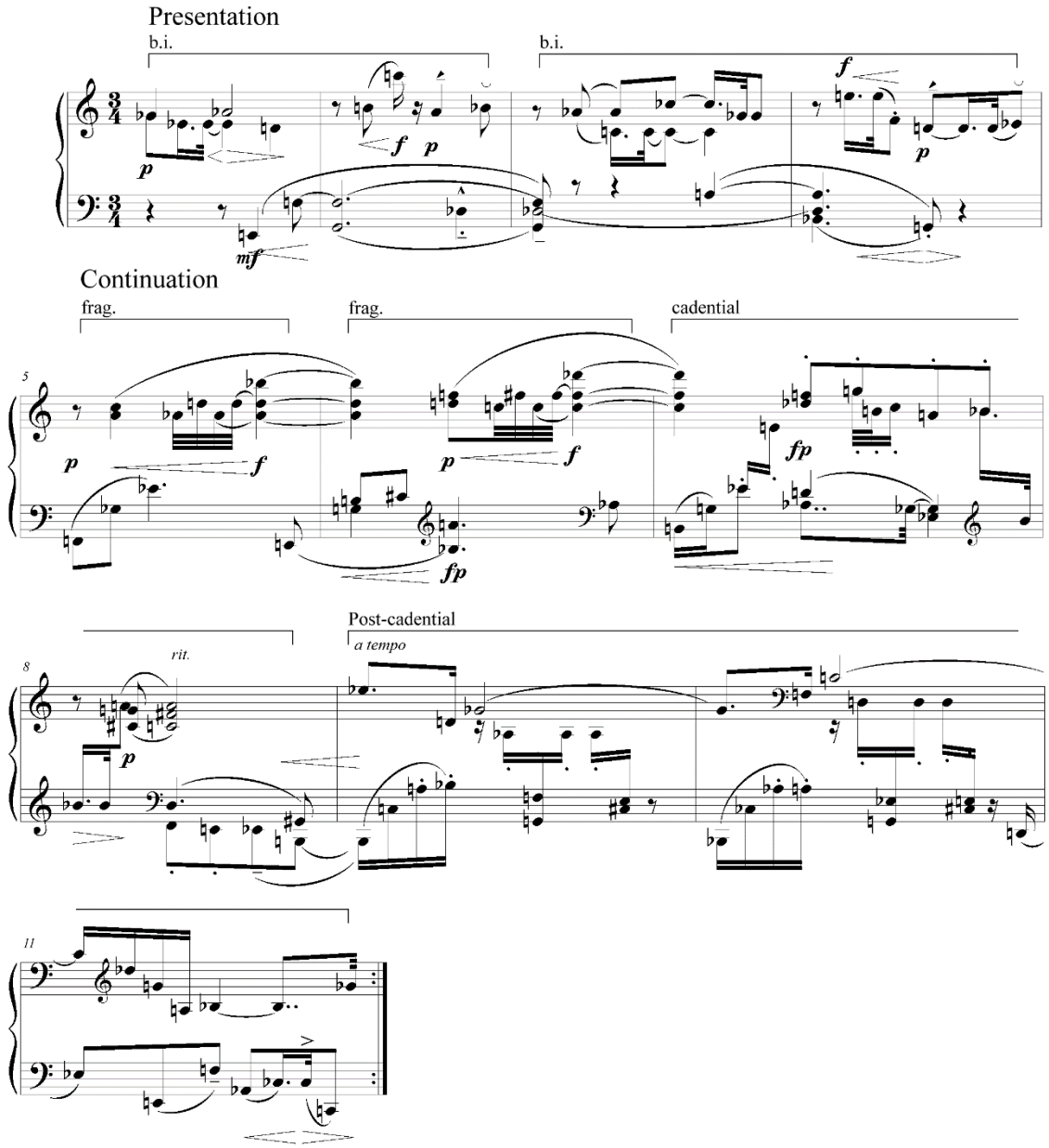
These rhetorical functions can also be seen to some degree in Schoenberg's descriptions of cadence. While he does not provide a rigid definition as Caplin does, he does bring up some typical norms and guidelines for new composers under the heading of "cadence contour" which claim that "in order to exercise the function of a cadence" the section "usually contrasts with what precedes it."[101] This is often done by "obeying the tendency of the smallest notes (like an accelerando), or, on the contrary, contradicting the tendency by employing longer notes (like a *ritardando*)." Coupled with rhythmic features, he claims that "if there is a climax the melody is likely to recede from it, balancing the compass by returning to the middle register. This decline in the cadence

[101] Schoenberg (1967, 29).

contour, combined with concentration of the harmony and the liquidation of motival obligations, can be depended upon to provide effective delimitation of the structure."[102]

Now let us return to Schoenberg's twelve-tone cadences in light of all these comments, assuming that cadential function in this repertoire is marked with a rhetorical gesture that appears in an appropriate location. **Example 3.6** provides the first 11 measures of the Minuet, which includes the sentence discussed earlier and is contained within a repeat. Furthermore, it actively demonstrates the interplay of syntactical and rhetorical associations of cadential function. Syntactically speaking, cadential or closural function marks the ending on the theme-level, rather than beginning or middle. In the Minuet, as described earlier in Section 4, mm. 1–4 make up a presentation and thus initiating function while the continuation of the sentence occurs in mm. 5–8. Thus, there is a beginning that introduces motive-forms and a middle that fragments and develops those motive forms, obeying the tendency of smaller notes. The half-note chord in m. 8 is thus in the expected location for a cadence.

[102] Schoenberg (1967, 30).

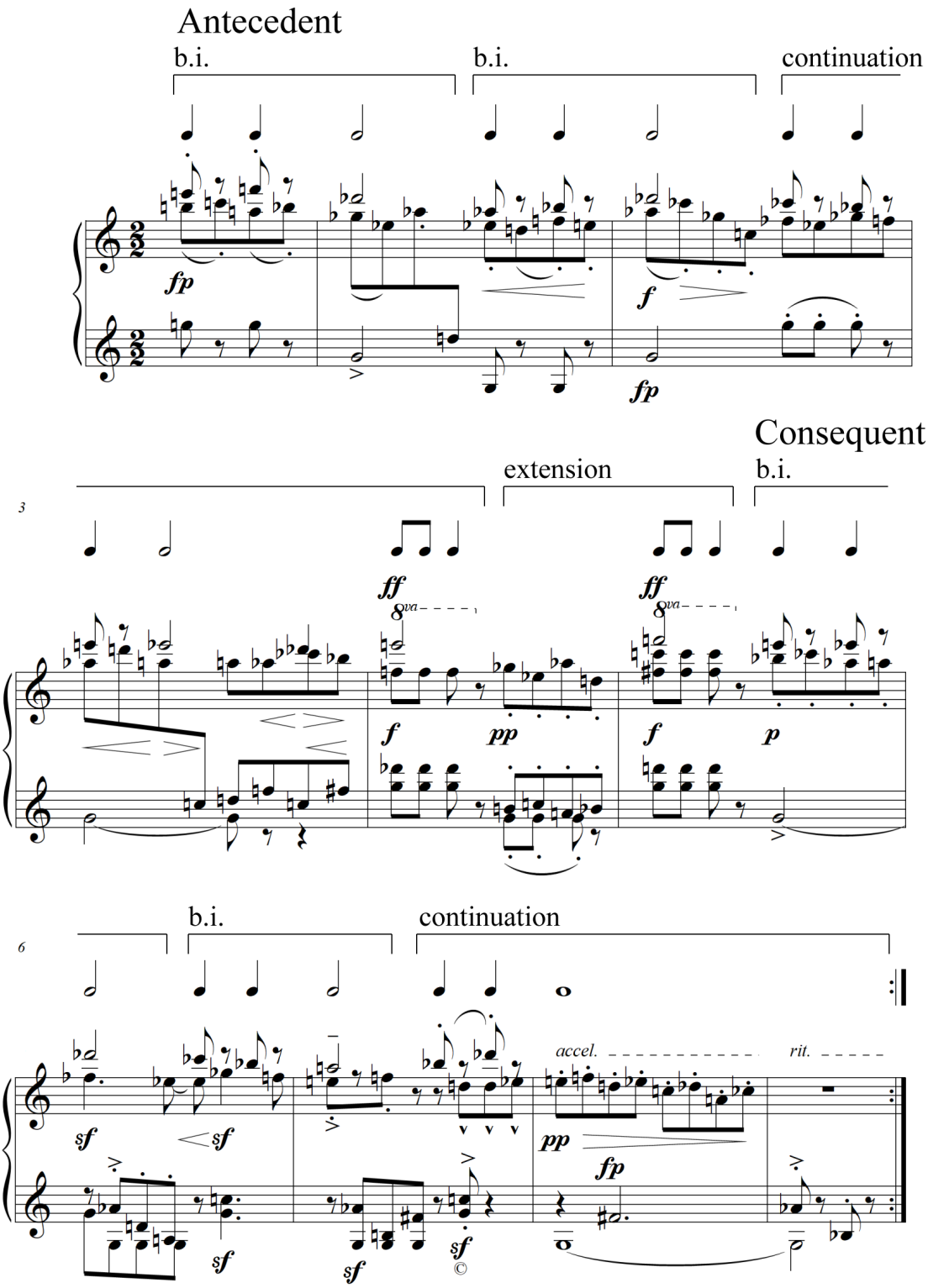


Example 3.6 – Schoenberg Op. 25 Minuet, mm. 1–11

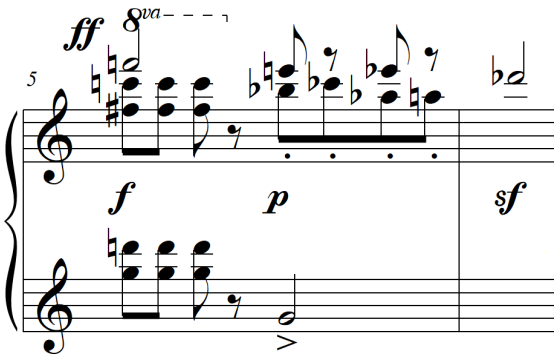
However, expected location does not a cadence make. In this case, mm. 7–8 also feature the expected cadence contour of descending after the peak, and they continue the tendency of smaller notes as the sixteenth note pulse-stream is saturated in m. 7, and by the end of m. 8 the energy that was accumulated through the continuation is dissipated

through the drop in range, dynamic, and rhythmic density. Even the structural pitch content can be understood in terms of liquidation. Thus, even though it does not occur at the literal end of the section, which would be in m. 11 at the repeat, we can interpret a cadence at the conclusion of the sentence in m. 8. This means that the material following the cadence point is post-cadential. While post-cadential function is not defined other than being "after the end," in this case it helps to undo the finality of the sentence in m. 8, injecting more energy and resurrecting the characteristic material back into the texture to help lead into either the repeated beginning or the subsequent B-section.

The cadences in the Musette examples are also particularly telling, seen below in **Example 3.7**. In mm. 1–8 the texture maintains a very consistent saturated eighth-note pulse-stream without any additional notes in the sixteenth-note layer. However, the range matches Schoenberg's cadence contour very neatly. The majority of the antecedent phrase falls within a very narrow tessitura, and its caesura contrasts that range by ascending forcefully into the highest register. Following that climax, the entire consequent phrase is a descent down from the high F as the melodic line trails off down into the treble clef for the first time in these nine measures. I also want to point out that the tone row crosses this formal boundary between the antecedent and consequent phrase, as shown in **Example 3.8**. I can easily imagine an analyst focusing so intently on how the row projects a form that they might miss this otherwise clear formal boundary.

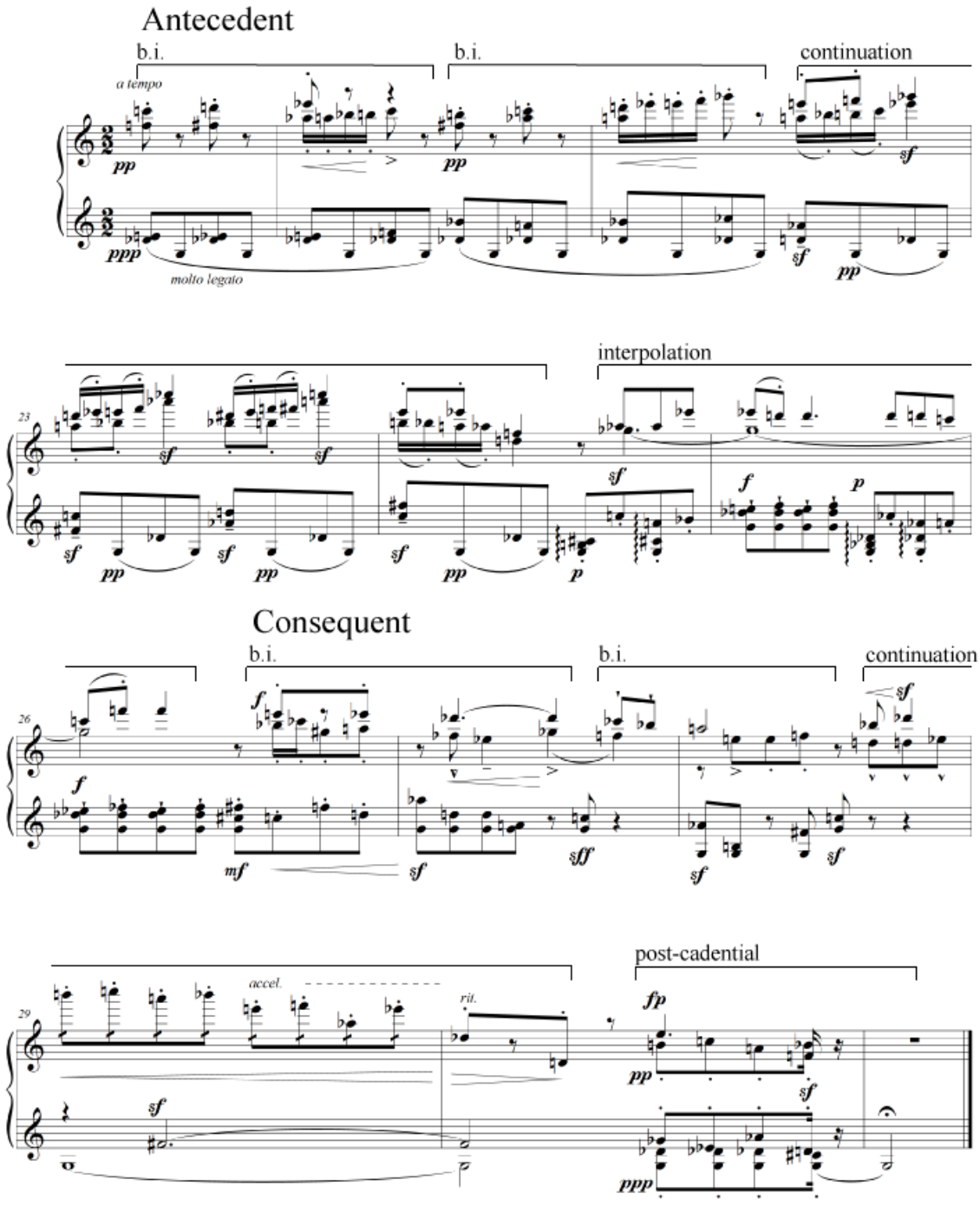


Example 3.7 – Schoenberg Op. 25 Musette, mm. 1–9



Example 3.8 – A complete statement of P4 crossing the caesura in m. 5

Even more interesting, however, is Schoenberg's handling of the recapitulation. **Example 3.9** below presents the final twelve measures of the Musette, mm. 20–31. This section contains the sentence discussed above in Example 3 with its rather weak closure, as well as the subsequent phrase that leads into the final cadence of the movement. After a fragmented Contrasting Middle, the sentence in mm. 20–24 provides a stable and tight-knit theme-type that initiates a rhetorical return to the beginning of the piece. The fact the sentence is only four measures long means it may be reasonably understood as a miniature sentence within the antecedent phrase. This would mark the subsequent phrase in mm. 26–30 a consequent, although it does not begin in the same manner as its antecedent. Instead of the typical parallel construction, the consequent begins with an almost exact repetition of the consequent phrase in mm. 5–9.



Example 3.9 – Schoenberg Op. 25 Musette, mm. 20–31

The uppermost voice in the beginning of the consequent phrase, mm. 26–28, is identical in pitch material to the earlier consequent and has been rhythmically varied so

that the content of each measure has been delayed by at least an eighth note. The [4,3,1] that begins the line still makes use of the Gavotte rhythmic motive of two quarters and a half note, but it is displaced by an eighth note from the notated meter. The [e,t,9] in mm. 27b–28a has been compressed from the same Gavotte rhythm into simply two eighth notes leading into the half note downbeat. And finally, the [t,1] that occurs last before the fluttering descent is almost unmodified, except that the Bb has been shifted back an eighth note. Thus, even though it is not a direct answer to the thematic material of its antecedent, this phrase must certainly function in the same consequent manner that it did in the opening A section.[103]

The interpolation between these antecedent and consequent phrases is quite different from what is seen in Caplin's examples. However, this could be read as an archetypal example considering the way Caplin's definition of interpolation reads: "musical material that is inserted between two logically succeeding formal functions, yet seeming not to belong to either function."[104] In this case, the consequent phrase logically succeeds the antecedent and even mirrors the rhetorical balance in strength of closure, and yet these measures of unrelated material are caught in between. With that said, Caplin's examples are much smaller fragments of music that appear within the middle of a phrase rather than between the phrases themselves. More challenging, the two-bar interpolation in mm. 24–26 consists of two one-measure basic ideas that could sound like the presentation of a miniature sentence for the consequent phrase. The first is based

[103] Alternatively, one might consider this an example of a compressed recapitulation where only the consequent phrase returns from the exposition, similar to Beethoven Op. 49/1, ii described in Caplin (1998, 83). But if all inter-thematic functions are brought to bear on the movement, we could not group the miniature sentence with the contrasting middle. It is too tight-knit, breaks away from the model-sequence technique, and provides too strong a sense of initiation.

[104] Caplin (1998, 55).

primarily on the Gavotte rhythm of three eighth notes leading into the downbeat but exchanges the usual half note arrival for two eighths and a quarter, a diminution of the other characteristic Gavotte rhythm. The response is identical rhythmically but rather than using the intervals <+5,-1> it uses a near retrograde inversion in <-2,+5> using the central dotted quarter note D as a pivot point. Despite all of that, this interpolation is merely a shadow of a presentation as Schoenberg toys with the formal functions to provide some additional sense of beginning before the true consequent phrase returns and closes out the movement.

To summarize, in this chapter I have discussed three main theories of energetics and rhetorical analysis. My current research project most closely resembles Kurth's waves of energy, although I embrace the formal schemas as a tool rather than shying away from them. Specifically the sentence and period theme-types create specific energetic patterns that provide prototypical main themes for Schoenberg's twelve-tone style. Other pieces may not rely on these types, but will still establish main themes modeled on similar energetic patterns. How I identify cadences is dependent on Hatten's work with gesture. Schoenberg has a typical gesture for his most conclusive cadences where the range drops, the dynamics drop, and the rhythms slow down often with a marked *ritardando*. This all fits into an energetic contour where lower energy states are more conclusive than high energy states. Now I am not arguing that this is some kind of necessity inherent to energetic contours; only that Schoenberg seems to have a preference for using lower energy states to mark the more conclusive endings. Finally, this work does not share very much with Larson's musical forces beyond a fundamental agreement about music being understood as motion through a virtual space. However, I hope that I

have shown that a hierarchy of gestures and formal functions represent how a listener can meaningfully comprehend Schoenberg's music.

CHAPTER IV: INTER-THEMATIC FORMAL FUNCTIONS AND TERNARY FORMS IN OP. 25

Up to this point, I have primarily been discussing intra-thematic functions; trying to clearly show how themes are structured with clear beginnings, middles, and ends in a twelve-tone harmonic language. This chapter moves up the hierarchy to discuss how these themes are organized into larger formal sections or entire movements. In other words, this chapter is about inter-thematic functions. I will begin by comparing Caplin's concept of tight-knit versus loose organization to Schoenberg's discussion of stability. From there, I will move on to complete analyses of minuet forms in Op. 25 to demonstrate how Schoenberg differentiates between thematic and non-thematic formal sections. Finally, I will discuss stability's implications in sonata forms using both pieces from Op. 33 as examples.

Tight-knit or Stable Formation?

Caplin first defines tight-knit versus loose organization in his chapter on small ternary, as the concept helps him distinguish the more thematic sections—exposition and recapitulation—from the contrasting middle. Classical themes are more tight-knit when they 1) begin and end in the same key, 2) have conclusive endings, 3) feature stable harmonic progressions, 4) exhibit symmetrical metrical patterns, 5) repeat musical material less often, 6) contain uniform motivic material, and 7) use conventional formal types.[105] Loosening techniques derail these tight-knit criteria through modulations or repetitions that create asymmetrical groupings. Schoenberg's description of stability is

[105] Caplin (1998, 84–85).

not so meticulously defined, but easily comparable to Caplin's. In the *Gedanke* manuscript, Schoenberg declares that "A statement is stably formed when its smaller components do not have the tendency to move away from a perceptible center (for example, a harmonic one) but instead arrange themselves around it (concentric tendency)."[106] These concentric harmonic progressions fit neatly into Caplin's harmonic characteristics of beginning and ending in the same key, having conclusive endings and stable harmonic progressions. But thinking beyond just tonal music, Schoenberg is especially concerned with motivic processes. For him, the primary purpose of a main theme is to establish the *Grundgestalt*: the basic idea and its motives. These motives are repeated to mark their importance and impress them onto the listener's memory. The theme should also vary these motives to demonstrate the flexibility of and potential within the *Grundgestalt*. While we have traditionally distinguished between main themes and subordinate themes by key, Caplin and Schoenberg both argue that these other formal parameters are just as critical.

Curiously, Caplin departs from Schoenberg in how he compares themes and their normativity. Both theorists use the term "tight-knit" to describe those themes that are most typical in their construction: those that feature even four-bar phrasing, clear thematic function, and well-defined cadences in the same key that they began. However, Caplin generally only uses the tight-knit vs. loose continuum as a comparative tool. In his view, this theme may be more tight-knit than that theme, or that theme is looser than this theme. This relationship is necessary for distinguishing main themes from subordinate

[106] Schoenberg (2006, 133).

themes. Caplin's view of tight-knit is essentially inter-thematic because it only defines the relationship between two or more given themes.

However, the concept of tight-knit vs. loose formation is inextricably linked to the concept of stability. In fact, Schoenberg first introduces stable and loose formation as opposing structures in his unfinished *Gedanke* manuscript. In his "Laws of Comprehensibility," Schoenberg states that "main matters will have to be 'stable in form' (see below), will be more resting than moving, will show fewer digressions and clearly characterize these [digressions] as such." Additionally, "they will be sharply delineated, not beginning or ending in just any way or at just any time; they will in fact present the main idea briefly yet with the necessary breadth and expansiveness, clearly accented and articulated." Later on, he declares a statement is stable "when its smaller components do not have the tendency to move away from a perceptible center" referencing a local adherence to a single tonic. Schoenberg contrasts that with subordinate ideas which "can 'somehow or other' start (as if condensed) and somehow stop, vanish." A few pages later, he poses loose formation as the opposite of stable: "a connection is loose if the parts are capable of a certain amount of independent motion (eccentric tendency?), which can go so far as to allow individual parts perhaps to escape from the association." Thus, Schoenberg lays out a system where main themes are stable, subordinate themes are loosely organized, and transitional passages are the loosest or most eccentric. This lines up well with Caplin since it is the relative stability between the two themes that determines their relationship as primary and subsidiary. However, it is also clear that Schoenberg's concept of a stable formation is not just relative to other themes but an inherent quality: i.e. "A statement is stably formed when […]"For Schoenberg, this

absolute sense of stability must be governed by Laws of Comprehensibility which go hand in hand with laws of the mind. This music is still for human consumption, by listening primarily, and must therefore conform to how humans perceive music.[107]

While I agree that comparing tight-knit and loose phrase formation within a single piece provides analysts very valuable insight, there is an absolute metric of stability. It is not that stability is some inherent essence of a theme, but that we can declare that a theme is stable without necessarily comparing it to any other particular theme. We can do so by recognizing that themes are better conceptualized as non-classical categories that exhibit centrality and gradience (see below). Those themes that have a more tight-knit phrase structure are more central to the category. We learn these categories heuristically through exposure to similar music within the same style. Furthermore, stability can be expressed musically by how clearly demarcated or articulated the theme is from surrounding material and through the range and type of motivic development.

Categories

Platonic or Classical categories have necessary but sufficient conditions and thus have hard borders around them. Caplin's Classical Cadence, described in the previous chapter, is a prime example. In his definition, a cadence must have cadential content and occur at the end of a phrase or theme. A musical passage that does not meet both requirements is insufficient for a Classical Cadence, while any additional conditions are unnecessary. Thus, there are only cadences and passages that are not cadences. It seems that humans typically use necessary and sufficient conditions for our own abstract

[107] All of the quotes in this paragraph are taken from Schoenberg (2006, 111, 133–134).

creations. However, we naturally create categories of experiences and objects in our environments that do not necessarily meet these necessary and sufficient conditions.[108] Two of the most important features of natural categories for our purposes are centrality and gradience effects. Centrality is the idea that some members of a category are "better examples" than others. Categories with membership gradience have degrees of membership with no clear boundaries, while centrality gradience describes how members clearly within the category may be more or less central. For example, if I ask you to think of a typical bird, you will probably think of a pigeon or jay, or at the very least something shaped very much like it. Some people might even think of an owl or falcon. But not many people would imagine that a penguin or an emu is a good example of a typical bird, even though they are definitely birds. Thus we can think of pigeons and jays as central members of the bird category, while owls and falcons are less central. Penguins and emus then aren't central at all.

Formal schemas exhibit both centrality and gradience in terms of tight-knit structure. That is, the most central example of a theme is also the most stable and tight-knit. For example, many theorists identify the main theme of the first movement of Beethoven's Op. 2/1 as the prototypical sentence in Western music literature. It features a clear statement-response presentation in exactly four measures. The continuation is also sentential, liquidating and fragmenting motives from the presentation, and it ends with a clearly marked half-cadence in m. 8. In essence, sentences are more tight-knit the more closely that they resemble Op. 2/1. This is because the Beethoven example is the most central member of the sentence category. This also explains how difficult it can be to

[108] The following breakdown is primarily drawn from Lakoff (1987).

compare how tight-knit themes are when they have been loosened using different parameters. For example, we can't easily explain which theme is more tight-knit: one expanded through repetitions of internal passages, or one extended through cadential evasion.

We create these categories naturally through our experiences with category members. Returning to the birds, there are a number of reasons why pigeons and jays make more central members, but let's focus on their basic shape. They have round bodies with heads placed more forward. Their wings contour to their body when folded in, and they have shorter bony legs. Furthermore, their proportions seem more typical, while other birds may have longer legs or necks that seem more atypical. However, there isn't anything specifically more normal about their proportions. Instead, this shape seems more normal to us specifically because most birds in our environment take this shape. Pigeons and jays make a great central example of birds because they are a constant feature of our surroundings. When we first encounter a new type of bird, its proportions may seem startling not because they are unnatural, but because they aren't in the typical pattern we have learned to expect. In his book on musical expectation, David Huron calls this subconscious thought process "heuristic learning." Essentially, at any given time while we listen to music we are making educated guesses to anticipate what will come next. Whether we guess correctly or not, we subconsciously track all of the results to help inform future expectations. We draw on our own understanding of a musical style or genre to help us make these guesses, and so the better we know a musical style the more informed our guesses become. Huron focuses on anticipating the next pitch, which feeds into Larson's model of meaning as patterned hierarchy discussed in chapter 2. And again,

I must argue that the undue focus on pitch expectation has led many theorists to misunderstand atonal and serial music, both in terms of theoretical structure and how listeners can engage with it.

Unfortunately, the variation in listener backgrounds presents real issues for creating a single universal model for every listener's categories. Every listener has a unique musical experience and background and thus creates their own non-classical categories with their own internal references. Each listener's past experience is partially based on generation and location but also simply which genres and styles an individual listener chooses to listen to and engage with. As such, formal schemas are created actively and passively. People who choose to study music select a corpus and actively construct schemas around those pieces. Theorists always do this in their own independent research, but we also teach our own models to students. One of the central purposes of undergraduate theory classes is to engender a shared formal schema between all trained musicians based on the same selected corpus. This is borrowed from the conservatory model designed to pipeline new performers into professional orchestras. However, listeners also passively learn formal schemas just through listening to music. Anything that comes on the radio eventually feeds into a heuristic model where listeners might intuit formal schemas for specific genres or styles. Someone engrossed in rock music probably recognizes the pre-chorus's drive towards and resolution into the chorus, even if they don't know the terms. If a song subverts that formal expectation, that listener would recognize the pre-chorus's denial and even come to expect it if they hear other songs with similar techniques.

This is all to say that my model here is trying to faithfully recreate Schoenberg's schemas based on his own writings and how his music is written. For this chapter, we will be focusing on the following schemas: ternary minuet form and sonata form. While there is reason to believe that stability has a role to play in other musical styles, its specific implementation in Schoenberg's music is uniquely grounded in the 18th century Austro-German tradition. We will see that the minuet's main theme is the most stable formal unit, followed closely by the recapitulation which is typically slightly varied. The contrasting middle represents the loosest formal unit of the minuet form. In contrast, the sonata form features two large levels of hierarchy. At the largest level, the sonata form takes on a ternary structure, with an exposition, development, and recapitulation. The exposition consists of 1) a stable main theme, 2) a transition that leads into 3) a subordinate theme or theme-group, 4) and a closing section. The recapitulation typically brings back all of the exposition's formal sections, with a new tonic-affirming progression of keys. However, composers feel free to alter their recapitulations in numerous ways without abandoning the sense of thematic return and tonal closure. The development is unstable and chaotic, developing motives from the exposition in entirely new ways and to greater extent, while modulating between a wide variety of keys without staying in one for too long.

Beyond resemblance to a prototype, Schoenberg also claims that a theme has stability when its beginning and ending are clearly marked. On the other hand, loose structures seem to appear or disappear on a whim. The most stable themes do not emerge unexpectedly from transitional material. Instead, they are prepared and marked off before they are begun. And when they end, they do not fade off into transitional material, but are

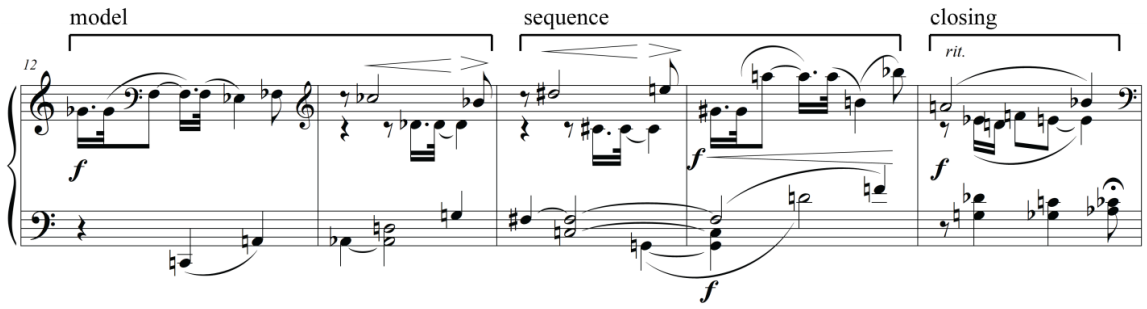
instead marked with typical closing gestures. I won't claim that every main theme is preceded and followed by a grand pause, but I will show in the analyses that beginnings and endings are marked throughout Schoenberg's music and help to define stable thematic formations. Furthermore, I will show that subordinate themes are both loosened through phrase extensions and expansions but also by how well-defined their formal boundaries are. And finally, transitional passages represent the strongest eccentric tendency, not just in loose phrase formation but also in how they change from one theme's motive-group to another's.

Op. 25 Analyses

The Minuet and Musette, which we discussed in Chapter 3, demonstrate these inter-thematic functions very clearly within their minuet forms, which I described in chapter 2. Just to recap, a minuet form features three main functions: an exposition, a contrasting middle, and a recapitulation. The exposition is usually a stable theme-type that is often repeated. The opening thematic material returns at the end, often varied or abbreviated in some way. The contrasting middle is in between the two main thematic sections and is usually less stable, sequenced more, and highly fragmented. In the shortest of small ternary and minuet forms, the contrasting middle might just be four measures of harmonic meandering back to the exposition material. However, sometimes the middle is expanded so much that it begins to take on thematic characteristics.

If we look at the Minuet, each of these functions is relatively clear. I already described the exposition in Chapter 3, structured as an 8-measure sentence followed by a 3-measure post-cadential extension. The exposition is literally repeated with repeat

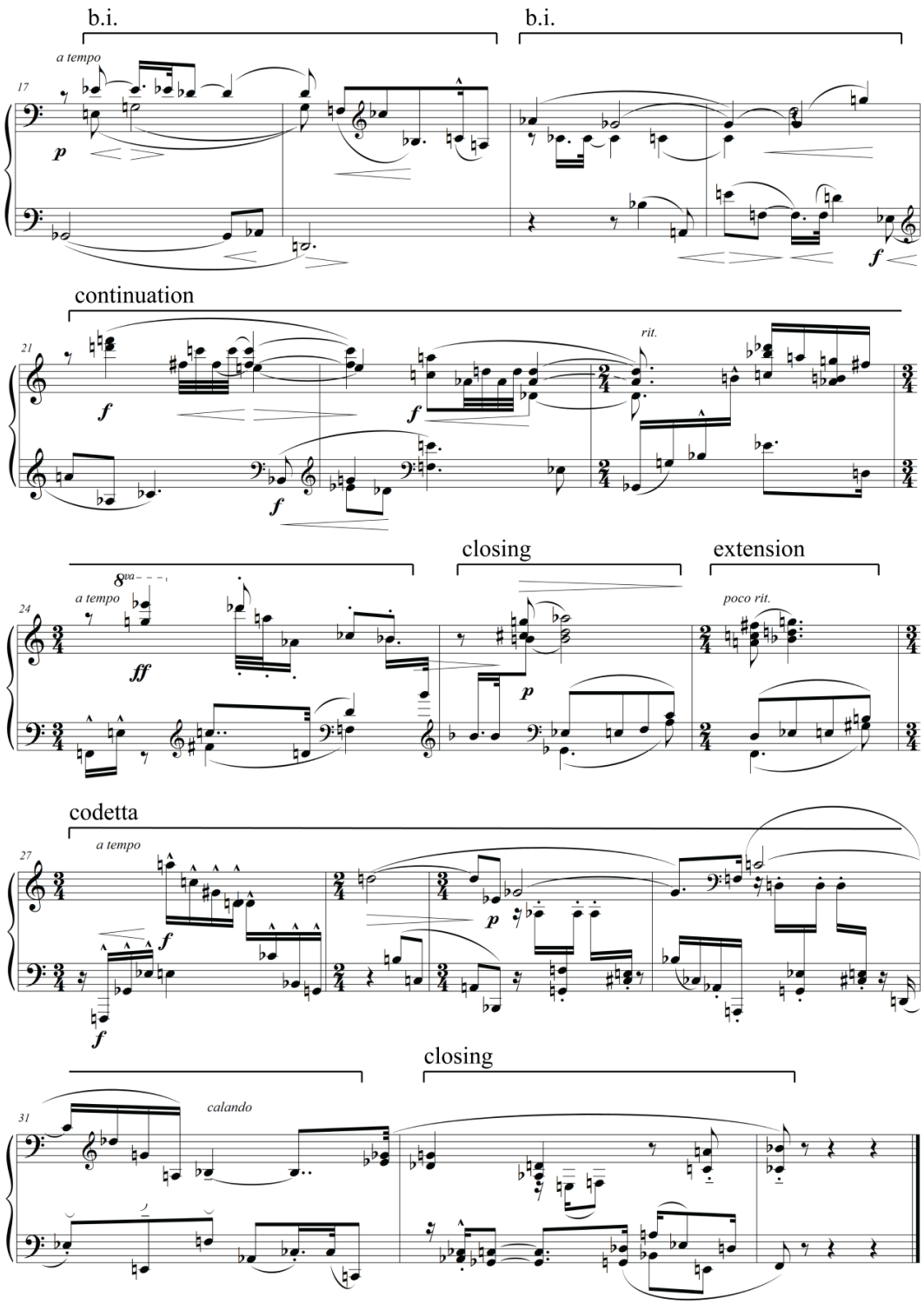
barlines, as is typical of minuets. The contrasting middle, **Example 4.1**, is a short five bars that are extremely fragmented and marked at a consistently loud dynamic with several crescendos. The phrase begins with a two bar statement with the same eighth-note pulse as the beginning, but the bass line creates a very regular quarter-note pulse as well. This statement is immediately repeated, but reverses the order of the measures and inverts the bass line. This two-bar model and sequence is especially characteristic of the 18th century minuet's contrasting middles, and is the simplest type that Schoenberg discusses in *FMC*. However, it is surprising that this contrasting middle has an entire measure devoted to closing the short passage. This closing gesture in m. 16 is slightly ambiguous as it remains loud, but also slows down and liquidates the characteristic leaps into half-steps in every voice. This example is particularly curious for studying inter-thematic functions. It seems to provide the barest minimum requirements of a contrasting middle, as it is contrasting material in the middle of the movement. But it also lacks an identity as a fully developed theme with clear beginning, middle, and end. The model is established, the sequence repeated, and then it abruptly ends.



Example 4.1 – Schoenberg Op. 25 Minuet contrasting middle, mm. 12–16

Schoenberg frequently varies the material at the beginning of a recapitulation so that it is not immediately recognizable until the formal section is well under way. [109] Such a technique can be seen in the beginning of this recapitulation, shown in **Example 4.2**. Instead, the theme seems to gradually reappear as mm. 17–18 vaguely recall the opening motives but mm. 19–20 almost sounds as if it literally repeats the opening two measures. The pitch material is clearly varied, but the rhythms and contour combine to create the same shaping as the opening. The continuation is inverted so that it starts in the upper register and reaches down by using those same 32nd note patterns. At the moment where you would expect the cadence, given its location in the continuation, it instead evades closure by suddenly erupting upwards back into the middle register. It settles on the same repeated B♭ pattern in m. 24, but the left-hand's closing gesture fades away in an ascending pattern and is restated for emphasis. It's as if the entire continuation has been turned upside down.

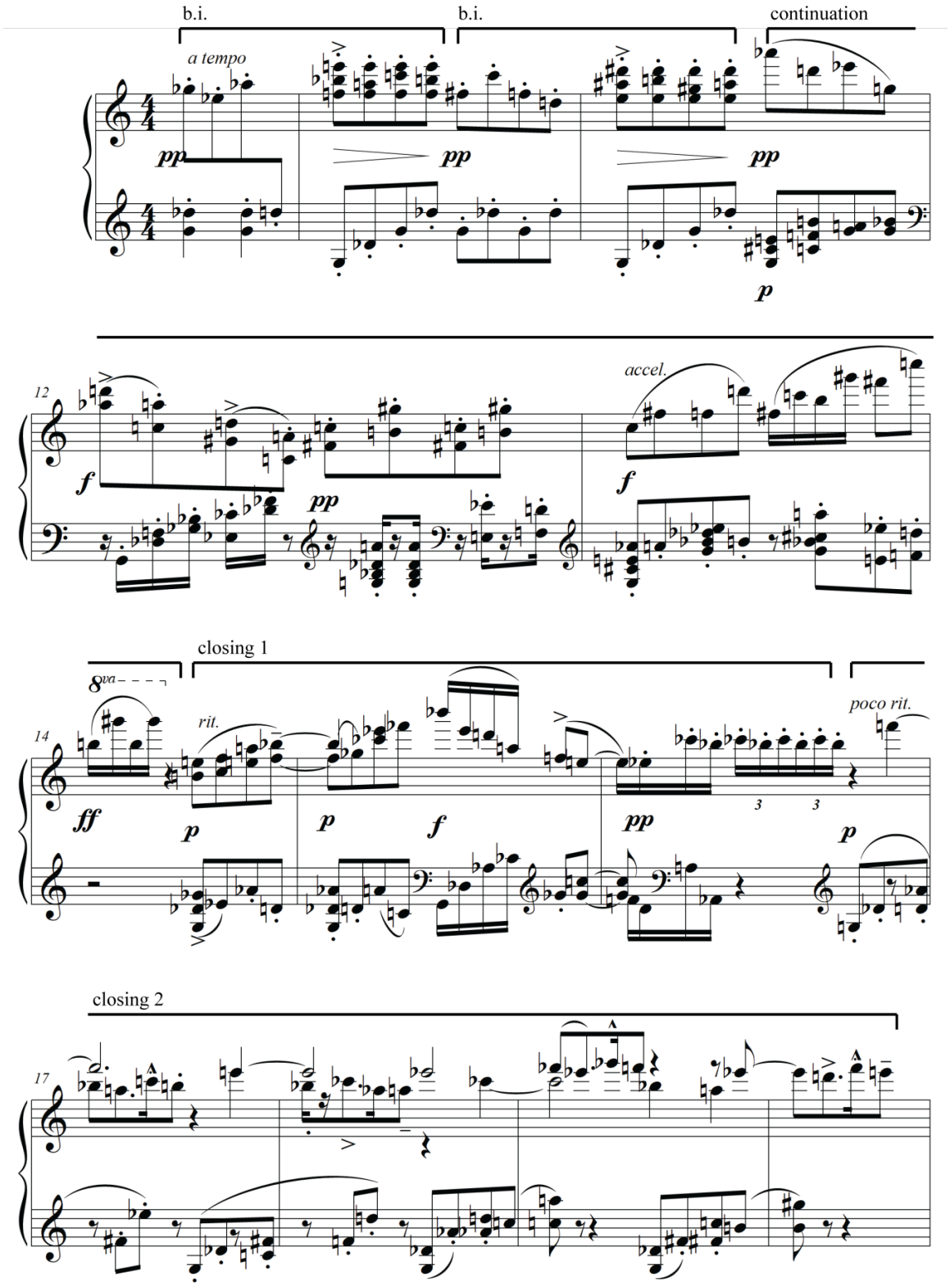
[109] We will see this technique in my analyses of the Musette, Op. 33b, and Op. 11 and it seems to be an essential feature of Schoenberg's musical style.



Example 4.2 – Schoenberg Op. 25 Minuet Recapitulation, mm. 17–33

The post-cadential material is also repeated and expanded into a fuller codetta which begins with an eruption of new energy in mm. 27 that undoes the theme's final cadence. The introspective 16th-note dyads return, although the downbeat arpeggiations are inverted. Finally the piece ends with a long drawn out sigh with the incredibly appropriate performance instruction: *calando*. Overall, the recapitulation is slightly less stable than the exposition, but significantly more stable than the contrasting middle. Its beginning is not clearly articulated, instead slowly easing back into the expositional material, and its closing gesture is evaded to extend the sentence structure. Still, all of its constituent pieces are there and the intra-thematic functions are all still readily apparent.

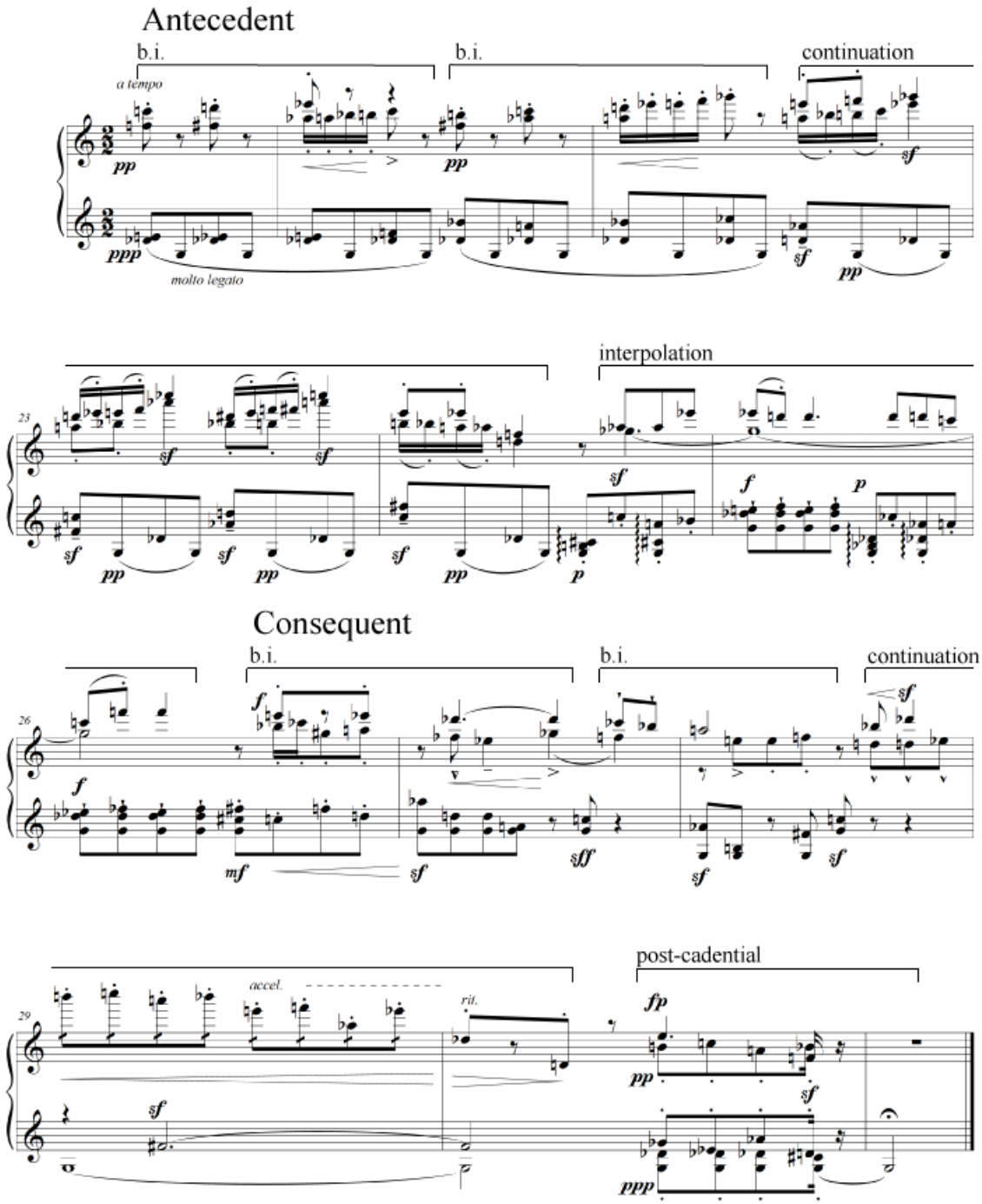
The Musette, on the other hand, features a significantly more complex second half. The contrasting middle, **Example 4.3**, is structured as a very loose sentence, using two continuations. The basic idea is one measure long and seems to recall the motivic material of the caesura in mm. 4–5. It emphasizes the minor third and tritone of the second tetrachord while leading into high repeating eighth notes on the downbeats of mm. 10 and 11. The sentential continuation begins in m. 11b with a repeated half-measure descending gesture before accelerating into a sixteenth-note pulse level. It ends by further fragmenting the sweeping gestures, accelerating into 16th notes, and climbing into the highest registers on the piano while simultaneously liquidating out all of the characteristic motives from the rest of the movement. It ends rather inconclusively at a high energy state at the top of the range with a loud dynamic.



Example 4.3 – Schoenberg Op. 25 Musette contrasting middle, mm. 9b–20a

The middle's first closing phrase begins in m. 14b, drawing on some of the same sweeping passages from m. 13. This time the phrase leads into a slightly more conclusive cadence in m. 16a with the marked *ritardando*, pianissimo dynamic, and liquidation into a semitone trill. The second closing phrase, in mm. 16b–20a, makes for a curious section. If we only heard mm. 16b–18a, then we might think that it was a two-measure presentation, similar to every other four-bar phrase in this movement. However, rather than move to some kind of medial function by developing the material and building in energy, the phrase just keeps repeating the same material and losing energy in a descending sequence. What could have been the presentation of a relatively stable theme is thus better understood as an extended closing for the contrasting middle.

Similar to the Minuet, the recapitulation has been drastically varied, see **Example 4.4**. I still hear the periodic structure of antecedent and consequent in the recap, even though the antecedent has been significantly varied. The basic quarter-quarter-half rhythmic motive remains in the top voice, but an inner voice fills out the long half-note with a running scale in sixteenth-notes. This time around, the continuation is sentential (mm. 22b–24a), fragmenting the idea into half-measure chunks and sequencing them through an ascending scale, growing higher and louder. The end of the antecedent is not emphatically punctuating, but instead features a sudden turn down. Because of this, the cadence might be thought of as more conclusive than the original caesura in mm. 4–5a but less so than the final cadences.



Example 4.4 – Schoenberg Op. 25 Musette recapitulation, mm. 20b–31

There is a two-measure interpolation in mm. 24b–26a which seems to simply act as a connective between the more intense antecedent and the less varied consequent phrase. In fact, if we compare the two consequent phrases, the pitch material of the

melodic line is not altered at all. Instead, the melody begins shifted off of the notated downbeat but finds its alignment at the end with the long descending scalar passage. The movement finally ends with a one measure cadential extension very similar to the end of the Minuet. And like the Minuet, the recapitulation's beginning is varied to mask its immediate return and is expanded through an inserted passage. The contrasting middle features an even looser organization, being extended through not just one but two additional continuations.

In the context of minuet form, there are two important takeaways here. First, Schoenberg is very fond of altering the recapitulation. The first two measures of the Minuet's recapitulation seem to vaguely hint at the opening passage, rather than directly quoting it. The Musette is even more varied, and some readers might find it outlandish to begin the recapitulation in m. 20b simply because of how different it is from the opening. However, I think its fundamental motivic relationship and its initiating function are clear. Second, the size of the contrasting middle is extremely fluid within even these smaller ternary forms. The Musette's 11-measure middle is more than twice as long as the Minuet's 5-measures, despite the two movements being almost the same length. Still, both middles feature a clear closing gesture. The Minuet uses a single measure of soft dynamics compacted in the middle register to mark its closure. On the other hand, the Musette uses two continuations and a long cadential extension to slowly drain all of the energy away, each phrase ending as if asking a question.

CHAPTER V: SONATA FORM AND OP. 33b

SONATA FORM

Exposition

Compared to minuet form, the sonata form presents some unique challenges. Approaches to sonata form have been divided into two opposing camps: on the one hand, William Caplin, Janet Schmalfeldt, and Steven Vande Moortele have proposed a more generative view of sonata form that takes each composition as a unique formal structure and builds the sonata form out of the constitutive elements. On the other hand, James Hepokoski and Warren Darcy have created a normative approach where there are types of sonata forms and each individual composition is held in some kind of dialogue with its idealized model. Because Caplin's work is largely a refinement of Schoenberg's formal theories, I will continue to model my methodology on Caplin's and ultimately Schoenberg's. As such, I will continue to compare Caplin's *Classical Form* against Schoenberg's *Fundamentals of Musical Composition*, as I have done in the previous chapters. However, I will not totally eschew Hepokoski and Darcy's Sonata Theory, as its focus on thematic rotation provides many valuable insights into how sonata forms work. But we should understand that differences between Sonata Theory and Schoenberg's textbook do not necessarily imply differences between Sonata Theory and Schoenberg's thought. It is entirely likely that Schoenberg would have noticed musical patterns in earlier sonatas and borrowed them for his own compositions without feeling it necessary to explain those patterns to undergraduates at UCLA. For example, Schoenberg does not reference the *medial caesura* in sonata forms even though Sonata Theory makes a very

big deal out of it. That does not mean that Schoenberg did not borrow the *medial caesura* as a compositional device in his twelve-tone music.

Larger forms also require techniques that aren't necessary for the smaller forms. For instance, the sonata's exposition contains multiple themes that must somehow be distinguished from each other. Furthermore, these themes are literally connected through transitional material which must somehow be marked as 'on-the-way' rather than a stable theme in its own right. Sometimes the themes have even been expanded into theme-groups that must somehow belong together. In tonal music, harmony played a key role in each function. The sonata form's main theme is within the tonic key and does not modulate. After the main theme, the transition begins the modulation to an opposing key, typically the dominant. Once the contrasting key is prepared, the subordinate theme enters and conclusively ends in the contrasting key. Sometimes there is new material after this conclusion but before the end of the exposition proper, but it is usually firmly in the contrasting key. However, following the main thesis of this dissertation, there are other musical parameters that help define these formal functions. I am showing that Schoenberg was acutely aware of these other "art-means," describing some of them in his own writings, and employing many of them in his own compositions.

For example, the main theme is not just defined by the home key, but also by being the most stable or tight-knit theme of the movement. Schoenberg even states that while "contrast in mood, character, dynamics, rhythm, harmony, motive-forms and construction should distinguish main themes from subordinate […] the most important

type of contrast is that of construction."[110] Again, this brings up our earlier point of contention between Schoenberg and Caplin. For Caplin, we should only compare the structure of two themes within a single piece. The more loosely-organized theme is functioning like the subordinate theme, while the more tight-knit theme functions like the main theme. However, Schoenberg clearly thinks that a single theme taken on its own can be considered inappropriate for use as a main theme. Earlier I argued that we might take this to mean that a theme is more tight-knit the closer it resembles a prototype. However, Schoenberg also offers up this idea: "Repetitions within the main theme enhance memorability and through variation, PREPARE FOR development and elaboration. In subordinate themes mere repetition and juxtaposition often REPLACE development and elaboration."[111] Taking Caplin and Schoenberg together paints an interesting picture of how to view thematic structure. On the one hand, subordinate themes have a looser organization with more extensions and repetitions. However, the repetitions are more literal and do not significantly develop the material. Main themes, on the other hand, are more tightly organized but may feature more varied forms of the basic motives. We can think of a main theme as containing more internal contrast, despite its tighter organization.

Transitions also feature interplay of motivic and formal structure. Structurally they are the most unstable formal sections because they function as motion towards a new thematic area. Transitions are usually characterized as energy gain: they are highly fragmented and sequential, accelerating the rhythms, expanding tessituras, and increasing

[110] Schoenberg (1967, 183).

[111] Schoenberg (1967, 183).

dynamics. In essence, they bear the same characteristics as medial functions within a theme, but they are played out on a much larger scale. Schoenberg also details four specific elements that transitions usually employ: "establishment of the transitional idea (through repetition, often sequential); modulation (often in several stages); liquidation of motival characteristics; and establishment of a suitable upbeat chord."[112] This last one is particularly curious, as it resembles both Caplin's Dominant Arrival and Hepokoski and Darcy's *medial caesura*. Sonata Theory's MC is specifically a half cadence at the end of the transition in either the original or subordinate key area followed by a strong rhetorical break in the texture that opens up space for the subordinate theme to enter. In Caplin's view, the MC may not always be a cadence because it lacks the typical cadential progression leading into it. Instead, he expects the transition to at least arrive at the dominant harmony and usually sustain it with a pedal in the bass line. Either way, the end of the transition is clearly marked on a chord that prepares the entrance for the subordinate theme. However, even if the transition does not clearly mark its own closure, one of its primary purposes is to lead in to the subordinate theme with some kind of preparation.

The motivic content and the development of those motives also help us recognize transitional passages. Schoenberg distinguishes between transitions "with an independent theme" and "transitions evolving from the previous theme."[113] These independent themes may be motivically related to the main theme, but they seem to be built from entirely new material. These are often easier to recognize by the new motive forms that clearly mark it

[112] Schoenberg (1967, 179).

[113] Schoenberg (1967, 179).

as a new section distinct from the main theme. However, transitions also commonly draw motivic material directly from the main theme, known as the P-based transition in Sonata Theory. Such transitions might begin modulating immediately, making clear their transitional function. Others might repeat a great deal of the main theme and delay the transitional features until the end. I believe these types of transitions are particularly tricky to recognize, which explains why earlier analyses of Schoenberg's music have had a hard time distinguishing between sonatas and rondo forms.[114] If the transition begins with material that is repeated directly from the main theme, then analysts have typically called it a restatement of the main theme. As such, these analyses end up labeling main themes all over the piece, making it look more like a rondo. This is, however, an unreasonable position to be in, considering tonal sonata forms always use main theme material for more than just the main theme's formal function. Instead, we should understand these formal functions as being related to the thematic and motivic content but not identical.

Finally, expositions often end with closing themes or sections, although again this is a great point of contention between Caplinian formal functions and Sonata Theory. Hepokoski and Darcy allow for closing themes, which are fully-fledged themes with beginnings, middles, and ends in the secondary key area. This position stems from a decision to only allow for a single secondary theme. Any new material that appears after the one secondary theme is a closing theme. However, Caplin and Schoenberg allow for multiple subordinate themes, as they are all fully-functioning themes. As such, Caplin's closing section is distinguished as being non-thematic both in its phrase structure and

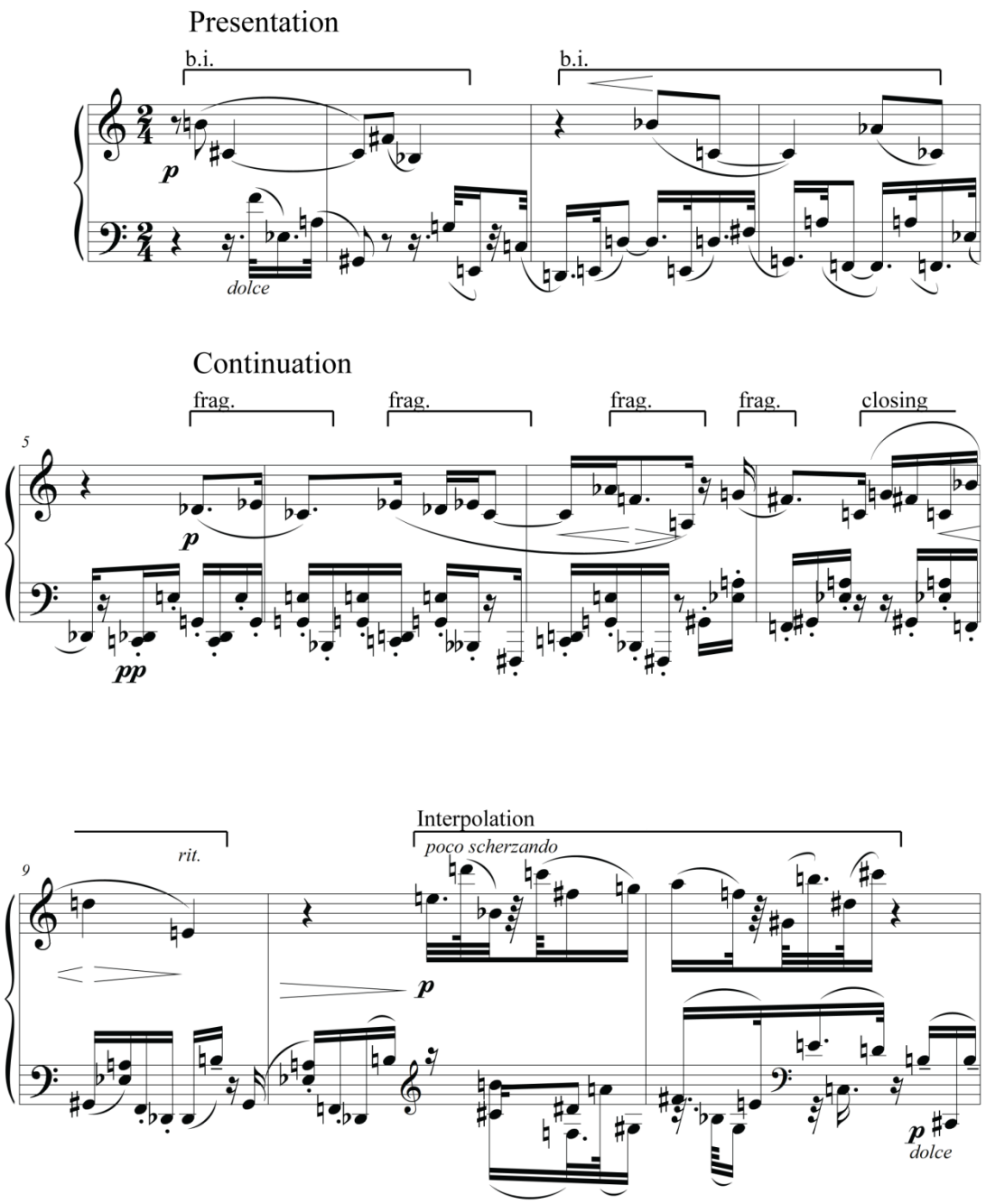
[114] I'll discuss this specifically with Brian Alegant's rondo analysis of Op. 33b below.

harmonic progressions. They often feature extended alternation between tonic and dominant harmonies, as if the composer is repeating the cadence over and over again so you don't miss it. As far as I know, Schoenberg only uses a single subordinate theme in his sonata forms. However, I bring up these polemics because it helps us put our thumb on exactly how to recognize Schoenberg's closing sections. In many cases, Schoenberg introduces entirely new material at the end of formal sections, but this new material does not create complete themes. The Minuet from Op. 25 is a typical example which introduces a new one-measure idea at the end of the main theme, but it is not repeated or developed in any way. Instead, the idea is merely established and ended.

Examples from Op. 33b

Let's first consider the main theme of the *Klavierstück* Op. 33b mm. 1–10a, shown below in **Example 5.1**. Alegant has noted that this is a sentence, although its continuation is rather problematic. The opening four measures clearly make a presentation function, opening with the long descending leaps with a more sporadic dotted-16th plus 32nd accompaniment. Note that the eighth-note pulse-stream is saturated for the entire four measures, creating a very regular meter. The continuation accelerates to the 16th-note pulse stream and saturates it entirely except for one skipped pulse in m. 7. The melody takes on a more dance-like character, moving into a loose triple grouping pattern. Hyde and Boss both make an argument that this could be a second theme, contrasting with the opening four measures.[115] And indeed, if we took mm. 5–7 in isolation and rewrote it in a 3/8 meter, it could make a rather convincing antecedent phrase.

[115] Boss (2015) and Hyde (1993).



Example 5.1 – Schoenberg Op. 33b, Exposition Main Theme and Interpolation, mm. 1–9

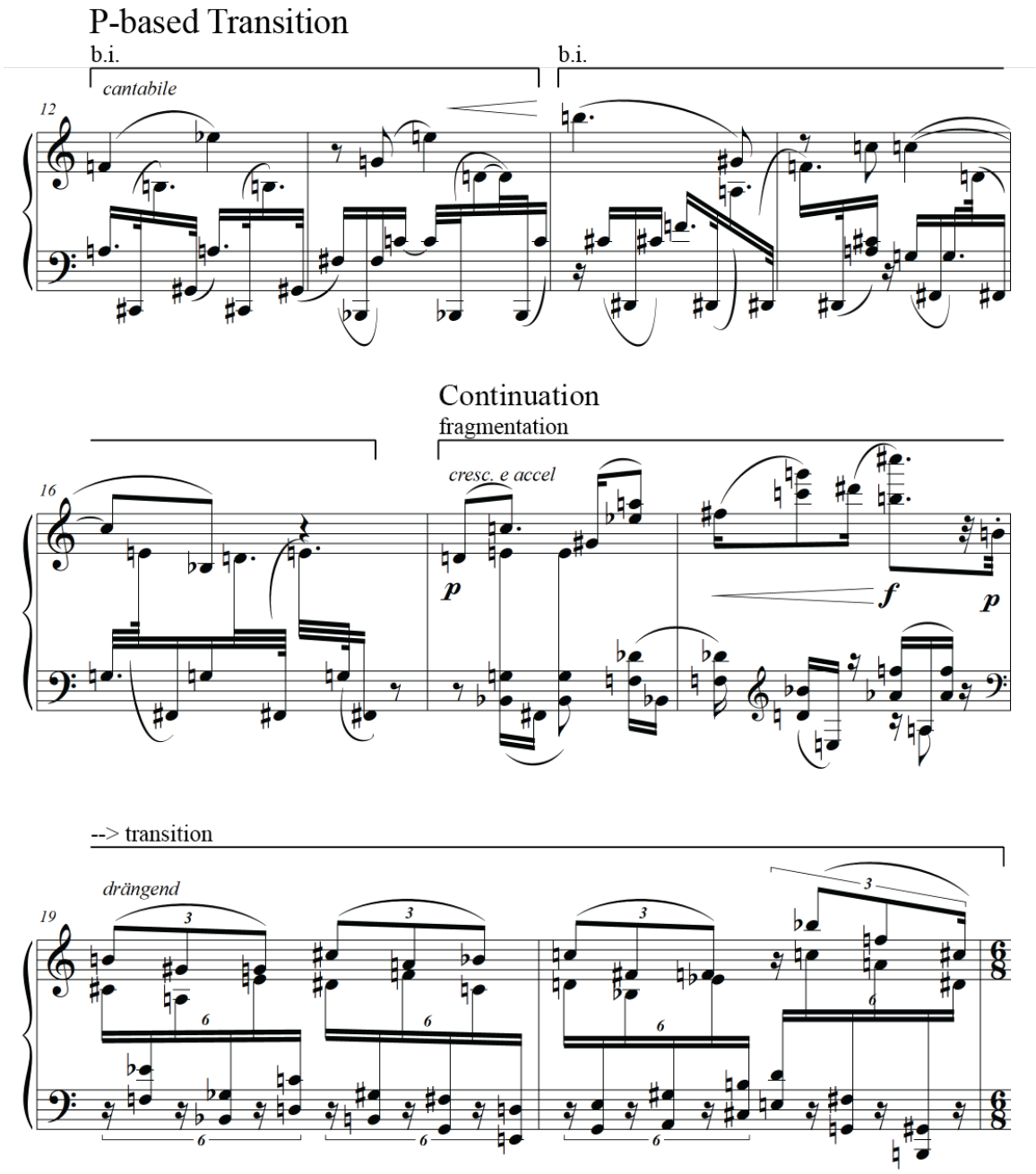
However, it still carries a medial function given how it follows mm. 1–4 and accelerates both pulse-stream and metric groupings. Finally, this theme ends with a long descending leap that quotes the opening minor 7th motive, similar to Caplin's Romantic

cadence, and is marked with a *ritardando* and repeated accompanimental gesture in the left hand.[116] This theme is thus very stable due to its adherence to the sentence theme-type and well-articulated beginning and ending. While some readers might have preferred this continuation to have more driving energy, like in Beethoven Op. 2/1, this example still clearly fits the description. The continuation motives are directly drawn from the presentation, inverting the minor seventh and sixth into major second and third. The phrase is clearly shortened into groupings of three eighth notes, at least for a time. And finally, the pulse-stream acceleration to the 16th-note easily marks a more medial function after the slower presentation phrase.

I have marked the transition in mm. 12–20, shown below in **Example 5.2**, although both the function and its borders need commenting. First, Alegant marks this section, or at least mm. 12–16, as being a thematic return of the opening phrase, thus marking the total movement's form as a Rondo. I have to admit that the motivic return of mm. 1–4 is striking, but that does not mean this passage conveys a thematic function. No, this is a P-based transition, very similar to Beethoven piano sonatas Op. 2/3, iv and Op. 14/1, i, that Schoenberg cites in *FMC*.[117] The first four measures of the main theme are restated before really undertaking the departure for new lands. In this case, Schoenberg has even varied the accompaniment so that it is much more active and unstable. The easy sense of pulse, where melody and accompaniment change hands regularly, is gone.

[116] Caplin (2018).

[117] P-based transitions, especially if they begin with tonic harmony, are a great example of Schmalfeldt's formal *becoming*. We recognize the transition has begun only midway through it, and then retrospectively reinterpret the transition as beginning earlier than we first recognized it.

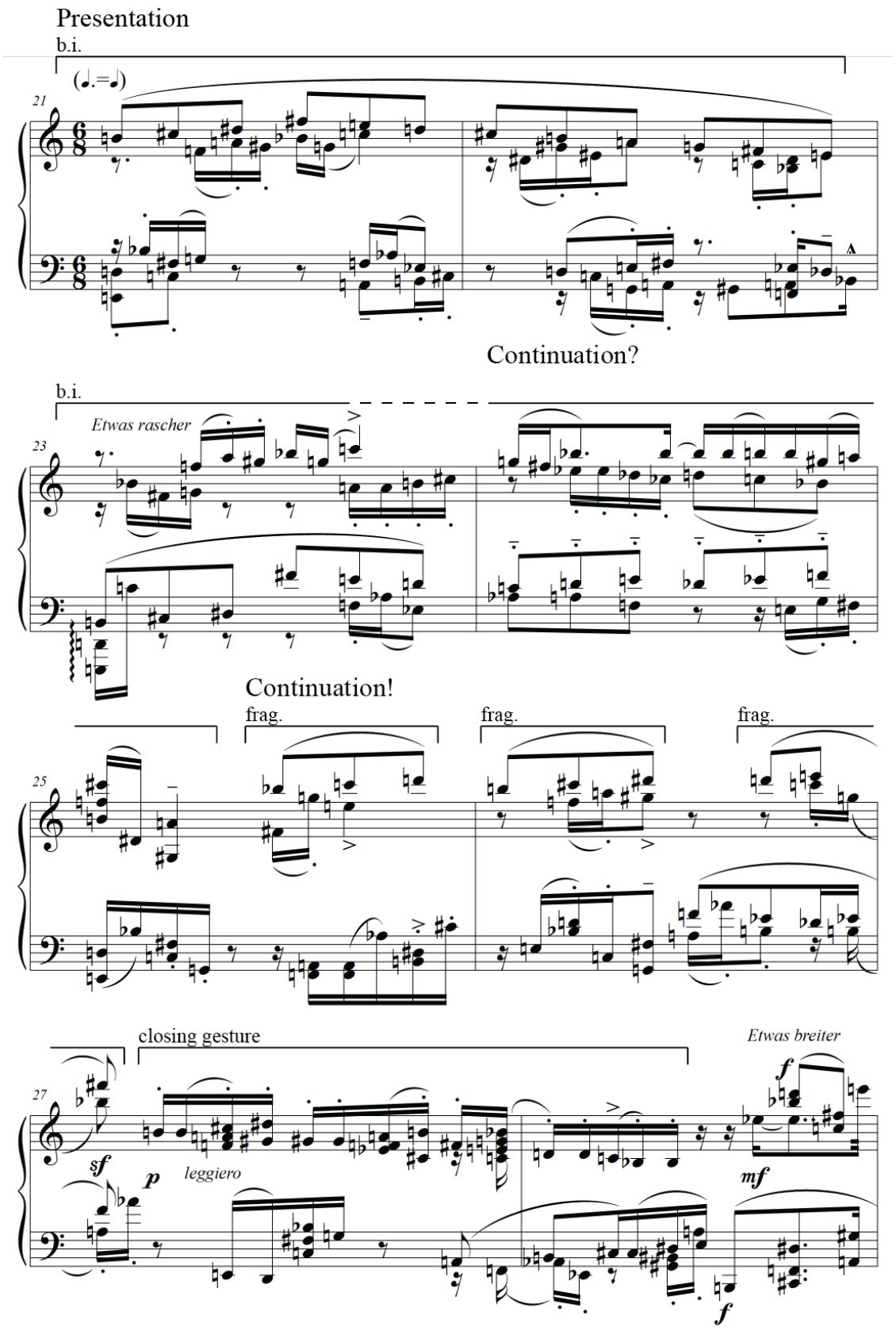


Example 5.2 – Schoenberg Op. 33b, Exposition Transition, mm. 12–20

More importantly, the odd dance-like continuation is replaced by a more aggressive drive into the subordinate theme. In mm. 17–18, the right hand takes the presentation motives and begins fragmenting into triple groupings as it climbs higher, louder, and faster. This eventually leads into a real compound meter in mm. 19–20 before

the subordinate theme enters in m. 21. Note that this transition does not feature anything like a medial caesura. Instead, motives from the main theme are slowly abandoned and transformed into features of the subordinate theme. Such a transition is basically the definition of an eccentric tendency. The phrase structure is not significantly loosened, although the presentation was expanded into five measures by lengthening durations in mm. 15–16. The "continuation" is a steady four measures although the sense of meter is tenuous in mm. 17–18.

The subordinate theme, mm. 21–28a in **Example 5.3** below, is easily identified by the compound meter and a strong resemblance to diatonic scalar passages. This theme is structured as a sentence with a four-bar presentation in mm. 21–25a and a three-bar continuation in mm. 25b–28a. However, Schoenberg has blurred the boundary between presentation and continuation, which makes phrasing decisions rather difficult, which in turn loosens the sentence structure. The problem is that the presentation's response in m. 23 is not immediately obvious because the motives are rearranged into different voices and registers. Now, Schoenberg used this technique in many presentation phrases of *Verklärte Nacht*, discussed in chapter 2, but many performers take this opportunity to highlight the more rambunctious 16th-note motives with the *etwas rascher* directive. A performer probably should emphasize the tenor line in m. 23, which closely resembles the melodic passage in mm. 21 as a call and response.



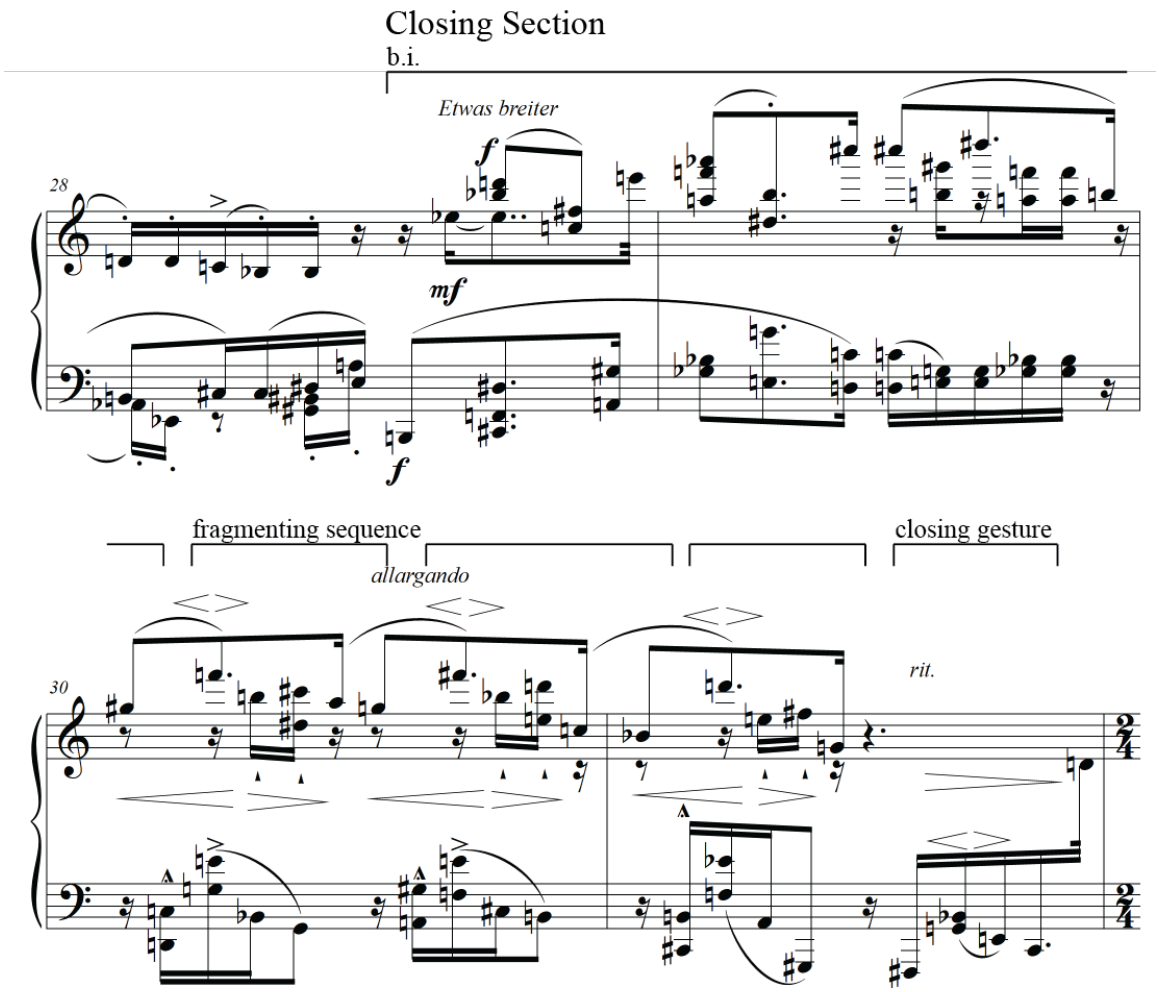
Example 5.3 – Schoenberg Op. 33b, Exposition Subordinate Theme, mm. 21–28a

This analysis would point towards an even four-bar presentation, but doing so ignores the fragmentation and acceleration of the diatonic motives (set-class 3–6) in the right hand of m. 24. This development of the basic motive to 16th notes might make us consider a dissolving "third" statement continuation, and yet there's a clear texture break and sudden descent in m. 25 that sounds like the end of a phrase. It appears that the medial energy gain has jumped the gun and begun before the presentation has actually finished. By the time we get to mm. 25b the continuation function is very apparent. The melodic line is fragmenting the three-note diatonic motive and sequencing it higher and louder. Finally the end of the phrase is marked by further shortening the diatonic motive, dropping to a softer dynamic, descending in register, and inverting the final diatonic motive.

First, I want to stress that the ambiguity here is only a theoretical one, as a performer must decide which analysis to perform. For example, Pollini's recording almost discards the tenor line's diatonic passage instead focusing on the *etwas rascher* 16th-notes in the right hand. When you listen to his performance, it is clear that there is one basic idea and a five-bar continuation. But Glenn Gould takes the opposite tack, highlighting the left hand's diatonic passages even as the phrase gets denser and it becomes harder to pick that line out of the thick texture. More interestingly, Gould emphasizes the pause at m. 25 much more than Pollini, highlighting the 4+3 phrasing instead of the 2+5. It is not that either performance is wrong, but rather that they have each chosen a different opportunity afforded to them by the piece. Second, I want to underscore what techniques Schoenberg uses to mark the looser phrase formation. This phrase does not feature the usual expansions and repetitions that are typical of

subordinate themes. However, both the beginning and ending of the theme have been obscured. There is no texture break or *medial caesura* to begin the theme; instead the transition seems to slowly become the subordinate theme. The triple groupings in m. 17 become true triplets in m. 19, before the complete notational change to 6/8 meter in m. 21. While the diatonic motive's importance is underscored through repetition, its first entrance must be highlighted by the performer if the listener is to recognize the subordinate theme function. Similarly, while the end of the theme features a very clear energy drain and closing gesture, the closing section immediately follows without skipping a single pulse.

The exposition ends with a closing section from mm. 28b–31, shown below in **Example 5.4**. As discussed above, this closing section presents new material but does not manifest a complete thematic structure. After the subordinate theme ends with its descending whole-steps, the closing section suddenly erupts at a *forte* dynamic and quickly climbs to the upper end of the piano. But as quickly as it appears, this phrase begins winding down. Notice how each statement of the closing motives are about half a measure in length. As the phrase begins to fade away in m. 30, it gives the impression that the motivic material is liquidating and fragmenting away as if it were a continuation. However, each one of these so-called "fragments" is just as long as the opening idea. This balance of proportion in the smallest pieces is highly characteristic of Schoenberg's closing sections. It suggests a lack of development and departure, instead just presenting a simple statement.



Example 5.4 – Schoenberg Op. 33b, Exposition Closing Section, mm. 28b–31

Developments

Developments are tricky to describe because there is so much variation within the category. Schoenberg declares that the development is essentially a contrasting middle for the entire sonata form, though it is usually expanded a great deal to balance the length of the exposition and recapitulation. Because this section creates large-scale instability, composers express a great deal of freedom and often reach keys distantly related to the global tonic. Beyond harmonic relationships, instability is also achieved through phrase structure: how well-articulated phrases are and how clearly the thematic material is

demarcated. Today, English-speaking theorists typically call this section a development, as if to say its primary function is to develop material that was first presented in the exposition. While that is typical, there are of course always exceptions to that rule. In this section, I will compare the essential components of modern theories for developments to Schoenberg's description of the section in *FMC*. We will see that, while these components are not specifically named in his theoretical writings, they can still help us make sense of Schoenberg's sonata forms.

Schoenberg does not create a specific list of typical structures for development sections. Instead, he chooses a handful of key examples and discusses their unique approaches to developing thematic material. Building on Schoenberg's theories, Ratz identifies the Core as a specific technique in Classical sonata forms, as I described in chapter 2. Just as a reminder, the technique begins with a relatively long model of 4 to 8 measures. This model is then sequenced at least once, but potentially a great many times. The model is then fragmented and liquidated until a dominant arrival, usually with many measures of standing on the dominant. In *FMC*, Schoenberg's first and simplest example of a development is Beethoven's *Pathétique*, Op. 13. He does not use the term, but he clearly describes the structure of the core. The 6-bar model occurs in mm. 137–142 and the sequence in mm. 143–148. Beethoven then begins fragmenting the model into 4-bar units in the left hand. Fragmentation and liquidation continues into an extended standing on the dominant which gives way to the retransition. In later examples, he makes reference to the "principle of the sequence plus progressive reduction" and the "familiar sequential manner," both of which seem so inherent to core technique.[118] It seems that,

[118] Schoenberg (1967, 207).

although he did not name it as such, Schoenberg was clearly familiar with core technique and its presence in sonata developments.

Sonata Theory, on the other hand, is much less concerned with the specific phrasing and instead pays more attention to the order in which thematic material returns. This idea considers the order of the entire exposition (P-TR-S-C)[119] a rotation and compares the order of development 'themes' to the complete rotation. Thus, a development could feature a complete rotation by moving through material from each of the four principal sections of the exposition. This does not mean the material is treated in the same manner, though. It is entirely possible for a development to spend the majority of its time on transitional material but still feature a complete rotation, so long as those characteristic motives of each function appear in the correct order. Many developments feature only a half-rotation of themes, usually moving through P and TR. In some of his examples, Schoenberg shows an almost Sonata-Theory like attention to the appearance and ordering of expositional themes. He points out how Beethoven Op. 28 No. 1 is "essentially monothematic," focusing on the main theme, but the Op. 2 No. 1 is built almost entirely out of subordinate theme material. This is not to say that Schoenberg is particularly concerned with the concept of a rotation. For example, he describes the development of Beethoven Op. 10 No. 1 as being derived from first the transition and then the subordinate theme. Now, the ordering here, transition before subordinate, seems almost entirely coincidental to Schoenberg, even if it is significant for Sonata Theory. This point will bear further repeating in the recapitulation, but for now it is enough to say

[119] I have been using the Caplinian/Schoenbergian terms, but Sonata Theory calls the main theme a primary theme. I feel that keeping my language consistent is helpful, but it would be obtuse to rename abbreviations from Sonata Theory.

this middle section is highly unstable and Schoenberg seems to think that any material from the exposition can be ripe for development.

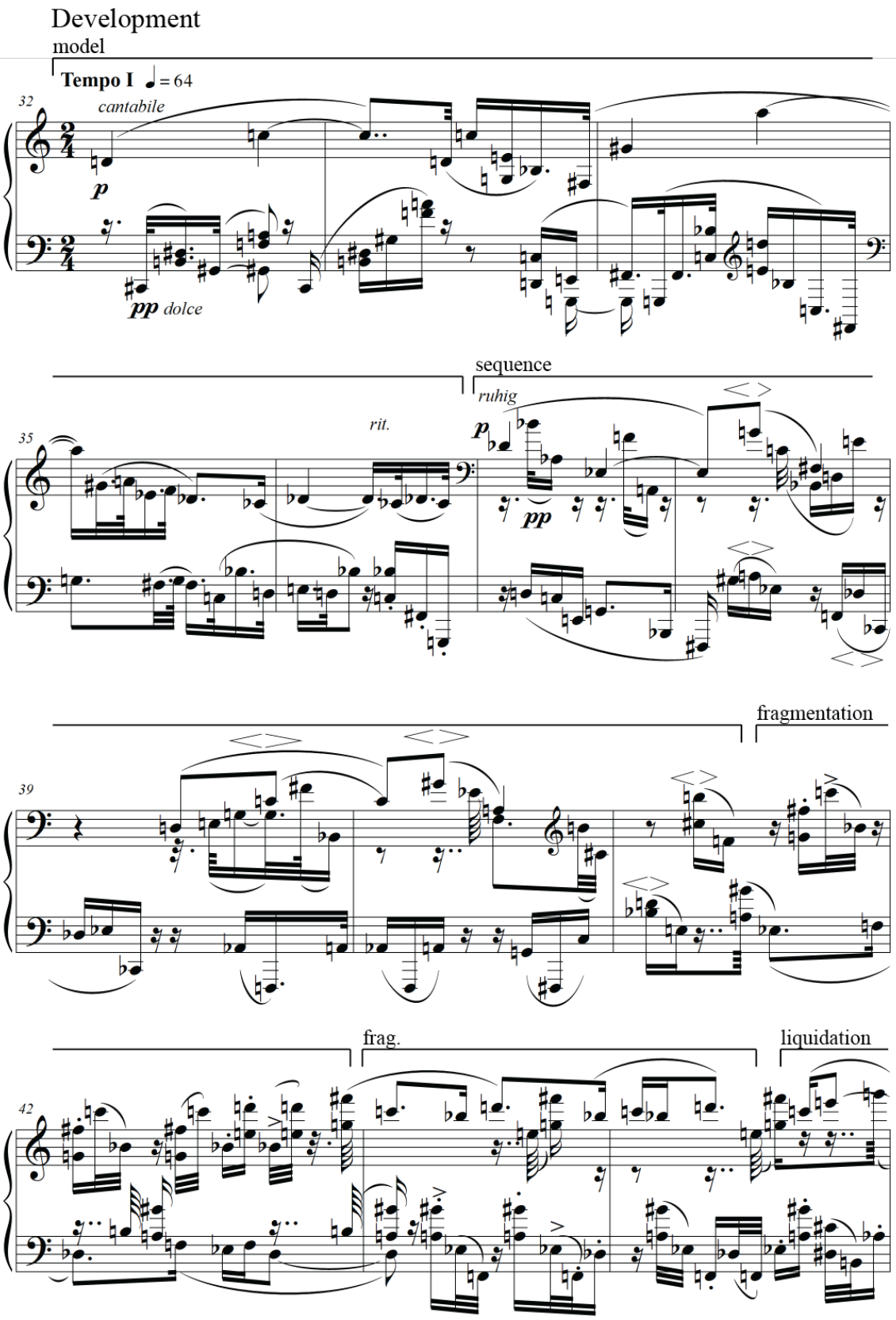
Examples from Op. 33b

The development of Op. 33b features a half rotation of the expositional material (P-TR) but also greatly expands and loosens the phrase structure of each constituent piece. This expansion loosely resembles a developmental core in the beginning, though the comparison at the end is rather tenuous. The development begins immediately with a 5-bar model based on the primary theme's presentation. Again, without recourse to key relationships, Schoenberg leans on rhythmic properties for establishing a local sense of stability. He retains the two-bar basic idea in mm. 32–33 although the second measure has taken on some of the accompanimental dotted rhythms. The response is expanded in mm. 34–36, again retaining the beginning but altering the end of it. The alternation between D♭ and C♭ vaguely recalls the continuation without truly restating it.[120] Schoenberg then repeats the presentation in mm. 37–41 but with significant variation and fragmentation, which mimics the technique of sequencing. The characteristic leaps from the beginning can be seen on the page by tracing the D♭-E♭-G-F# quarter notes, but the accompanimental dotted rhythms are placed directly on top of this melodic line rather than taking turns. Meanwhile, the left hand combines accompanimental material from many different portions of the exposition, including the short three note fragments that step and leap in opposite directions from the subordinate theme. All of this makes hearing the main theme material extremely difficult even when performed by exceptional

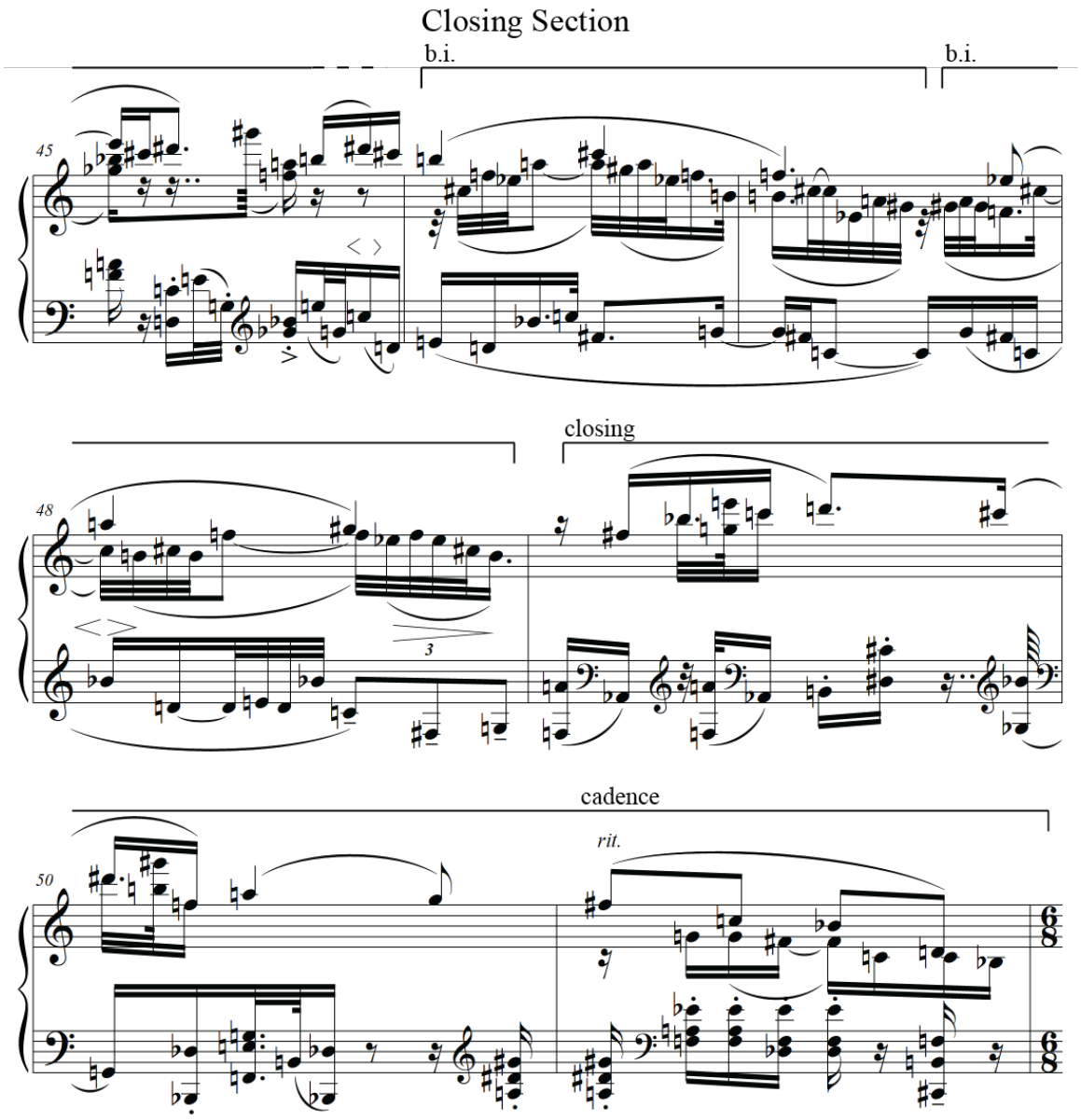
[120] However, Jack Boss (2018) considers this reference to the continuation to be more than a vague hint, calling it the first "synthesis" of the work's dialectical problem.

pianists. Despite the use of main theme material, the passage instead creates a sense of wandering as it picks and chooses to draw from so many different pieces of the exposition.

In mm. 41–45, the dancing continuation motive returns, first in the left hand and then inverted in the right hand. Each statement is only a measure and a half long, much shorter than the model. The quick statement response, coupled with the dancing rhythms, drives the core forward. Even though it is a very short example, the passage from mm. 41–45 provides the fragmentation we expect in a developmental core. This fragmentation leads into and elides with the following passage in mm. 46–51. This passage functions much like a retransition without resembling the usual standing on the dominant with excessive fragmentation and liquidation. I have decided to mark this as a retransition for three reasons. First, this twinkling passage serves as a long extended closing gesture for the entire development. Much like other closing sections, it presents new material in even proportions without much development, fragmentation, or expansion.



Example 5.5 – Schoenberg Op. 33b, Developmental Core, mm. 32–51



Example 5.5 cont. – Schoenberg Op. 33b, Developmental Core, mm. 32–51

Second, this phrase helps to foreshadow the subordinate theme motives. Without a dominant harmony to function as the upbeat chord of the home key, Schoenberg instead prepares the recapitulation with motivic becoming. Much like the transition in mm. 12–20, Schoenberg gradually introduces characteristics of the subordinate theme until it fully appears in m. 52 with the move back to 6/8. These running 32nd-note lines in the alto voice are developed from the accompanimental 3-note groups in the subordinate theme.

The “leap then step in opposite direction” motive gets combined multiple times, resulting in an ethereal meandering that sounds entirely new despite its connection to earlier material.

Third, this phrase is still providing developmental functions even as it draws on subordinate material. It does not develop the characteristic diatonic scales that marked the subordinate theme so clearly in the exposition. Instead, it develops those materials which seemed insignificant the first time around. Overall, the core technique is only clear at the beginning of the development. It begins with a five-bar model, based on the main theme’s entire presentation phrase. The sequence is established more through varying the accompaniment, drawing on motives throughout the exposition. The core’s fragmentation is brief, but still provides the quickening drive forward. However, the retransition function is marked by its sense of ending the development proper while at the same time motivically preparing for the recapitulation of the subordinate theme.

Recapitulation

In tonal sonatas, the recapitulation serves one essential function: repeating the subordinate theme in the key of the main theme. Now, I will leave the question “What is a twelve-tone key?” for the end of this chapter. For now, it will suffice to say that I am much less concerned with these “structural” concerns and more concerned with how a listener can recognize the forms as they happen. While I am certain that question was very significant to Schoenberg, I want to focus here instead on the purely formal characteristics. First, the “textbook” example of a sonata recapitulation features a full rotation of the entire expositional material, P-TR-S-C. Schoenberg points out that the

minimum change is to state the subordinate theme in the tonic key. As such, we can expect the main theme to be stated in full, often exactly as it appeared in the exposition. The transition must be altered so that it does not modulate to the subordinate key so that the subordinate theme can be stated in the home key. Finally, the recapitulation ends with a closing section that is derived from the exposition but is often changed to feel more conclusive as it ends the entire movement rather than just the initial section.

Normally, we recognize the beginning of the recapitulation with the return of the home key. But since twelve-tone music has no key relationships, we must instead rely on recognizing thematic material and the stable presentation of that material. The development section is incredibly unstable and many of its phrases stop without conclusively ending. Instead, the section seems to spill forth from one phrase to the next. However, the recapitulation brings back stable thematic formations just as in the exposition, although the themes might not appear with the exact same phrasing as in the exposition. As such, we can hear that the recapitulation starts when a theme from the exposition is stated with clear beginning, middle, and end and when it is well-articulated from the surrounding material.

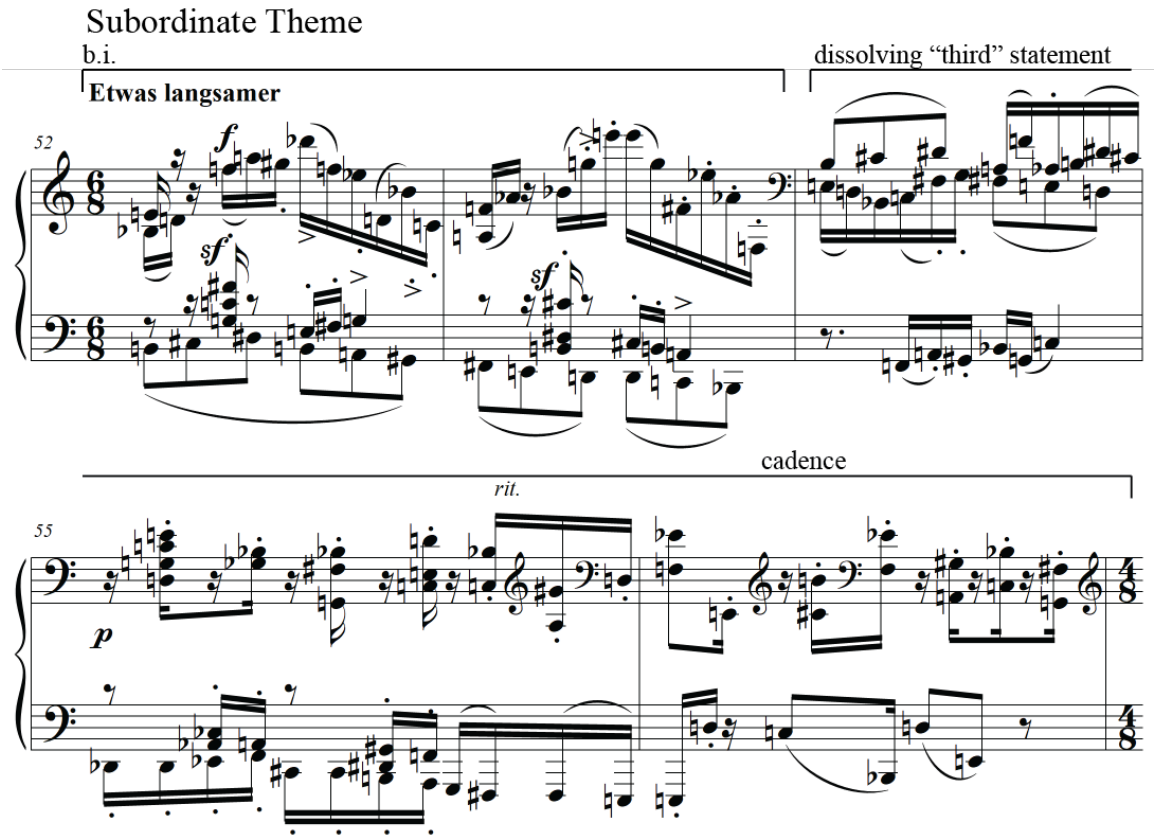
Now, I should also mention the types of sonatas described in Sonata Theory, as it will play a significant role in analyzing Op. 33b. As I mentioned above, the "textbook" recapitulation features a complete rotation of expositional material, but many sonatas do not do this. Of importance here is the distinction between the Type 1 sonata without development, Type 2 sonata without recapitulation, and type 3 "textbook sonata" described above. The Type 1 sonata only has an exposition and a recapitulation, both of which feature complete rotations. In essence, it functions like a binary form where each

half begins the same, but the ending is altered to effect a weak-strong key relationship. In Sonata Theory, the Type 2 is called a sonata without recapitulation, however that name is slightly disingenuous. The Type 2 features a complete rotation in the entire second half of the sonata such that the main theme and transition occur in the development and the subordinate theme and closing section occur in the "recapitulation." Hepokoski and Darcy make the argument that a subordinate theme cannot support an initiating function; therefore, in strict Sonata Theory the Type 2 does not contain a recapitulation. However, I find this reasoning arbitrary and circular: a recapitulation cannot begin with a subordinate theme because a subordinate theme cannot begin a recapitulation. This third portion still conveys the functions of a recapitulation by bringing back material from the exposition altered to provide a more conclusive ending to the entire movement or piece. This is directly analogous to the recapitulation in the Musette above, which only brings back the consequent phrase of the period with slight alterations to provide full-movement closure. As it stands, there is simply no way to reconcile this theoretical difference and we must just accept that some readers might prefer to mentally substitute "incomplete recapitulations" with Type 2's "Not a Recapitulation."

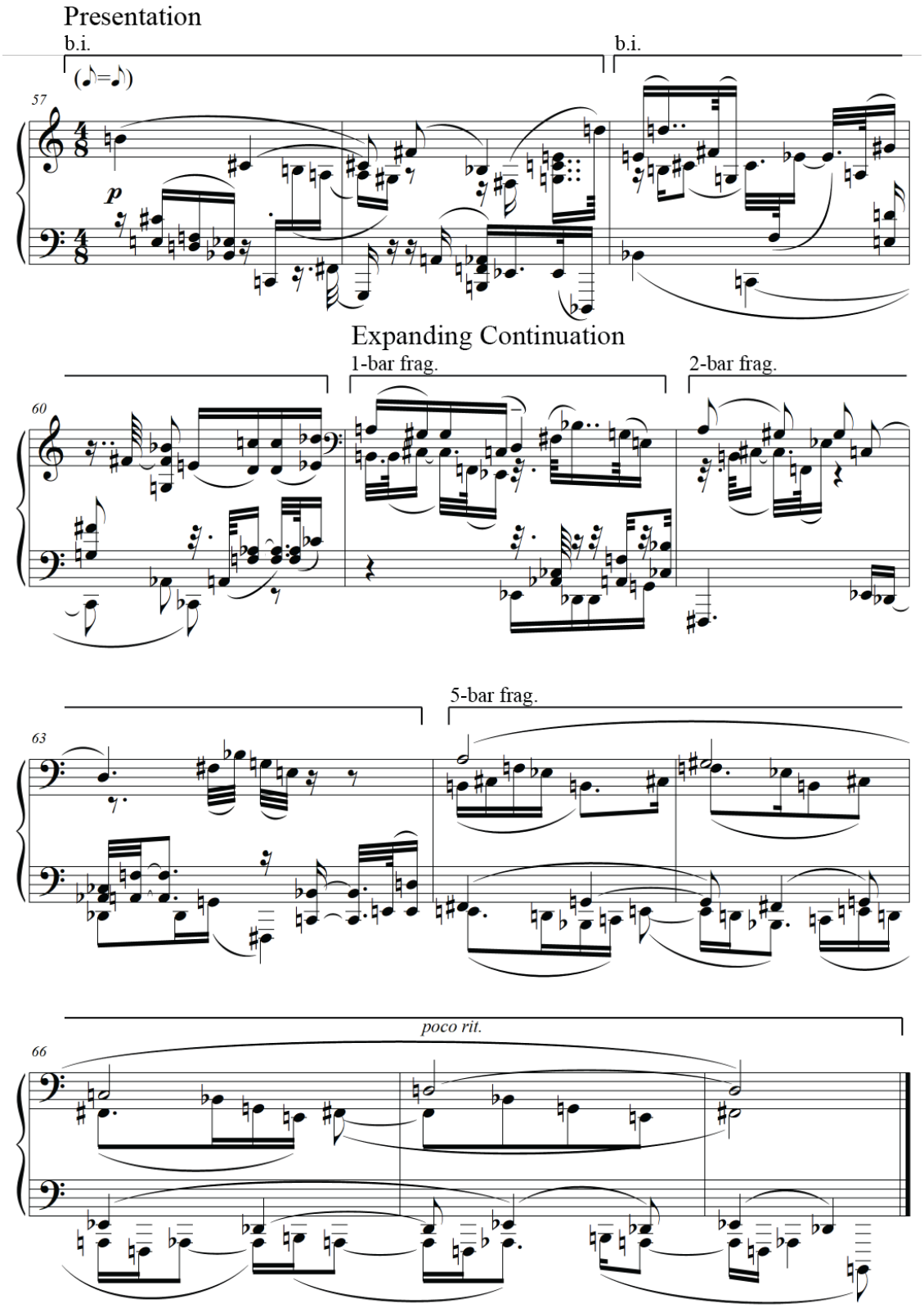
Examples from Op. 33b

The issue of the Type 2 is made manifest in my analysis of Op. 33b, which begins the recapitulation with the subordinate theme in mm. 52–56, shown below in **Example 5.6**. The diatonic melody appears prominently in the left hand, clearly marked as a two-bar basic idea. A response begins in the right hand of m. 54, but it is quickly developed into a 16^{th}-note passage in the lower left hand of m. 55. This prevents the easy classification into a typical sentence structure. The subordinate theme ends with a very

clear closing gesture in m. 56 based on the marked *ritardando* and how the range of both hands is condensed into the middle register of the theme's tessitura. Despite its brevity, this subordinate theme features a clear sense of beginning, middle, and end while being well-articulated from the surrounding material. While the theme stays within the 16th-note pulse-stream throughout, the melody is accelerated from 8th notes to 16ths in m. 55 before the clear closing gesture. In another context, this five-bar phrase would make for a very typical antecedent or consequent.



Example 5.6 – Schoenberg Op. 33b, Recapitulation Subordinate Theme, mm 52–56



Example 5.7 – Schoenberg Op. 33b, Recapitulation Main Theme/Closing Theme, mm. 57–68

This subordinate theme leads directly into main theme material in m. 57, see **Example 5.7** above, which raises another issue with the Type 2 sonata form. Is this a reverse recapitulation? On one hand, Sonata Theory specifically denies the existence of reverse recaps in tonal music specifically because subordinate themes can't begin formal sections. Instead, we should call this a P-based closing section, which is not unusual at all. P-based closing sections happen in expositions and complete recapitulations alike. The problem is that Schoenberg shows no significant concern for rotational ordering in any of his theoretical writings. I should also point out that this passage does form a complete theme with presentation in mm. 57–60 and continuation in mm. 61–68, although, the presentation's pulse is rather unstable, with many 32nd-notes and skipping the 16th-note pulse stream rather often, and the cadence is extremely extended and drawn out. It also makes sense that Schoenberg in particular would be interested in reverse recapitulations, given that symmetry and precise retrogrades are so foundational in his music. A reversed recapitulation would thus make a palindrome out of the large-scale form. While all this points to a reverse recapitulation, especially that the main theme material is presented with such a clear thematic formation, the Type 2 label with P-based closing draws a more direct parallel to earlier musical forms. Such a form is extremely normal, especially compared to sonatas of 18th century from Haydn or C.P.E. Bach. Suffice it to say that there is no perfect answer here.

Concluding Remarks

While this chapter is nominally about sonata form, I hope the reader can already see how these ideas can be translated to less typical forms. In Schoenberg's music, there is a clear distinction between stable thematic structures and roving transitional passages.

Even comparing one theme to another, it becomes easy to see how Schoenberg marks "main matters" as more important than the subordinate material. A main theme is characterized by even metric schemes and a regular sense of pulse as it builds in energy, surging towards a closing gesture that neatly extinguishes that energy. In Op. 33b, the main theme is a clear ten measures. The presentation is an evenly divided two plus two with a steady 8^{th}-note pulse-stream. Its continuation accelerates to the 16^{th}-note level, introduces triple groupings, and finally ends with a decisive cadence that repeats the accompanimental material one more time. Compare that to the subordinate theme which seems to suddenly emerge from the transitional material. Rather than a clear presentation, the second basic idea might actually be a dissolving "third" statement in the continuation. The subordinate material almost immediately launches into a series of fragmentation and development, driving towards a marked closing gesture.

Furthermore, it is not enough to simply label sections based on the motivic material. Analysts must pay special attention to how that material is being used. For example, the transition in m. 12 is clearly derived from main theme material, but it does not bear a thematic function! This passage is clearly transitional. While the rocky accompaniment at the beginning hints at what's to come, the music suddenly becomes something entirely different with the shift to triple groupings and then true triplets. Similarly, the development begins with the characteristic motives of the main theme, but it does not project a thematic structure. Instead, the motives are worked out in a constantly evolving developmental process. Phrases are not clearly articulated, instead folding into each other at the seams. To quote Caplin, "the formal function of an

individual group does not depend on its motivic content."[121] We must pay attention to the melodic and rhythmic properties that determine formal function beyond just the motives contained in the passage.

Finally, some of the pieces that I will analyze in the following chapters do not neatly conform to the ideal types of forms. The Op. 11 pieces in particular have vexed scholars since their composition. However, if we pay attention to what makes for a stable formation in Schoenberg's musical style, then we can more easily dissect the formal functions in music that has otherwise been characterized as erratic. We can hear what marks the "main matters" and distinguishes them from what is "subordinate," even if a piece is not a sonata form.

[121] Caplin (1998, 4).

CHAPTER VI: OP. 30, SONATA FORM, AND RONDO FORM

The First Movement

Up to now, the twelve-tone works I've discussed are relatively short. The formal units in the Op. 25 movements are all extremely close in size to their prototypical school-forms. The Minuet's sentence is eight measures, the Musette's period is nine, and both minuet forms are about 32. The sonata form in Op. 33b is roughly twice that length, but the pieces themselves haven't been greatly expanded. The main theme is a nine-measure sentence and the subordinate theme is eight. In contrast, the sonata form in Op. 30's first movement is 341 measures long. The main theme is an expansive 38 measures, stretching from m. 5 all the way to m. 42. The subordinate theme is just slightly shorter at 35 bars. The question, then, is how does Schoenberg expand these themes into such larger proportions and still maintain tight-knit structures? How is the main theme structured differently from the subordinate theme such that an analyst can recognize what material is essential and what is derivative? What we will see is that the themes in Op. 30, i, use a loosening technique described in the *Gedanke* manuscript. Instead of repeating formal functions or blurring formal boundaries, these themes are distinguished by the eccentric tendency of motivic development.

A stable formation is directly opposed to such an eccentric tendency. While the earlier examples in this book have focused on phrase formation and articulation, Schoenberg focuses on a technique of motivic variation in the *Gedanke* manuscript. However, there is a tension in how a composer should vary the motives within a stable theme:

> the smaller components […] are for one thing not extensively developed, for another not developed in such a way as to become anything basically different, since the intention is to show different aspects of the grundgestalten, thereby suggesting their flexibility and thereby at the same time fulfilling the condition of repeating these gestalten as often as possible, of frequently 'presenting' them to impress them on the memory as the subject to be discussed—and thereby, at the same time, fulfilling another purpose: that of offering as much change as possible in spite of frequent repetition. (They lack eccentric tendency.)[122]

The issue here is that main matters must be repeated enough times so that they may be impressed onto the memory. This helps mark those motives as the essential and fundamental building blocks for the rest of the piece. More repetitions make the primary motives easier to remember and thus the music is easier to comprehend. However, repeating the main ideas several times without variation would be unacceptable to Schoenberg's conception of high art, as it is too similar to popular music's overly repetitive and easily comprehensible style. Instead, a composer must vary these motives in such a way that they do not create something entirely new. This demonstrates not only the flexibility of the *Grundgestalt* but also the composer's skill. If these variations created something entirely new, that would lead to a loose formation or even transitional function. Thus, the composer must vary the motives in such a way that they are still easily discernible.

We can see the difference between stable and eccentric themes by comparing the main and subordinate themes from the first movement of the Third String Quartet. My own chart of the form is below in **Example 6.1**. Joseph Straus has already shown how the sonata form is structured harmonically. I follow his lead in marking the reverse recapitulation, although my reading of the sonata form slightly differs from Straus's

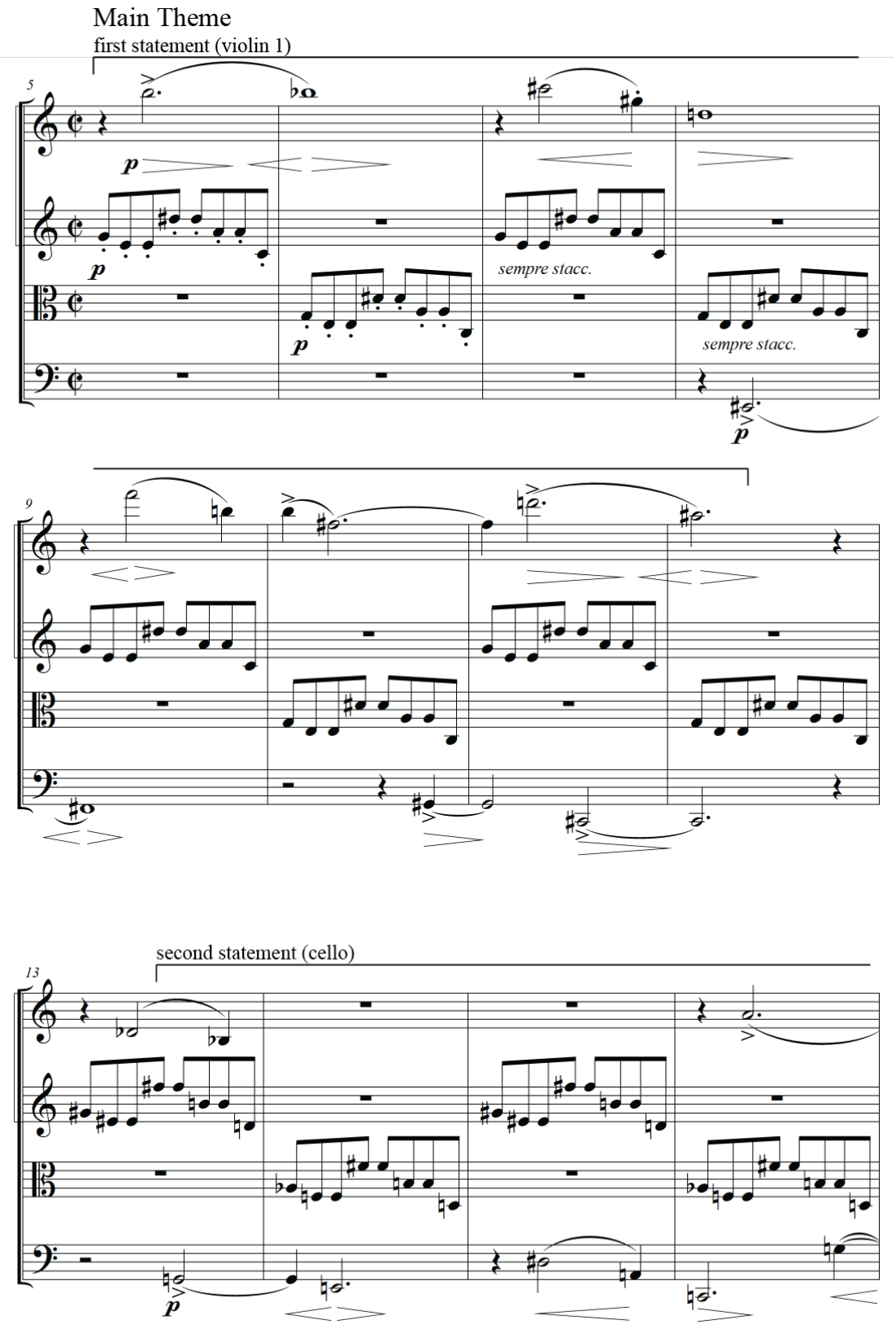
[122] Schoenberg (2006, 133).

analysis. I will discuss those minor differences after discussing the thematic relationship. First, I want to show how Schoenberg structures main and subordinate matters differently beyond just harmonic means.

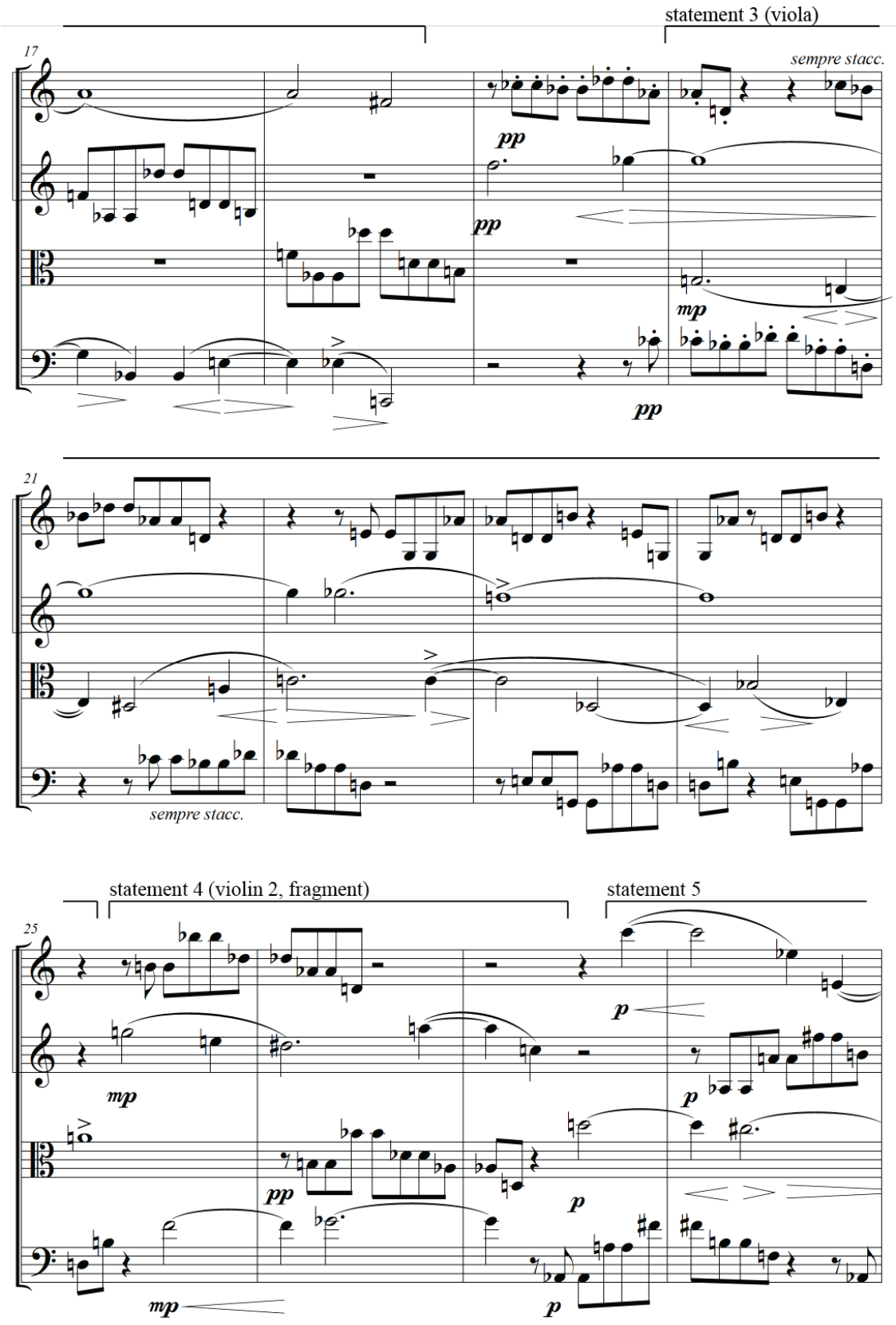
Exposition			Development	Recapitulation			Coda
P	TR	S		S	TR	P	
1–42	43–61	62–94	95–173	174–206	207–230	231–277	278–341

Example 6.1 – Form chart of the entire movement, Schoenberg Op. 30, i

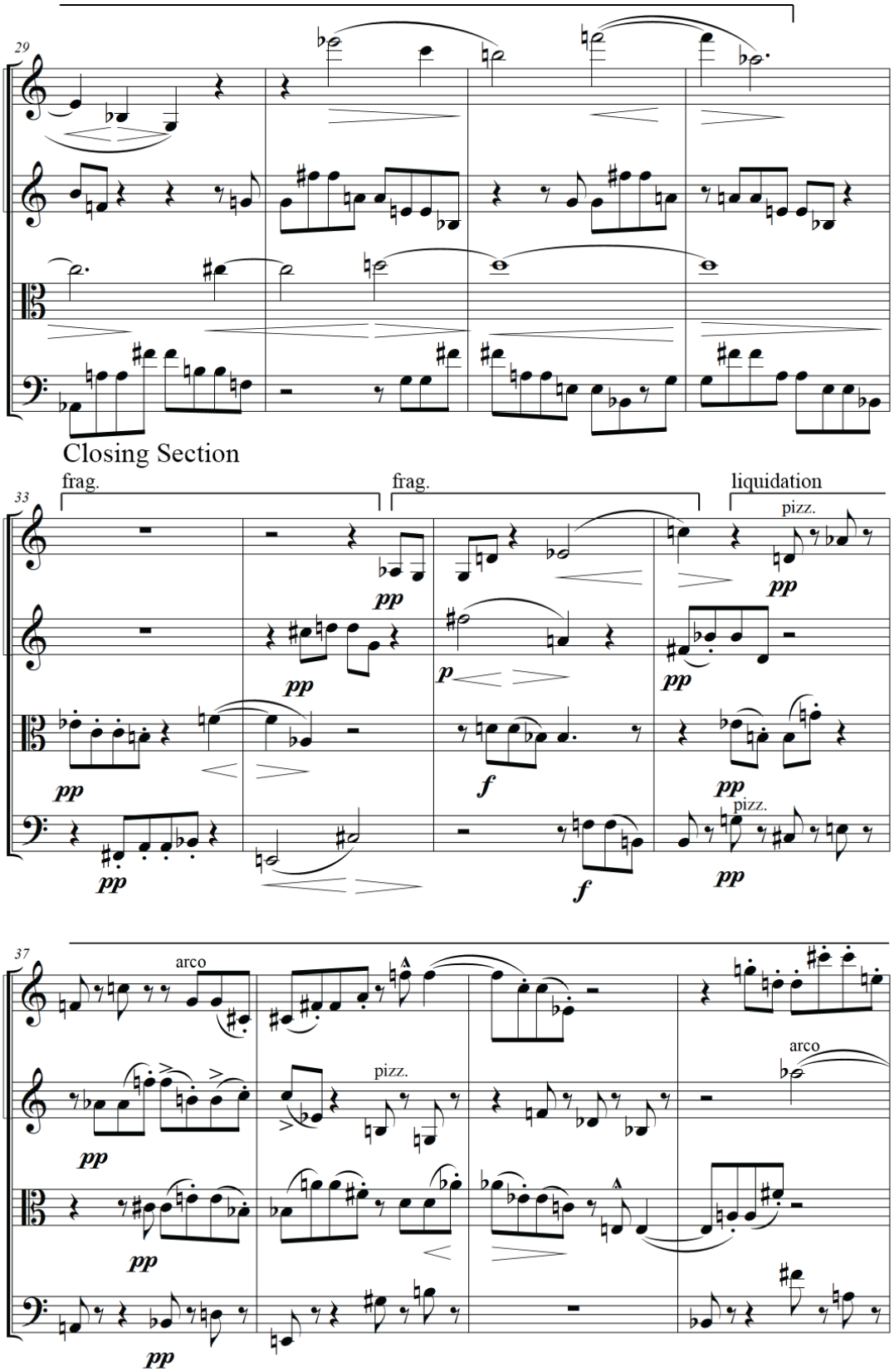
Consider the main theme in mm. 5–42, presented below in **Example 6.2**. The theme begins rather simply with a clear homophonic statement in the first violin, mm. 5–12. The lyric quality helps the melody stand out against the percussive accompaniment and will continue to mark the melodic fragments in the following passage. This 8-bar statement has a palindromic structure, as the opening dyad and descending trichord are mirrored in mm. 9–12. Taken on its own, we might be tempted to call this a complete theme. A four-bar antecedent introduces a basic idea, the ic1, and a contrasting idea, the set-class 3−5 (016) (voiced as perfect fourth and tritone). Rather than beginning with the same material and varying the ending, the consequent retrogrades the entire structure and expands the final dyad into an ic4. This interpretation is problematic, though, because there aren't any clear closing gestures to mark the end of this theme or to establish the periodic balance between unresolved antecedent and resolved consequent. Meanwhile, the accompanimental figure continues unabated throughout this statement and into the next. Altogether, the main theme has really only just begun.



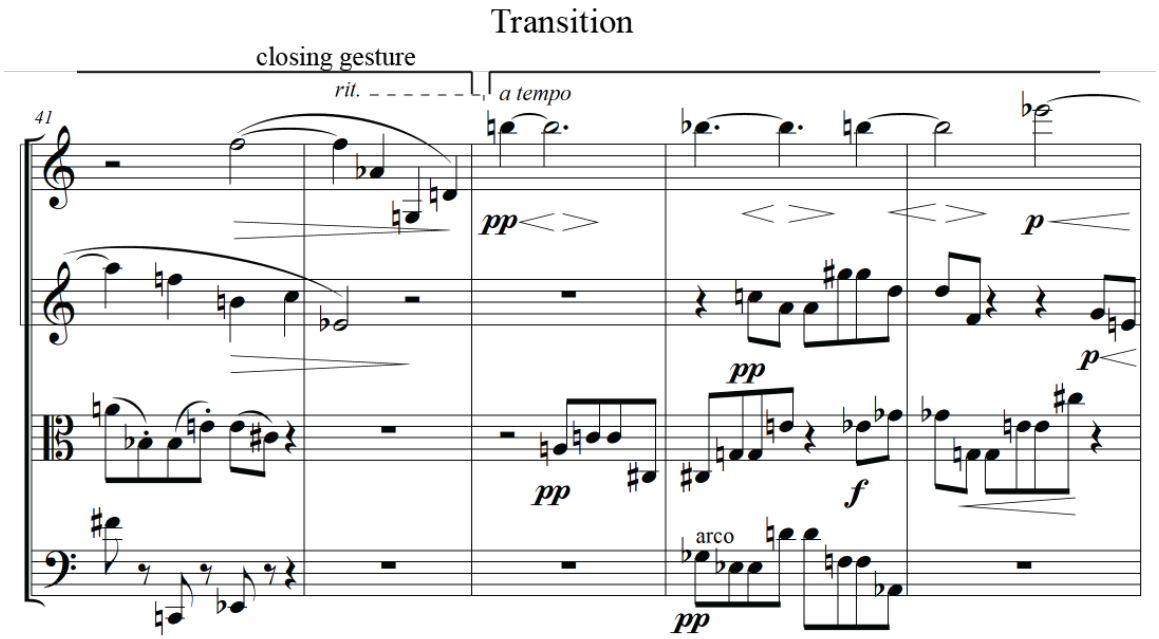
Example 6.2 – Schoenberg Op. 30 i, Main Theme mm. 5–42



Example 6.2 cont. – Schoenberg Op. 30 i, Main Theme mm. 5–42



Example 6.2 cont. – Schoenberg Op. 30 i, Main Theme mm. 5–42



Example 6.2 cont. – Schoenberg Op. 30 i, Main Theme mm. 1–42

The complete structure of the main theme consists of four more varied repetitions of this 8-bar statement and a final closing section that clearly marks its ending in m. 42. The cello responds to the violin melody with its own 6-bar statement in mm. 13–18. The rhythm of the opening four measures are preserved while the contour is simply inverted, but the second half is more varied. To create this shorter statement, the second half enters too early and compresses the rhythms in mm. 17–18 into quarter notes. The contour is also varied, as the trichord in m. 17 introduces the first ascending interval and the last dyad is stretched to a tenth. While the contour is the most obvious pitch variation, each dyad is now an ic3 while each trichord is converted into set-class 3–10. Though I will not do a set-class analysis of the entire theme, my purpose for using set classes here is to point out that these structural variations do not obscure the repetition of the violin's

melody. [123] The viola introduces a third statement of the melody in m. 20, also compressed to six measures and presenting new contour variations. This third statement then overlaps with a two-bar fragment in the second violin at mm. 25–27 before the first violin enters again in m. 28. This fifth and final statement begins with the quicker rhythms that have been developed so far, but then ends with the longer durations from the first statement.

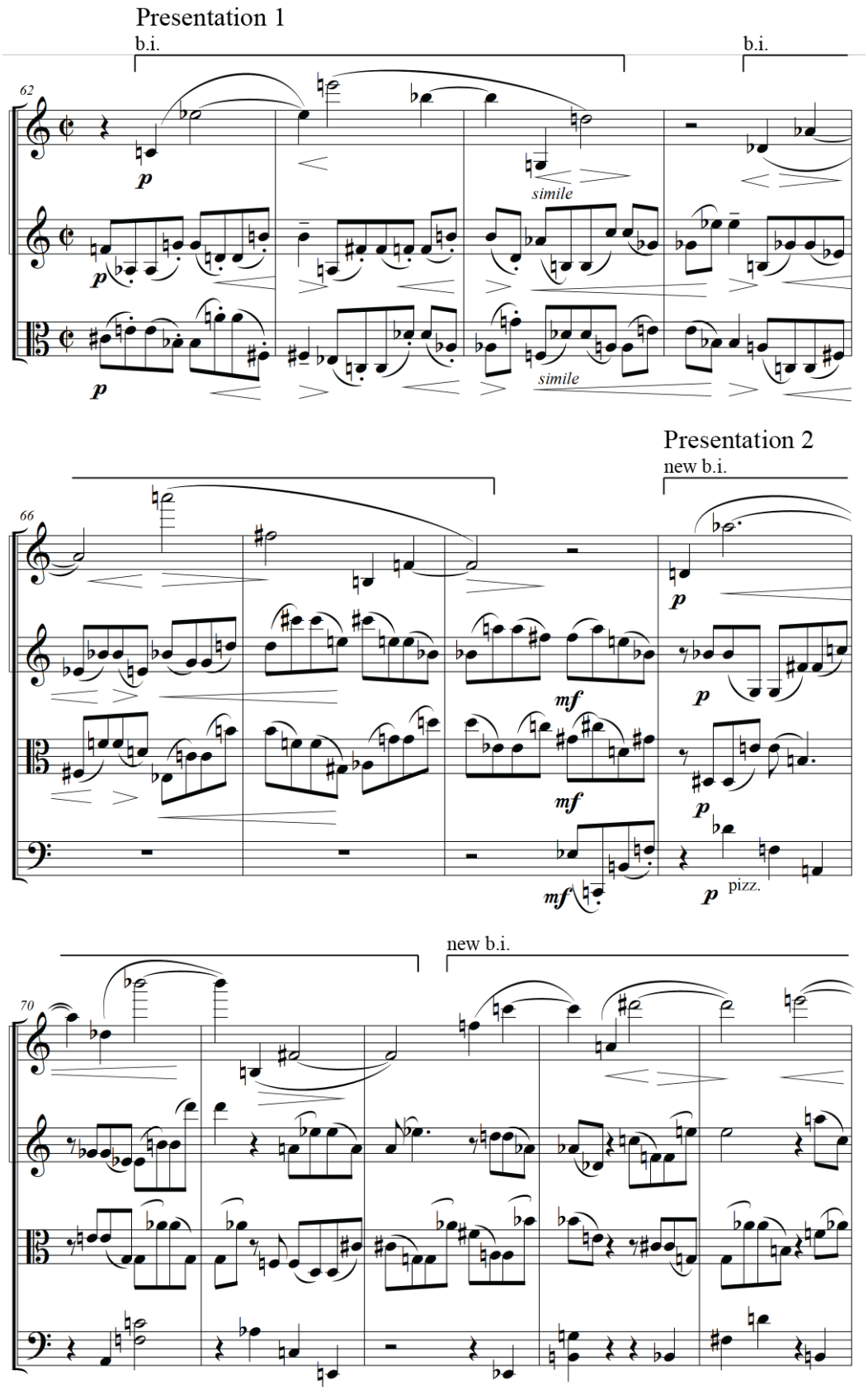
Beneath the third statement, the accompaniment begins splintering in m. 19. Up until this point, it traded off exactly every measure between the second violin and viola. Now, the eighth-note patterns are starting off the beat and overlapping with each other. While the sense of pulse up to now hasn't been particularly steady, it becomes much more irregular moving forward, helping establish a medial energy gain for the theme-group. The fourth statement in m. 25 is surprisingly short, only making half of the statement in about two measures. The fifth and final statement in mm. 28–32 is complete, but is still only five measures long as most of the rhythms are significantly shorter. Fragmentation is escalated in the closing section, mm. 33−42, where the long melodic statements are abandoned for short overlapping two-note fragments. The accompaniment similarly breaks down to four-note fragments that are passed around and overlapped. This continued fragmentation and liquidation provides a drive toward the first clear cadential moment of the piece in mm. 41–42. Overall, this theme is not related to any of the basic theme-types. Instead, it takes an eight-bar statement and works it out, developing it in many different ways without fundamentally changing it. Meanwhile, the energy gain is spaced out over a much longer duration while still providing a constant sense of moving

[123] If someone were to do a complete set-class analysis of the theme, it is probably very significant that the ic1 expands into an ic3 when 3–5 (016) also expands into 3–10 (036).

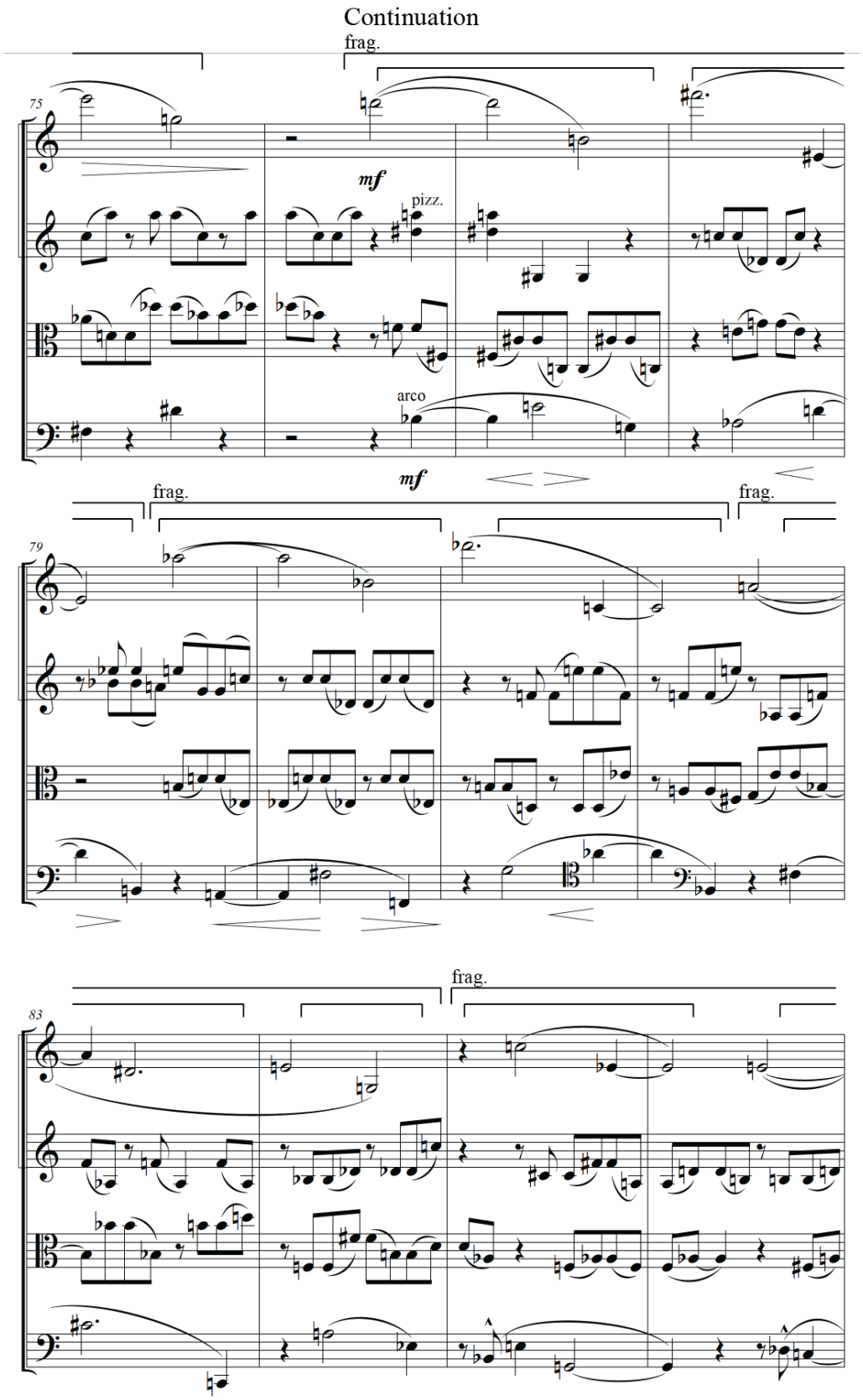
forward. The fragmentation and liquidation occurs rather late, after five melodic statements, but still helps clearly articulate the closure of this large-scale theme.

Compare that to the subordinate theme structure in mm. 62–94, shown below in **Example 6.3**. This 32-bar theme can be interpreted as a sentence with two seven-bar presentation phrases, followed by an 18-bar continuation phrase, as indicated above the staves. The first 7-bar presentation phrase is made up of two basic ideas, that are each exactly 3.5 measures long when you include the half-rests. This phrase is followed by two more 3.5-bar units, this time without the intervening rests. The use of two presentation phrases is a common loosening technique, but not particularly different from the earlier main theme. However, Schoenberg's method of motivic development is different here. Rather than state the same phrase multiple times, the second presentation eliminates the four-note grouping and instead features three ascending dyads. Each pair features an ascending leap until the final pair in mm. 74–75 which both leap down and greatly expand their durations.[124] It is rather difficult to identify this bifold presentation on first listening, because the lack of rest between the basic ideas and constant two-note pattern makes the whole presentation resemble a continuation's fragmentation. The primary cue for hearing mm. 69–72a as a single unit comes down to the dynamic shaping in the first violin which creates a single arch. The second bifold presentation is made even more difficult to perceive by the continuation, which fragments and repeats the only descending motive from mm. 76b−90. This fragmentation continues until a dynamic drive to *forte* in mm. 92–93 and a rather sudden cadence in m. 94.

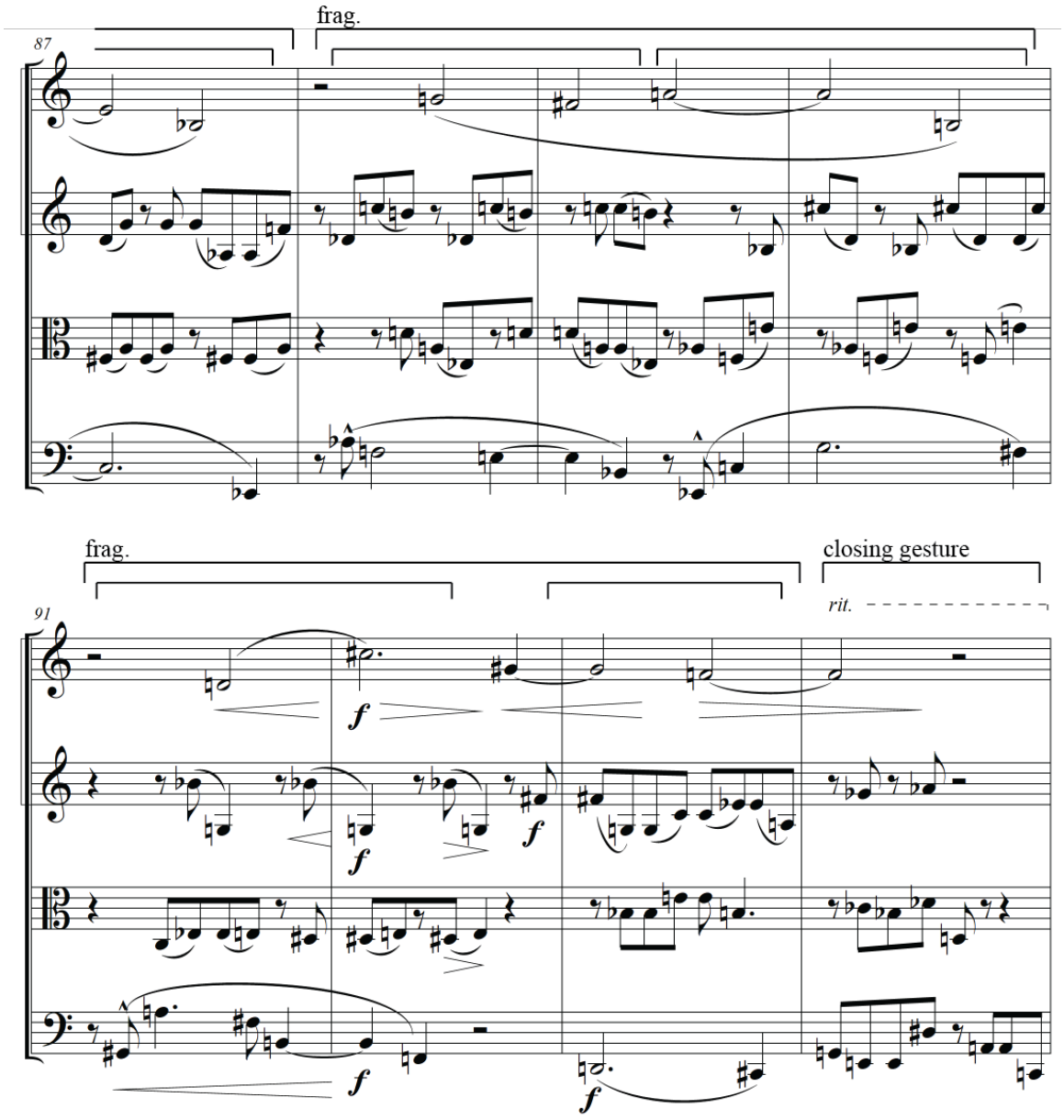
[124] This sort of "double presentation" is also used in the Rondo's first couplet, mm. 13–40, discussed below.



Example 6.3 – Schoenberg Op. 30 i, Subordinate Theme, mm. 62–94



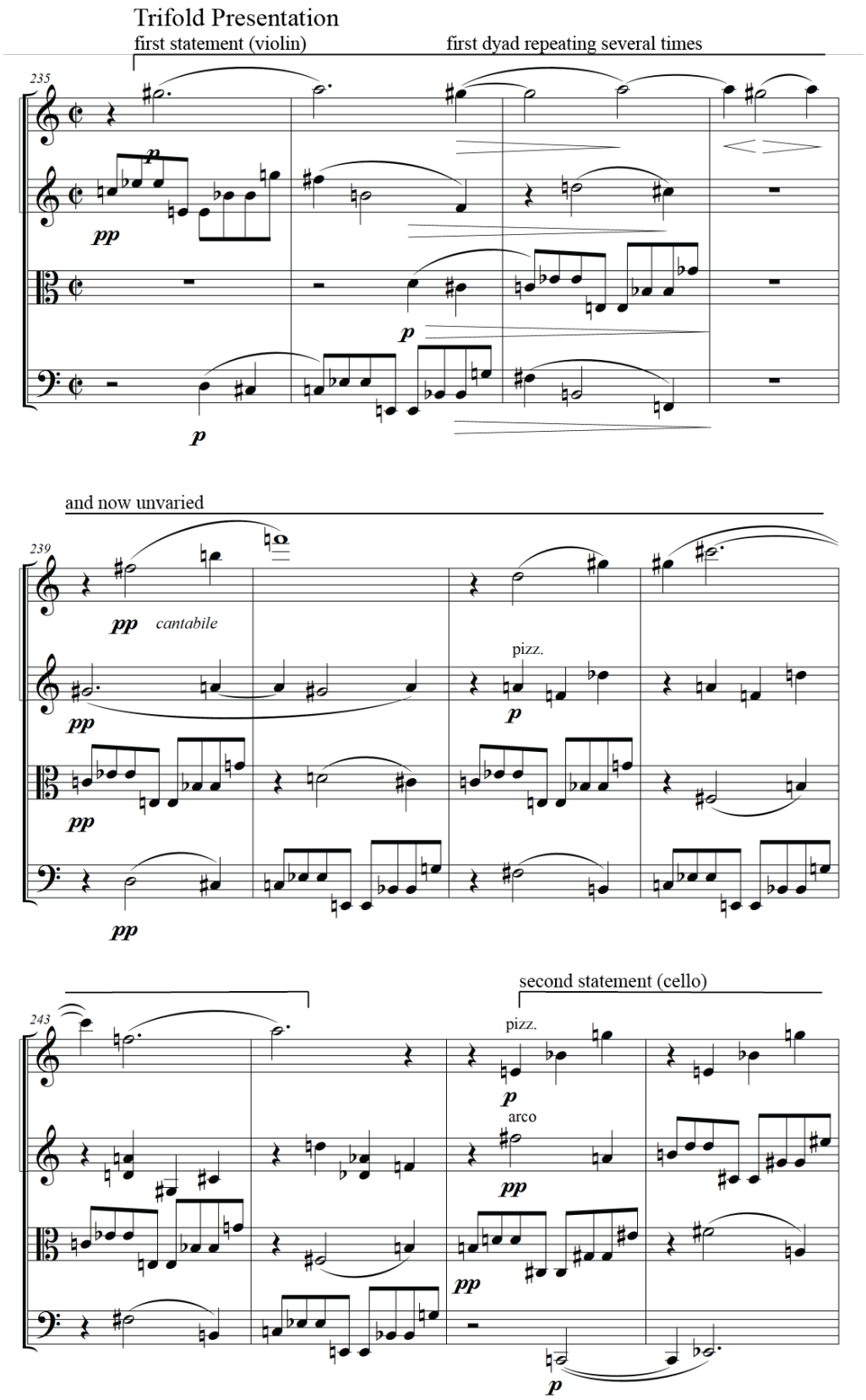
Example 6.3 cont. – Schoenberg Op. 30 i, Subordinate Theme, mm. 62–94



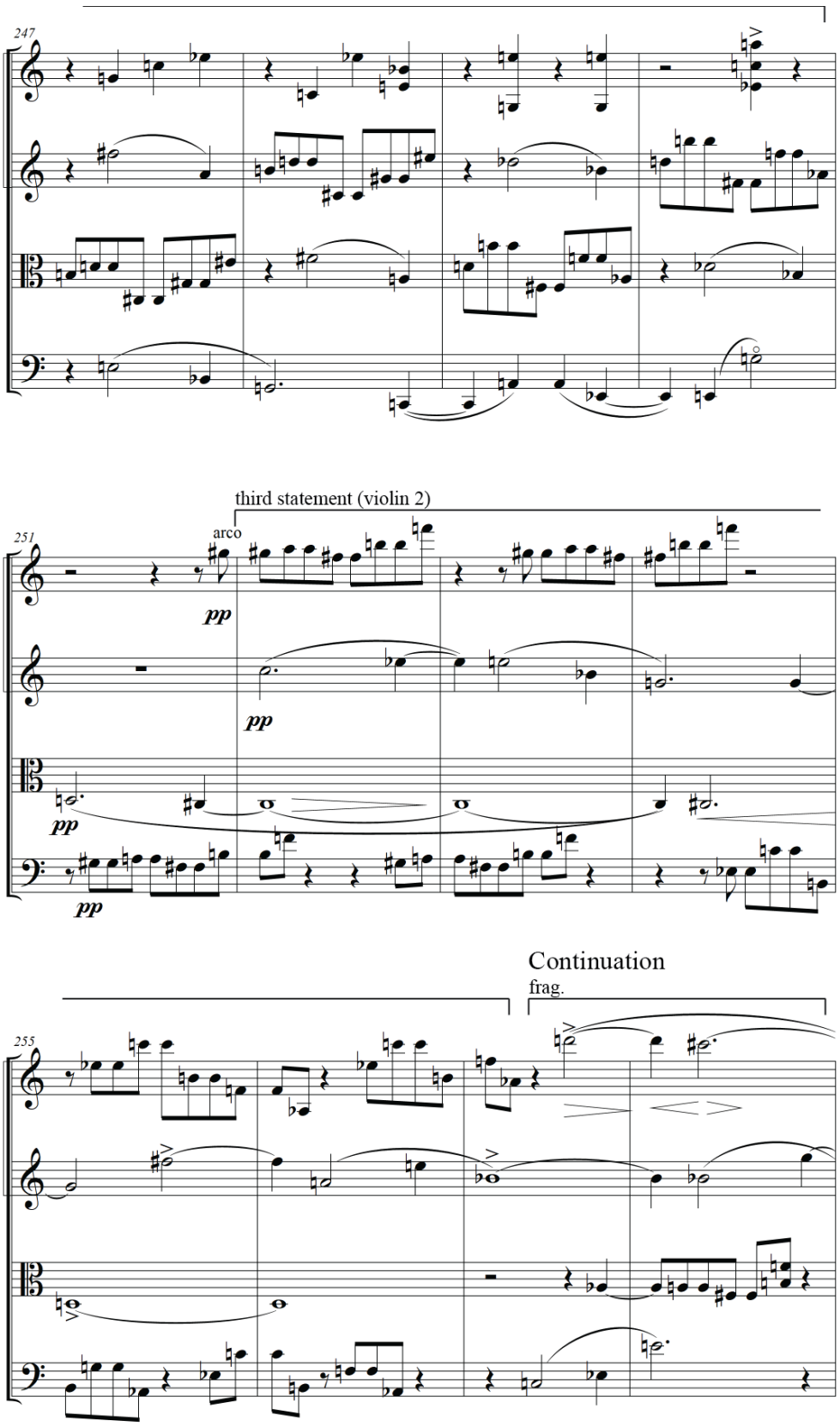
Example 6.3 cont. – Schoenberg Op. 30 i, Subordinate Theme, mm. 62–94

However, pay close attention to how the motives are developed over the course of this theme. The first presentation's basic ideas are clearly related as they feature exactly the same durations and contour. The second presentation's ideas, on the other hand, seem only loosely related. The ascending leap with the short-long rhythmic pattern is clearly established in the first basic idea, but it dominates the second presentation until the final

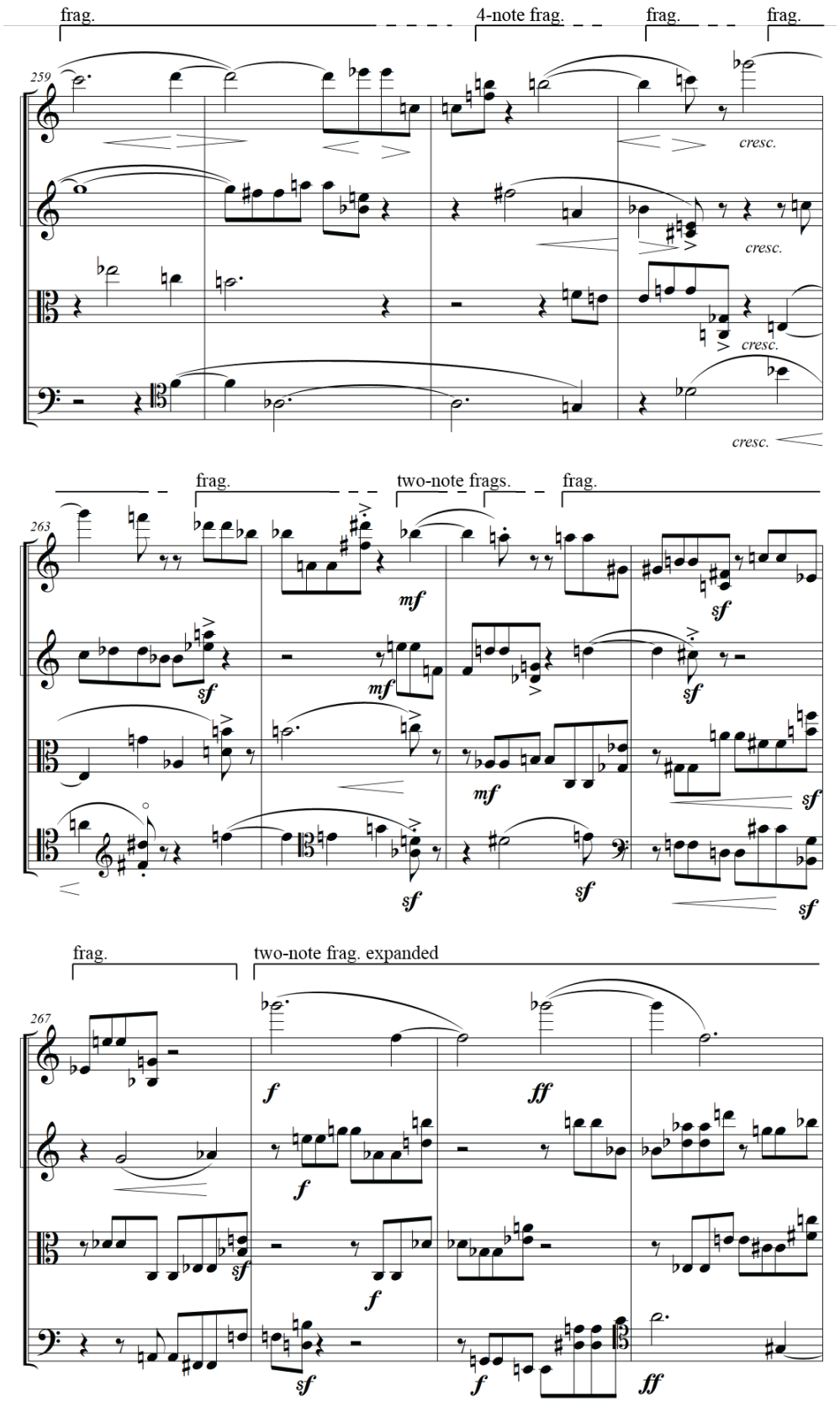
descending leap in m. 75. The continuation intensifies this eccentric trajectory in a duet between the first violin and cello. The top violin line fragments and repeats the descending dyad to create a four-note segment. The rhythmic character of this four-note segment is static, always a whole-note leaping down to a half-note and then two dotted half-notes. Underneath each of the descending dyads, the cello plays a three-note syncopated arch, leaping up and then down. In m. 84–90, this cello motive is gradually varied away from its original shape. In m. 84, the motive is shortened to just a descending dyad. In mm. 85–86 the first two durations are shortened into an eighth-note and quarter-note. The fragment in m. 86–87 is only descending, while the one in mm. 88–89a is now a four-note descending motive. The arch shape returns in a four-note fragment in mm. 89b–90 and a five-note fragment in mm. 91–92. By the end of the subordinate theme in m. 94, these motives have become something new. The cello line undergoes a dramatic transformation as the violin's large leaps are replaced by steps and skips. This process clearly demonstrates an eccentric tendency in how Schoenberg develops and varies the motives of the subordinate theme. While the phrase formation and articulation is quite similar to the main theme, the motivic process resembles a transitional function as the motives transform into something entirely new.



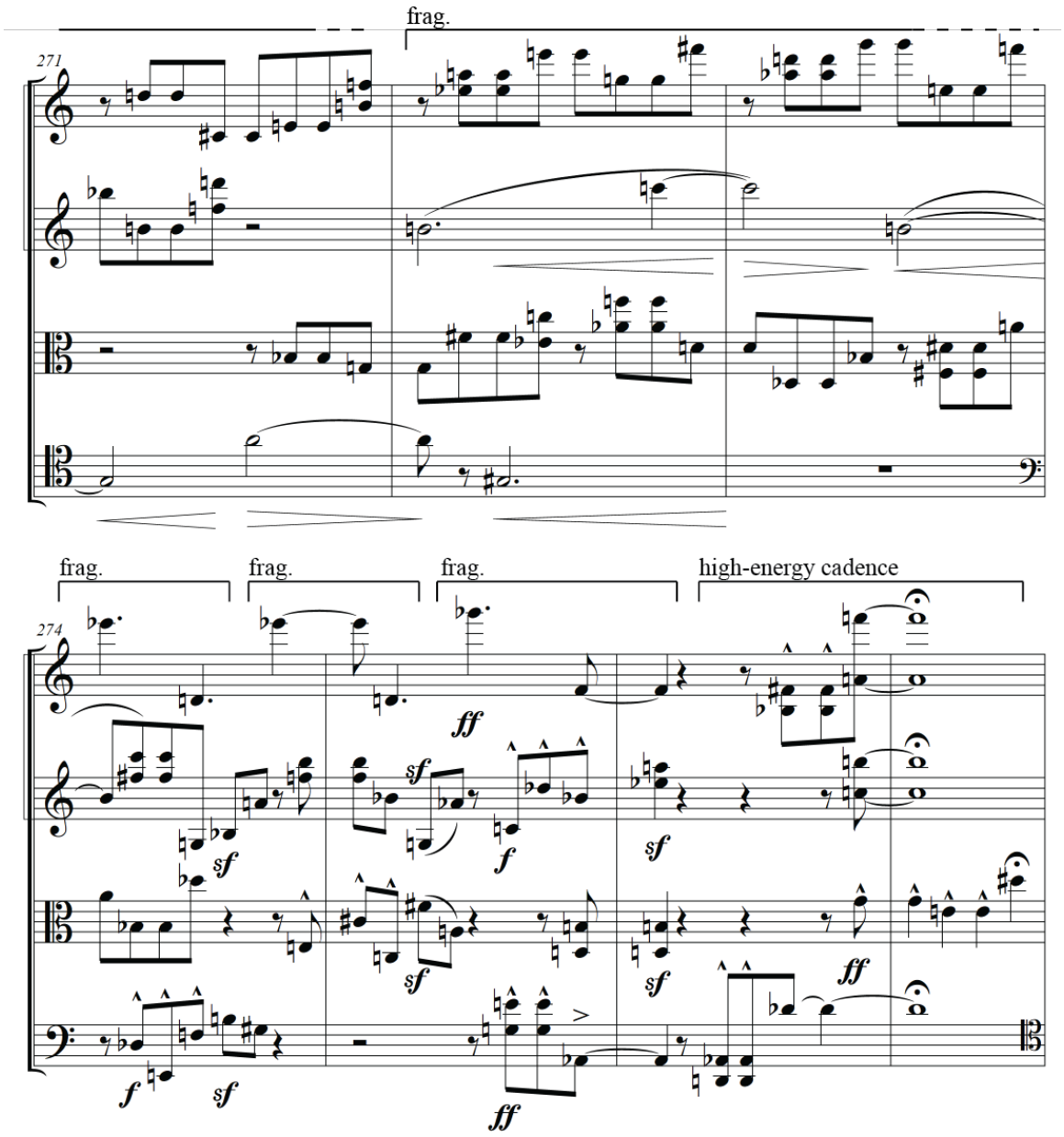
Example 6.4 – Schoenberg Op. 30 i, Recapitulation Main Theme, mm. 235–277



Example 6.4 cont. – Schoenberg Op. 30 i, Recapitulation Main Theme, mm. 235–277



Example 6.4 cont. – Schoenberg Op. 30 i, Recapitulation Main Theme, mm. 235–277



Example 6.4 cont. – Schoenberg Op. 30 i, Recapitulation Main Theme, mm. 235–277

In the recapitulation, the subordinate theme's phrasing is not particularly changed. The length is the same and while most of the intervals are now inverted, the technique of motivic variation is also unchanged. The main theme, on the other hand, has been changed to be even more tight-knit than the exposition's, as seen in **Example 6.4**. The main theme's first statement gets off to a stuttering start in m. 235, but finds its groove in

mm. 239–244. The cello's repetition in mm. 245–250 also proceeds as expected. Measure 252's third statement in second violin, however, begins to dissolve in m. 255. The theme begins liquidating and fragmenting, first into three-note groups in mm. 257−260 and then two-note groups in mm. 261–267. This fragmentation and energy drive reaches a peak in mm. 268–270 when the two-note motives are rhythmically expanded and the intervals are exploded beyond an octave. This peak more closely resembles motives from the subordinate theme, and demonstrates how Schoenberg creates new contrasting material out of the same *Grundgestalt*. In essence, he is putting the motivic coherence of the entire movement on display here. These subordinate theme motives undergo another continuation-style fragmentation and liquidation which leads to an incredibly tense high-energy cadence in m. 276.

Before moving on, I want to briefly address some of the differences between my analysis and Joseph Straus's.[125] This is just a matter of nuanced details, but Straus's analysis of this movement is the most significant treatment of its large form in the literature.[126] I just want to clarify why I have chosen to deviate from his form chart. First, he chooses to end the main theme earlier in m. 32, while I chose to end it in m. 42. Now it should be clear why m. 32 makes for an enticing option for the end of the main theme: that's when the last melodic statement ends. However, it should also be clear by now that the liquidation of characteristic material within a theme is not just common but expected. The passage in mm. 32–42 provides the fragmentation, liquidation and drive to a cadence

[125] Straus (1990, 121–132).

[126] Hyde (1980) presents a thorough accounting of the rows that structure the entire piece, but only analyzes one small phrase from the recapitulation. Hyde (1996) responds to and expands Straus's analysis with her own accounting of the coda.

that marks the end of the main theme area. The transition then has a clearly marked beginning in m. 43 before the energy drives towards a *medial caesura* in m. 61.

The other minor difference is where we start the primary theme in the recapitulation. This problem will plague analysts of Schoenberg's music for as long as we continue to analyze his music. Simply put, Schoenberg is sometimes intentionally vague about the beginnings of recapitulations. I hear a high-energy closing gesture ending the transition in m. 230, and the material in mm. 231–234 mimics the opening four-bar introduction with new layers added. The accompanimental pattern is passed through each instrument, with a new marching quarter-note line and a descending semitone dyad. The main theme's ic1 dyad begins in m. 235 and is repeated three times in various rhythmic durations before finally continuing on with the rest of the theme in m. 239. Here, I have chosen to begin the main theme earlier at m. 235 while Straus chose the later m. 239. This is another instance where the music almost stumbles back into a thematic passage, an extremely common technique for Schoenberg. I am not certain why Straus would choose this point to begin the main theme except that it is the least varied moment of the thematic recapitulation. Everything before that moment has been altered, but I don't believe the changes are significant enough to warrant moving the formal boundary.

When most scholars analyze twelve-tone sonata forms, they usually search for pitch-structural analogues of key relationships. My analysis, however, focuses on how Schoenberg distinguishes between main and subordinate matters in larger sonata forms from a purely formal and thematic perspective, based on parameters other than pitch. For example, Schoenberg uses different techniques for varying motives in the main theme and the subordinate theme from Op. 30's first movement. The main theme varies motives

without fundamentally changing into something new, while the subordinate theme gradually uses motive-forms more distantly related to the beginning. I do not want to demean pitch-structural approaches. Hyde's earlier manuscript research and analysis greatly clarified some of my own questions of pitch structure in this piece. It also seems rather straightforward that Schoenberg manipulated his rows to create the effects shown, and many of these analyses are both musically sensitive and intellectually stimulating. However, I have shown that Schoenberg's approach to form is much more complex than just pitch structure and many of the non-pitch features are more aurally salient. Furthermore, Schoenberg's distinction between themes is more nuanced than just which theme happens first. While some sonata theories privilege theme order, at least in nomenclature, Schoenberg structures his themes in different ways for different purposes. The themes in Op. 33b more closely resemble Caplin's concept of tight-knit, where phrasing and length play the most significant role in determining the relationship between main and subordinate themes. The formal articulation of the themes is also on display in Op. 33b. The themes in Op. 30's sonata movement, however, are distinguished through their motivic processes. Both themes are well-articulated from the surrounding material, both themes feature plenty of internal repetition, and both themes are roughly the same length. However, the subordinate theme is loosened more through its motivic variation. An eccentric structure is established as the motives gradually transform into something new over the course of the theme. That is in contrast to the main theme, which varies the main statement in many different ways without fundamentally changing it into something new.

The Fourth Movement

Formal theory typically underemphasizes rondos. Theorists usually spend our time working up through the formal hierarchy towards sonata forms. Even when we do discuss rondo forms, they seem more like a cursory after-thought, appearing as a brief summary among "other forms" or "full-movement" forms. Perhaps in common-practice music, rondos are too obvious, simple, or straightforward. Unfortunately, our lack of critical attention to rondo forms has led to formal issues in post-tonal music. Musical form in the 20th century is very challenging, as the harmonies don't contribute to defining form in the same way, and composers are often inventing creative new formal solutions. Couple that with a tendency for theorists to favor grouping structure methodology, where the same motivic content is given the same label regardless of how it functions, and we end up with a lot of rondo forms. We hear the opening material return many different times, and then ascribe the same formal label to all of those different segments simply because they share similar motives. My intention here is to show how Schoenberg actually writes rondos, by analyzing the final movement of the Third String Quartet Op. 30. This movement is clearly a rondo, as Schoenberg names it. And analyzing the form here will not be a challenge, even for a grouping structure methodology. However, I want to show that it is structured very differently from other pieces that have been called rondos by analysts. This discussion will pay dividends in Chapter 7, when I discuss the first two movements of Op. 11.

The common feature of all rondos is a repeating main theme, alternating with contrasting material. Most contemporary scholars focus on the five-part rondo, ABACA,

or the sonata-rondo ABA-C-ABA.[127] While these labels are useful for being so succinct, they only represent the grouping structure and fail to describe the formal functions. So that the rondo may have bespoke terminology, Caplin introduces the terms refrain, for the repeating material, and couplet, for the interjected contrasting material. While couplet is not the usual term, I will continue to use Caplin's term in my own analyses simply because they are specific to the rondo form and are not shared with any other forms. These rondo terms are distinct from their formal function types, however. The first refrain has a main theme function, while each repetition has a return of main theme function. The couplets are either subordinate themes or interior themes, though Caplin's distinction here is dependent on key relationships that aren't relevant to atonal and twelve-tone music. Some couplets have a looser structure and provide developmental functions. These are necessary for sonata-rondo forms, but can also appear in the five-part rondo.

I have provided a form chart of the entire movement below in **Example 6.5**, using grouping letters. However, I will not analyze the entire movement. Instead, I will focus on five excerpts to demonstrate the phrasing techniques that Schoenberg uses in refrains and couplets. My analysis begins with the thematic refrains, using refrain 1 (mm. 1–13), refrain 2 (mm. 45–62), and the final refrain 5 (mm. 186–209). While each refrain contains a different formal structure on the phrase-level, they each provide stable thematic function for the refrain. Finally, I will contrast these refrains with the much looser, and longer, couplets. I will focus on couplet 1 (mm. 14–44) and the last couplet 5 (mm. 171–185) to demonstrate this looser contrasting formal function.

[127] Schoenberg includes ABA and ABAB in the chapter on rondo forms, but also states in a footnote "To call these 'rondos' is perhaps an exaggeration." (1967, 190).

A	B	A	C	A	D	A	E	A
1–13	14–44	45–62	63–98	99–118	119–150	151–170	171–185	186–209

Example 6.5 – Form chart of entire movement, Op. 30, iv

The Refrains

My first and most important point is that the refrain material should be at least a complete theme. In *Fundamentals*, Schoenberg defines the rondo form very simply: "the rondo forms are characterized by the repetition of one or more themes, separated by intervening contrasts."[128] These themes may be short and simple or greatly expanded, but they are still complete themes at a bare minimum. These themes may be expanded, such as in the Op. 30 analysis below, but still recognizable as a repetition. Schoenberg (like Marx before him) sees the rondo form as a logical extension of the large ternary and Minuet-Trio forms. In the case of the Minuet-Trio, the complete minuet provides the refrain material while the ternary trio forms the intervening contrast. In that context, it isn't very surprising that most of the A-sections in Schoenberg's rondo examples are ternary forms. This makes sense for the shortest rondos, of 3 or 4 parts, but even the larger forms contain complex main themes for A-sections. The shortest example Schoenberg lists is the 8-measure period from Beethoven Op. 10 No. 3, iv. This point is crucial because there are so many analyses of post-tonal pieces that mistake the opening basic idea as the A-section and the rest of the theme as an intervening contrast. But themes are much larger than the two or three-measure segments being identified and themes often contain contrasting material within themselves. When we think of themes

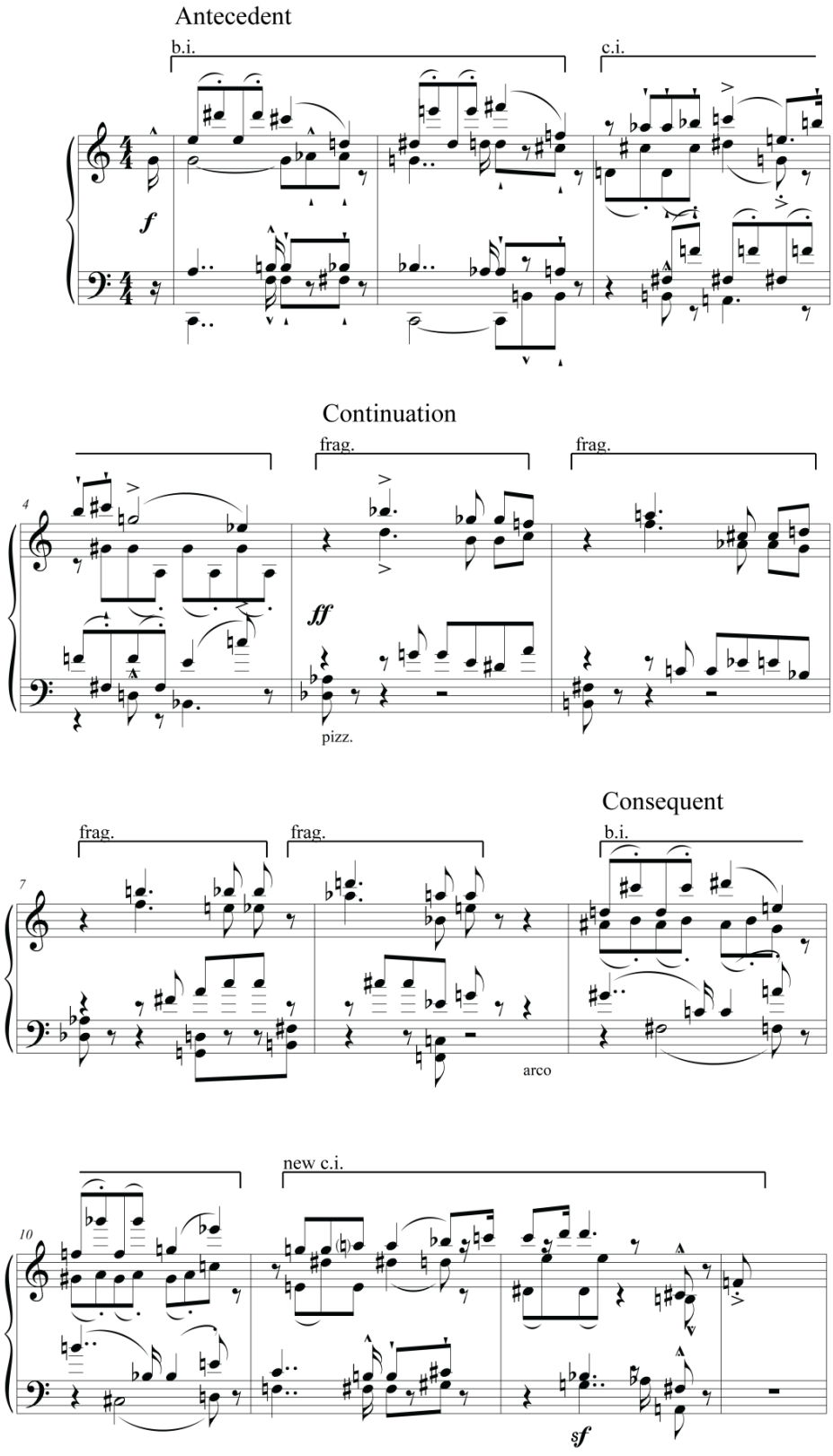
[128] Schoenberg (1976, 190).

on a larger scale, then we must necessarily discard the rondo forms that might otherwise be proposed.

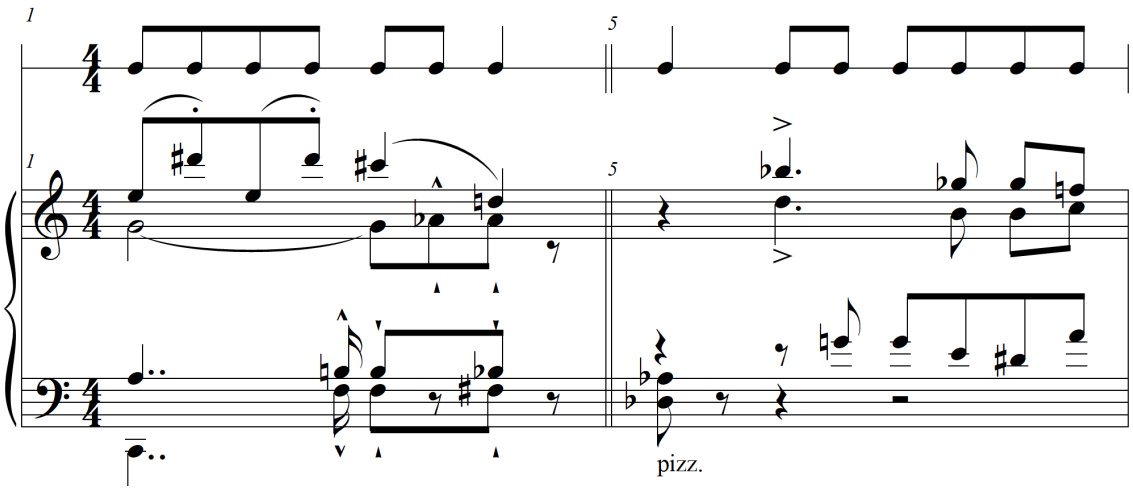
Take for example, the opening refrain in Op. 30, iv, shown in **Example 6.6**. It is a complete 12-bar theme that is well-articulated but not a simple type. It is divided into three even phrases of four measures each. The theme begins with an antecedent phrase structured as a miniature sentence, although the contrasting idea more clearly departs from the opening two measures. Note that the basic idea does not entirely saturate the eighth-note pulse-stream, instead leaving the last eighth note of the measure empty both times. The line of the melody starts with an ascent, but features a slight turn down to end the phrase where it began. The continuation introduces a new motive and syncopates the melodic line. Notice that the break in the rhythmic pulse-stream now occurs on the downbeat of the measure rather than at the end.

In **Example 6.7**, I have put m. 1 and m. 5 side by side so that we can clearly see how Schoenberg has retrograded fundamental rhythms in the continuation. This rhythmic variation also creates the syncopated rhythmic drive that helps lead into the slight fragmentation and acceleration in mm. 7–8. After a relatively long break in the texture, the opening motives return in a consequent phrase, or perhaps a recapitulation if you want to highlight the three-phrase structure.[129] The basic idea is barely varied at all, but the contrasting idea ends with a stinger that mimics a sol-do motion in the first violin. Also note that this is a stable and well-articulated theme but not a simple theme-type. Instead, he has constructed a unique form through these more general functions.

[129] I do not call it a small ternary simply because the exposition would only be a single antecedent phrase, but I cannot deny that identifying a contrasting middle and recapitulation is tempting here.



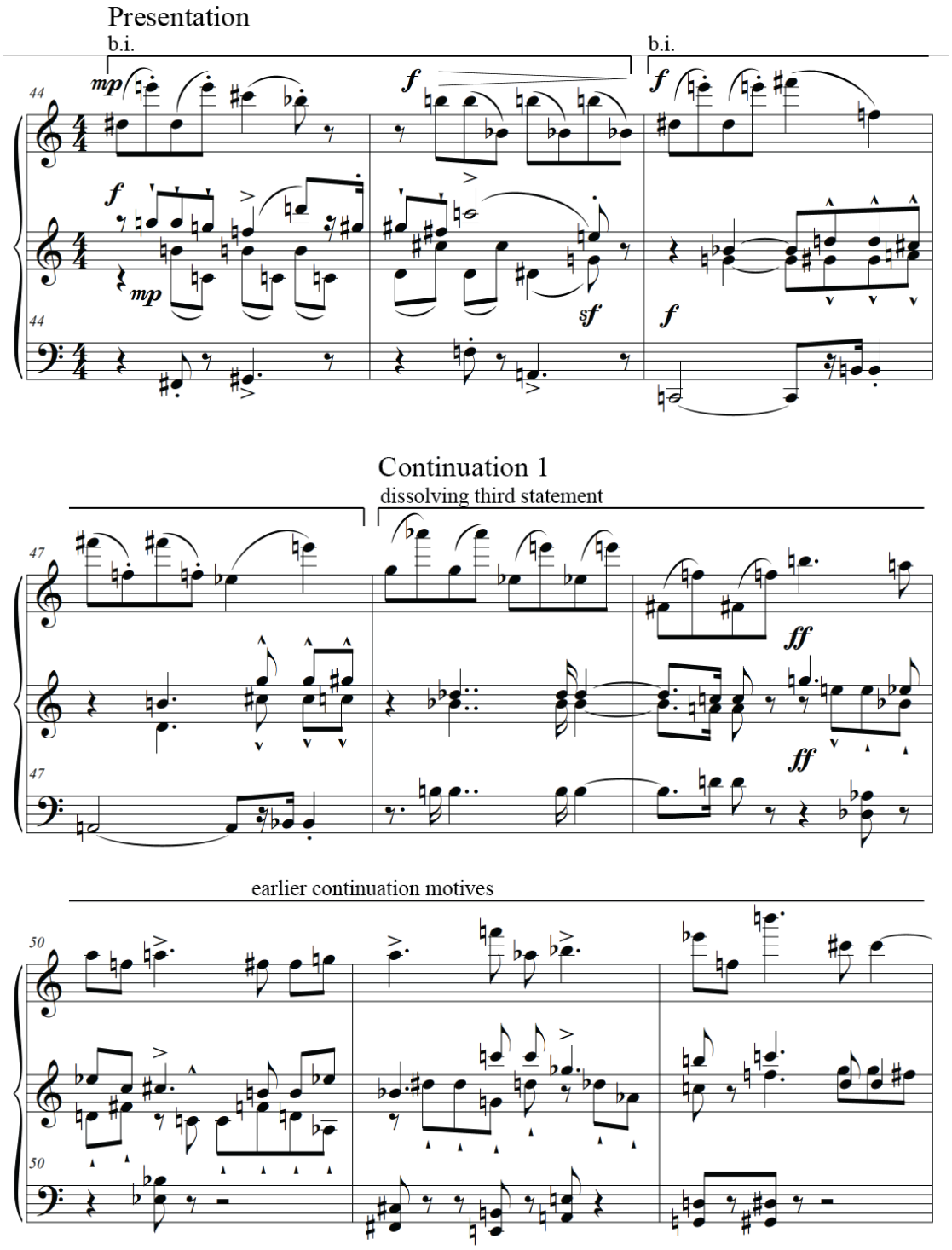
Example 6.6 – Schoenberg Op. 30 iv, refrain 1, mm. 1–12



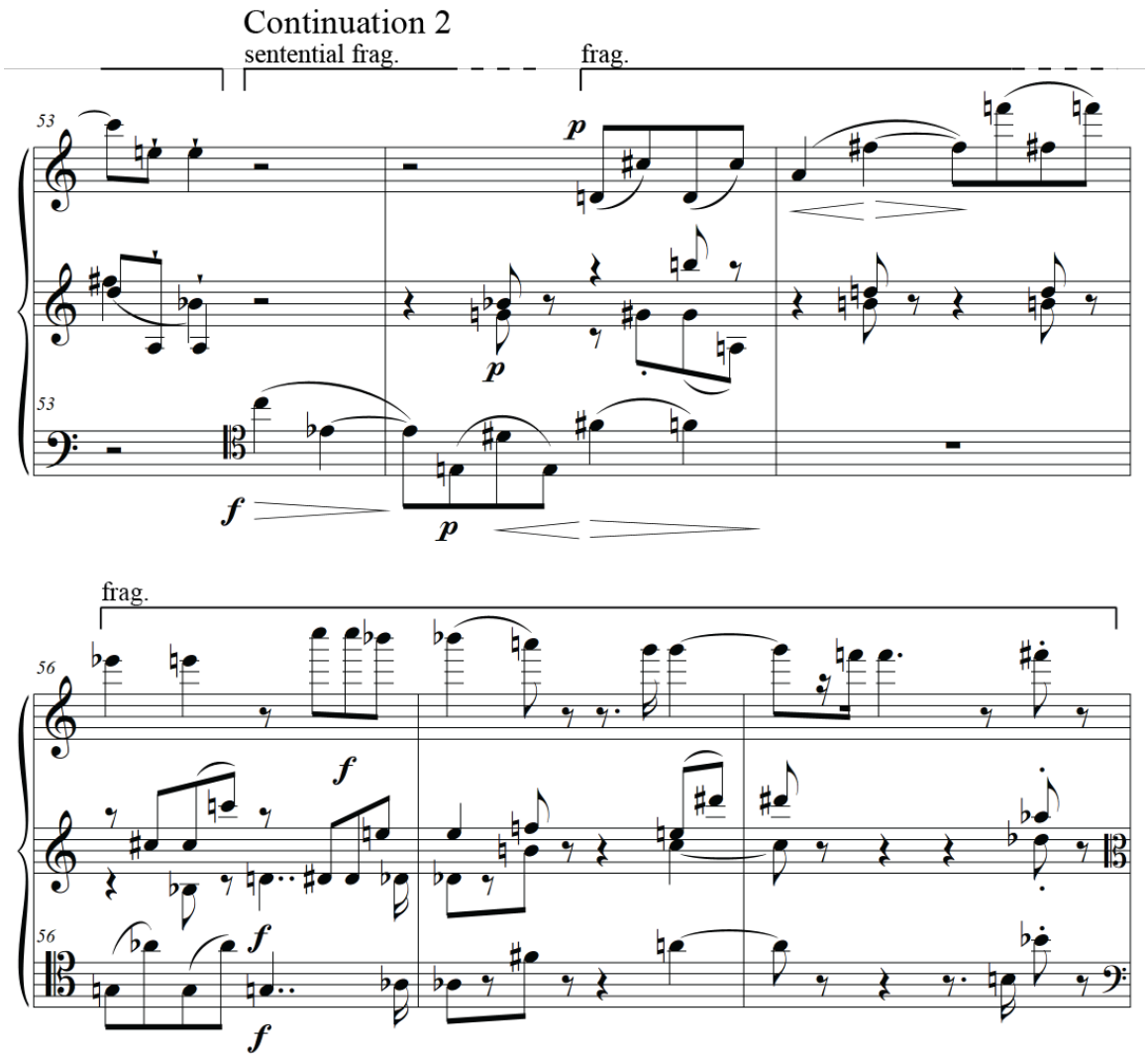
Example 6.7 – Schoenberg Op. 30 iv, mm. 1 and 5, showing the rhythmic retrograde

Second, Schoenberg values variation for its own sake and considers it one of the defining features of higher art. In most tonal rondos, the repeating main theme is barely varied if at all, and such alterations are not necessary or expected in rondo forms. However, because Schoenberg values variation so much, we can see that the refrain material is greatly developed and expanded over the course of this movement. In Op. 30's Rondo, the phrasing of each refrain is very different, but also drawn from the intentions laid within the main theme. I have marked phrases in the first refrain using terms from the period and sentence, although it doesn't neatly fall into either category. The second refrain, mm. 44–58 in **Example 6.8**, converts the antecedent phrase into a true presentation phrase with a two-bar basic idea and its repetition. The continuation fragments and syncopates the continuation motive while the basic idea's characteristic leaps are sequenced on every half-note. In this context, the consequent phrase sounds more like a second sentential continuation. These variations do expand the nature of the refrain beyond a simple repetition, but the way it is varied retains a complete thematic structure. When we first heard the refrain, both the antecedent and consequent were

structured as miniature sentences. However, because refrain 2 begins with a true presentation phrase and 2-bar basic ideas, the single-measure statement sounds like a sentential continuation. This refrain maintains some of the original ternary features, while emphasizing the original theme's sentential impulses.



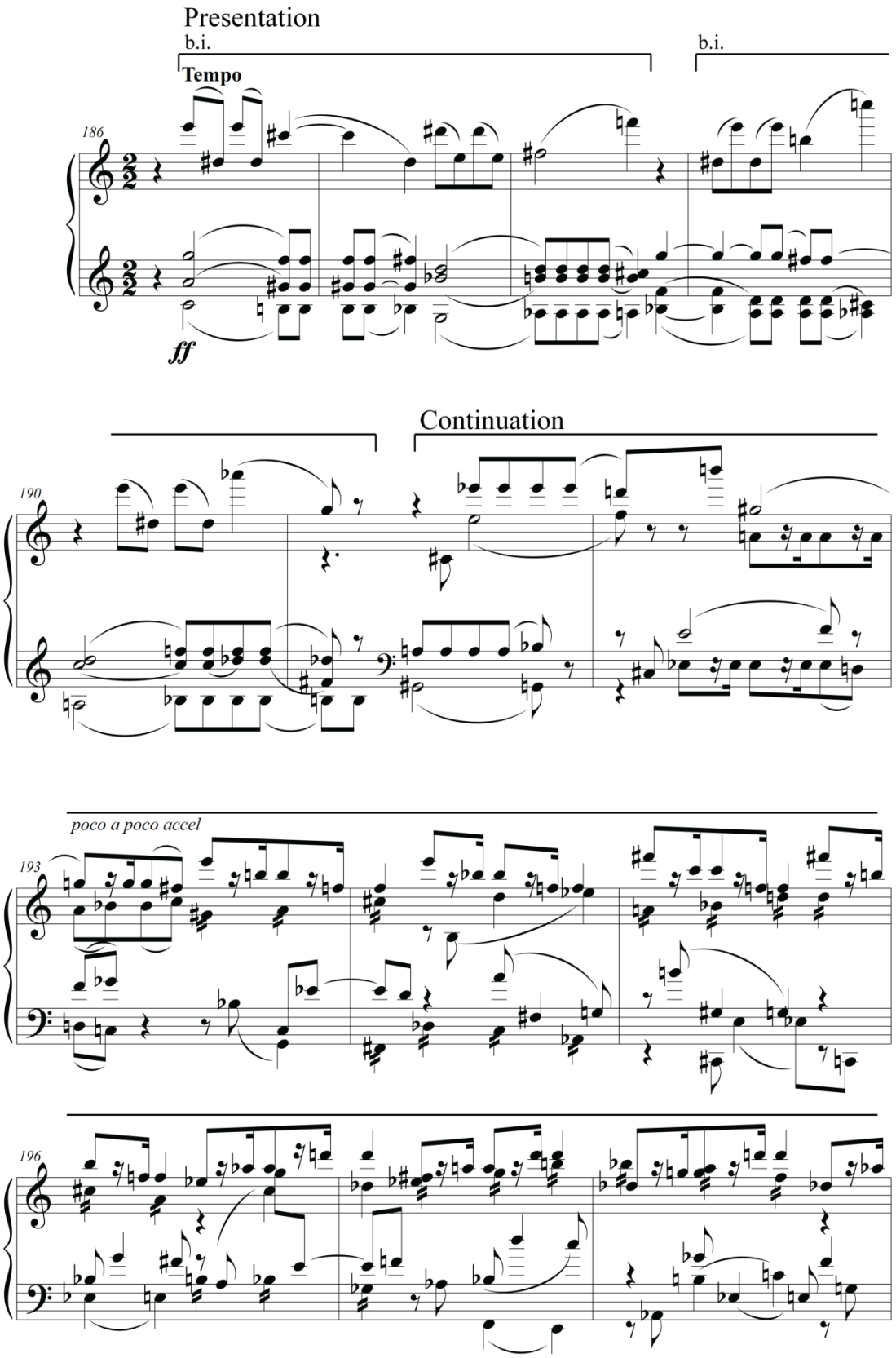
Example 6.8 – Schoenberg Op. 30 iv, refrain 2, mm. 44–58



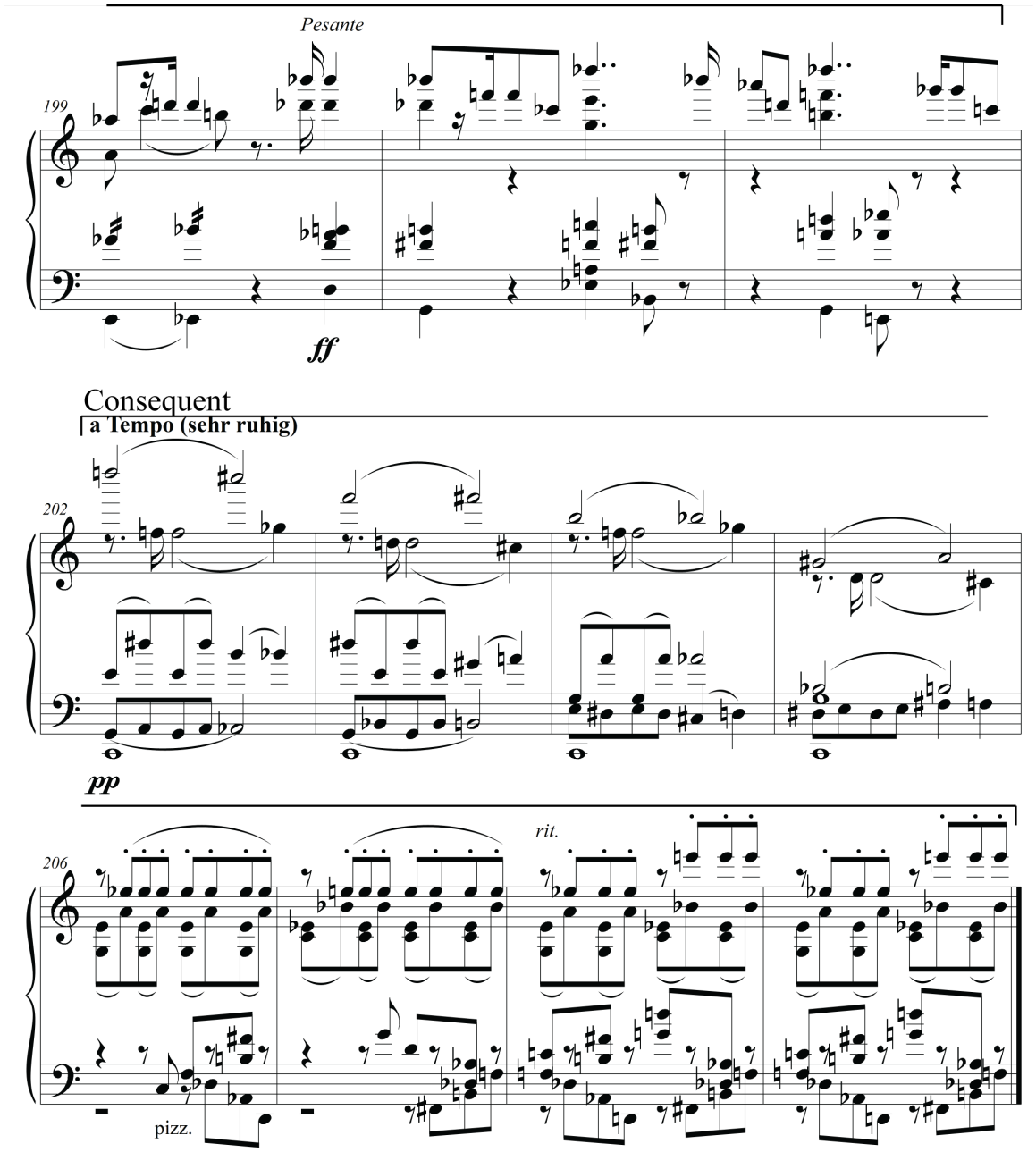
Example 6.8 cont. – Schoenberg Op. 30 iv, Refrain 2 mm. 44–58

We can contrast this with the final refrain of the piece, mm. 186b–209 in **Example 6.9**, which leans more towards the ternary aspects. The entire phrase structure of this refrain is significantly larger, but the consequent phrase expands into more of a recapitulatory function. The basic idea is now about two and a half measures, making for a 5-bar presentation phrase. The 10-bar continuation combines pitch-motives from couplet 1 and rhythmic motives from couplet 2 into a long sustained sequence in dotted-eighth-sixteenth figures. The line continues to drive upwards, accelerating and creating shorter and shorter fragments until it reaches a peak in mm. 200-201. After that intense

energy drive, the 8-bar consequent (or recapitulation?) phrase returns but it has lost its earlier jaunty character. Instead, it is calm and quiet and fades away ever so slowly. The characteristic leaps begin in the viola but are squished into semitones in the cello in m. 204–205. The last four measures become rather still, as oscillating violin and arpeggiating cello slow down while the top violin just repeats the last E♭ and E♮. Notice how this final theme builds to a much higher energy state than the opening theme. The repetitions are more incessant and reach higher and louder. The continuation only seems to slow down as it arrives at the very height of its range, as if it couldn't possibly climb any higher no matter how hard it strains. This last refrain provides the final cadence for the entire piece, and it is not boisterous or heroic. Instead, the most conclusive cadence of the entire piece is quiet, still, and fades away. Its energy drain takes place over the entire 8 measures though, beginning with what looks like a presentation in mm. 202–205. This "presentation" begins liquidating before it's even over, leading to a long closing gesture.



Example 6.9 –Schoenberg Op. 30 iv, Final Refrain, mm. 186b–209



Example 6.6 cont. –Schoenberg Op. 30 iv, Final Refrain, mm. 186b–209

My main point here is that we expect tight-knit phrase structures in refrains, and in the fourth movement of Op. 30, the opening refrain is incredibly tight-knit. There are not extra repetitions or expansions. Instead, it quickly states its basic motives before quickly transitioning into a couplet. While most tonal rondos would repeat the refrain

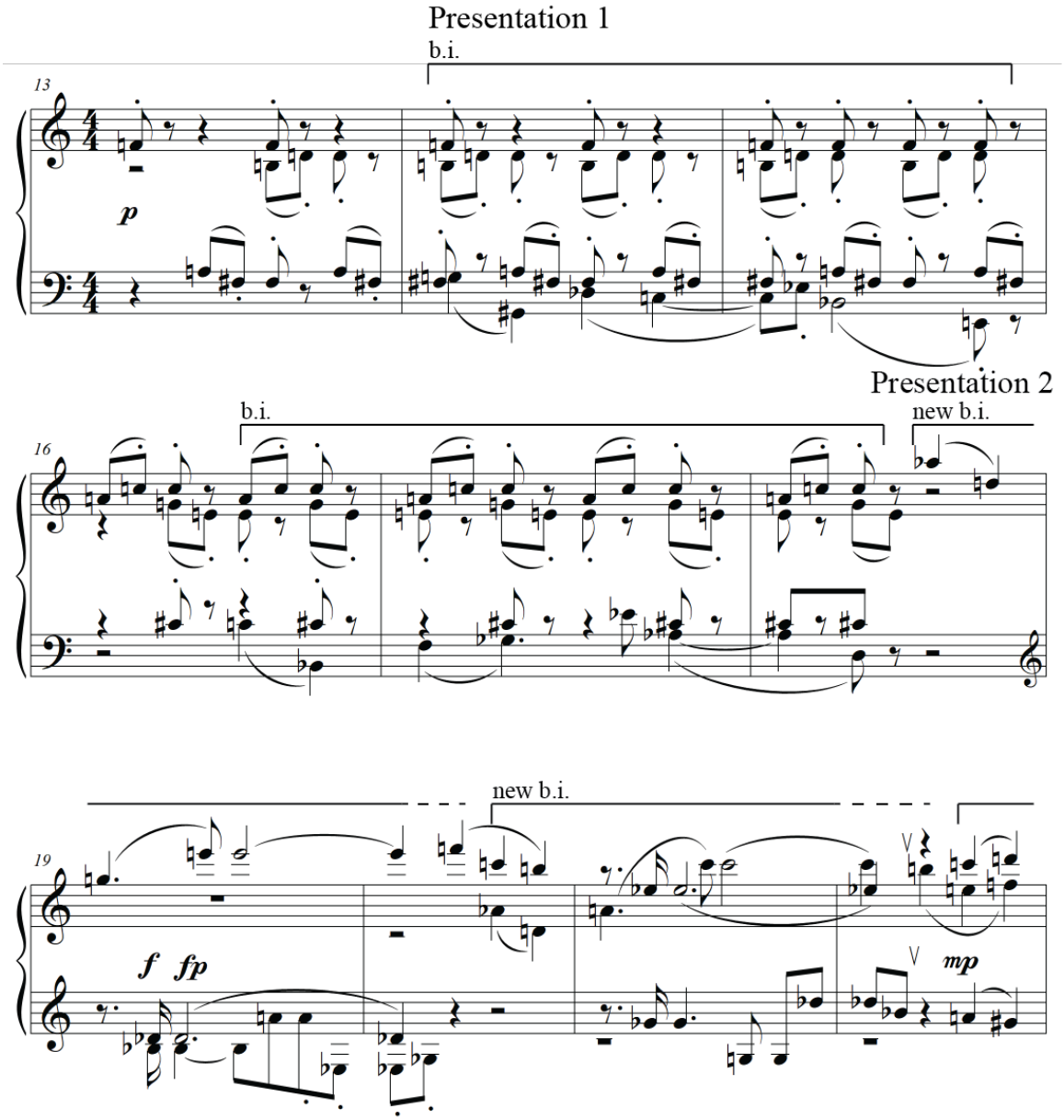
exactly, Schoenberg does not pass up an opportunity for variation. While some of the refrains feature significant motivic variation, Op. 30's rondo also features a trend of gradually loosening each refrain's phrase structure. This technique is common not only in Schoenberg's rondos, but in essentially every formal repetition. Furthermore, the types of phrase variations he chooses here are related to the first refrain's unique compound structure which contains ternary and sentential impulses. As the piece unfolds, he varies the structure in ways that emphasize one or the other.

The Couplets

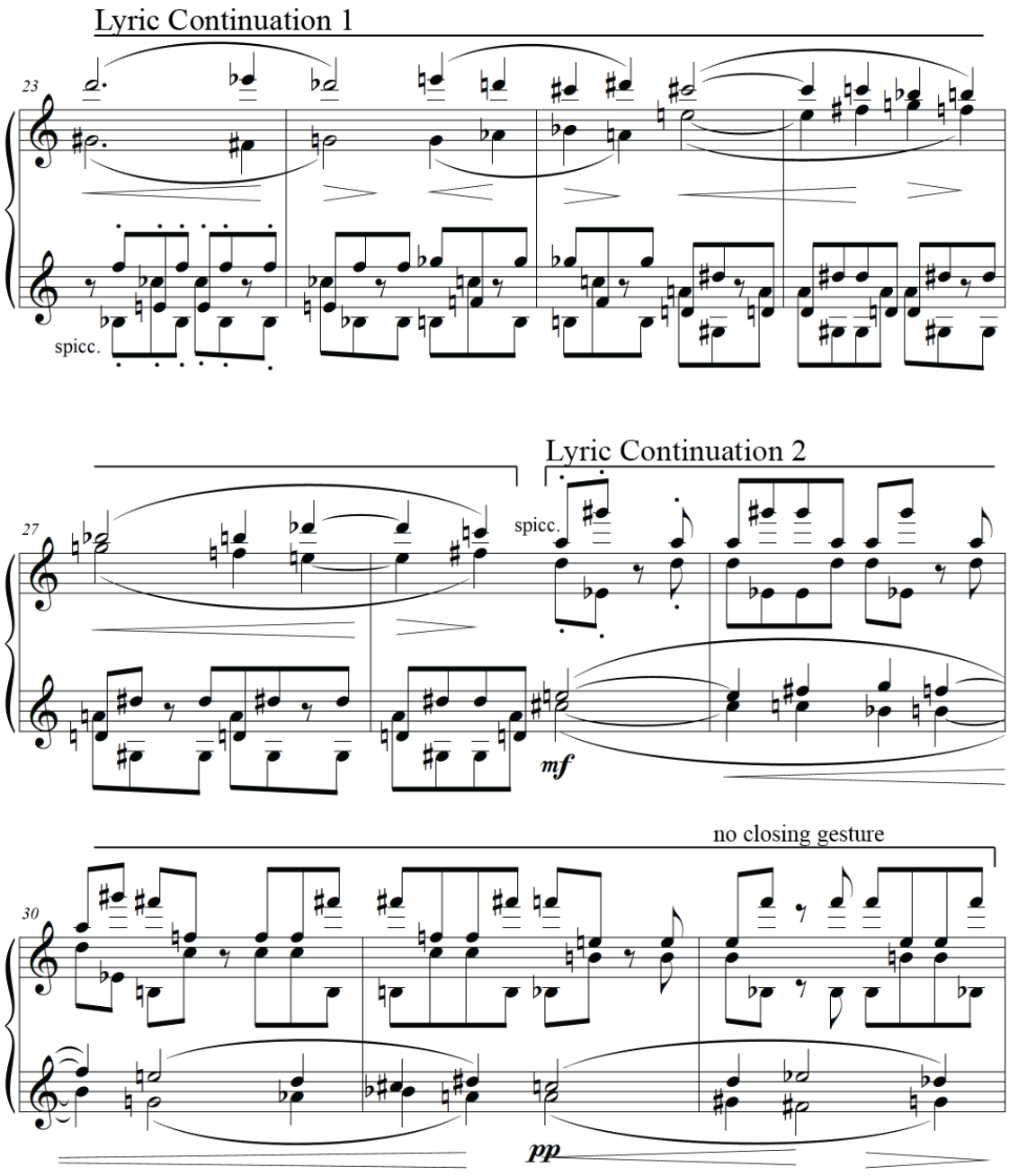
We strongly expect the couplets to feature a looser formation than the refrains they are positioned between; however, they are usually still thematic formations. Caplin claims that subordinate or interior themes are the typical functions for couplets, except for the developmental couplet in a sonata-rondo. I think it is important to note that the relationship of phrase formation between the couplets and refrains pertains to the adjacent formal units. When we address the phrase formation of couplet 1, we are comparing it to the formation of refrains 1 and 2. Normally, this is not an issue, but Schoenberg significantly loosens the phrase structure of the refrains over the course of the movement. Because of this, we also see a greater variety in how the couplets are structured. To demonstrate this, I want to analyze the first couplet which features a loose thematic structure, and contrast it with the fourth and final couplet which is wildly unstable.

The first couplet, mm. 13–40 in **Example 6.10**, is clearly articulated from the surrounding refrains. Measure 13 introduces just the accompanimental texture, similar to the opening measures of the first movement of this quartet. It connects the cadence of the first refrain to the couplet's melody, but primarily serves to clearly mark the beginning of

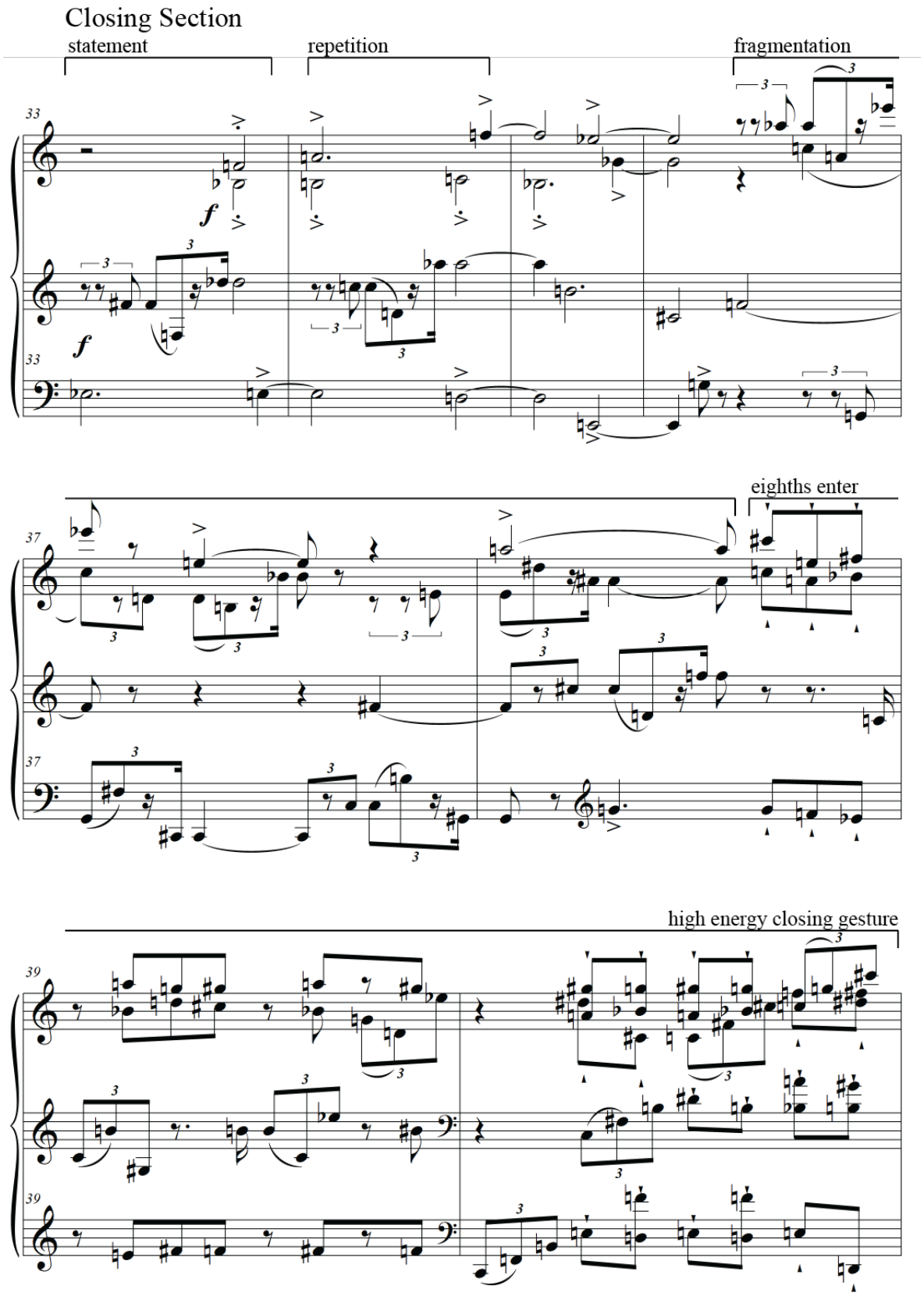
a new section. The couplet theme ends with a high-energy closing section that leads into the next refrain. This closing section introduces a new triplet motive with a steady quarter-note pulse-stream. This new motive is then fragmented as it accelerates and drives towards m. 40. The juxtaposition of duplets against triplets creates an incredibly busy and unstable climb to an inconclusive cadence in m. 40.



Example 6.10 – Schoenberg Op. 30 iv, couplet 1, mm. 13–40



Example 6.10 cont. – Schoenberg Op. 30 iv, couplet 1, mm. 13–40



Example 6.10 cont. – Schoenberg Op. 30 iv, couplet 1, mm. 13–40

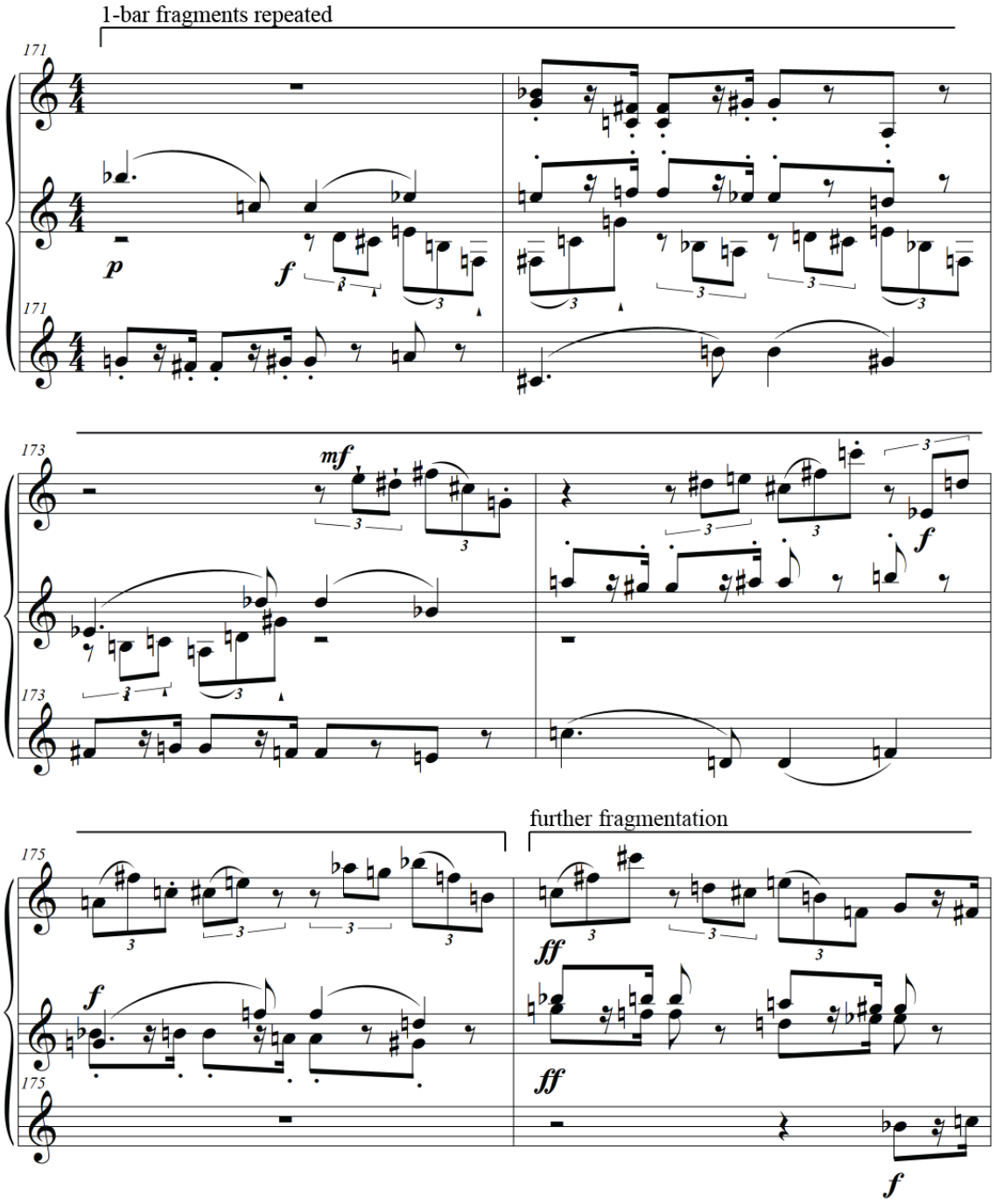
While these boundary points are clearly identified, the internal structure is much looser and features a significant amount of repetition. The cello begins the theme with a 2-bar basic idea and repetition, creating a relatively normal presentation phrase. The brief half-note delay in m. 16 seems to be including some of the introductory measure in the repetition. But this is immediately followed by a second presentation phrase in the two violins in m. 18. This phrase uses new slightly longer basic ideas that are still related to the first presentation in contour, pitch-class motives, and rhythms. However, the entrances of these ideas overlap with each other, in stark contrast to the more separated cello presentation.

The middle of the theme is made up of two continuations, although they are more like some of the lyrical expansions in *Verklärte Nacht* than the accelerating rhythmic drives we usually expect in sentences.[130] The first continuation features the first violin and viola in rhythmic unison but with mirrored pitches. Meanwhile, the second violin and cello create a similar effect in a near constant eighth-note pulse-stream. The second continuation is very similar although a bit shorter. The roles are reversed as the second violin and cello perform the melody while the first violin and viola accompany them. All told, the first couplet provides an example of a looser theme structure. While it is clearly articulated from the surrounding material, it repeats most of its formal functions. Not only that, but the double presentation followed by double continuation doesn't lead to a clear closing gesture. The theme instead relies on a retransition phrase to move back into the refrain material.

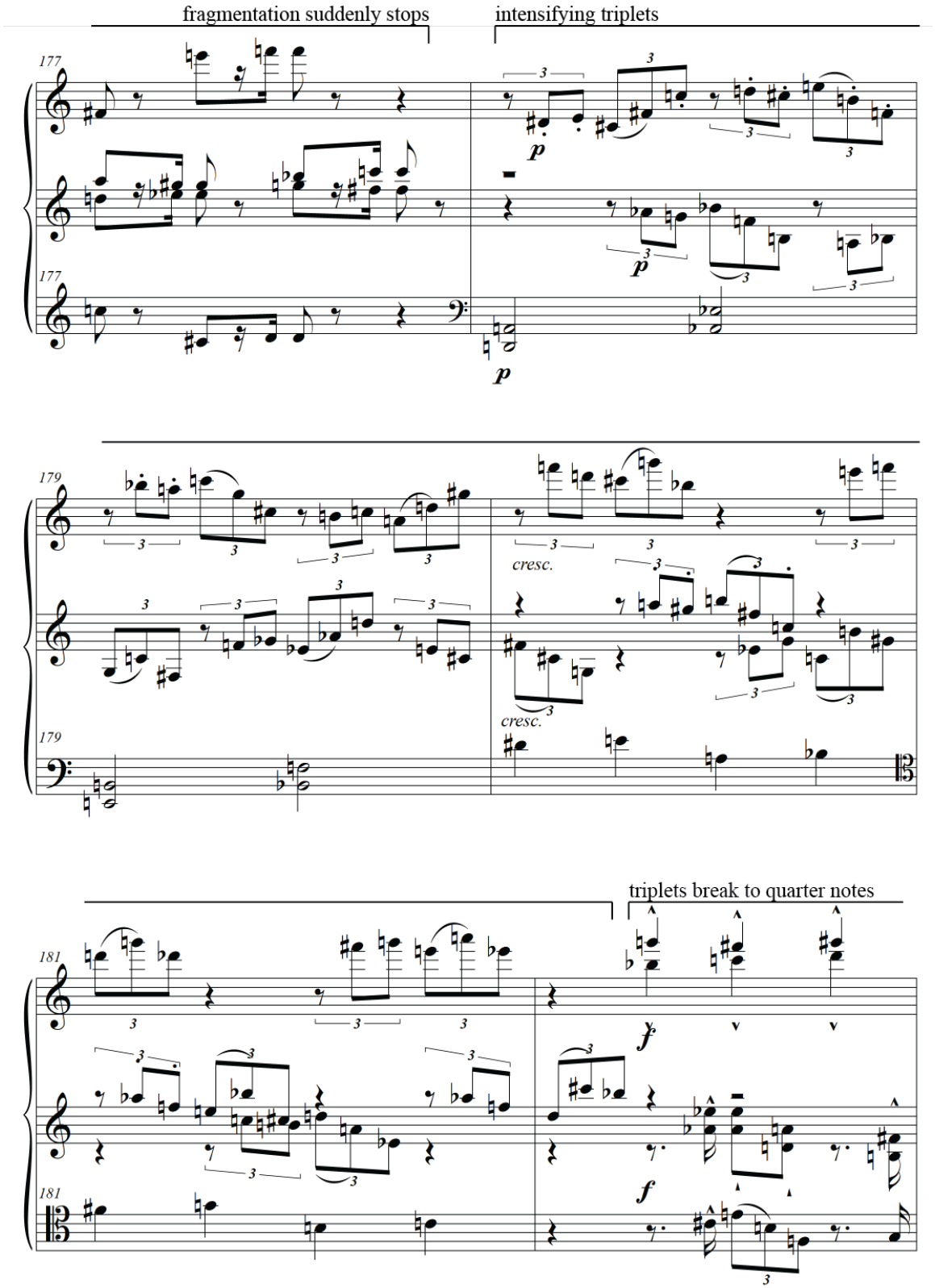
[130] For example, the miniature sentence consequent phrase in mm. 55–62.

Compare that to the final couplet in mm. 171–186a, shown in **Example 6.11**. The end of the previous refrain is not clearly marked with a closing gesture and the final moments of the refrain seem to be pickups into this couplet. We can only really piece together that a new section has started based on two points. First, the refrain's consequent hasn't been expanded with a continuation for the entire movement so far. Second, this couplet continues for a great deal longer than most other expansions and creates a two-phrase structure with a break in m. 177. That said, this couplet does not employ a clear thematic structure or even typical phrase types. It isn't even homophonic like most of the previous sections. We might see that the second violin introduces a melodic idea in m. 171 that is passed back and forth between second violin and cello four times. But the *piano* dynamic makes it difficult to hear that lyric fragment underneath the *forte* triplets and dotted-eighth-sixteenth figures. These other parts look more accompanimental or perhaps like the end of a liquidating continuation. In truth, this passage is best described as seeming to begin *in medias res*. Because of the complex interweaving of multiple melodic lines, it is best to listen to this passage in the same way as Kurth described the symphonic *melos* in Bruckner. The entire texture works together to introduce three musical ideas at once and then drive towards the break in m. 177. A second phrase begins in m. 178 but it keeps only the triplet line on top of a new half-note bass line in the cello. This second phrase begins with a completely saturated triplet pulse-stream that climbs above the staff with a constant crescendo. When the quartet reaches a *forte* dynamic, the triplets begin fragmenting and the quarter note pulse-stream remains. The triplets then begin slowing down to duplets with *marcato* accents. The final drive to *fortissimo* is

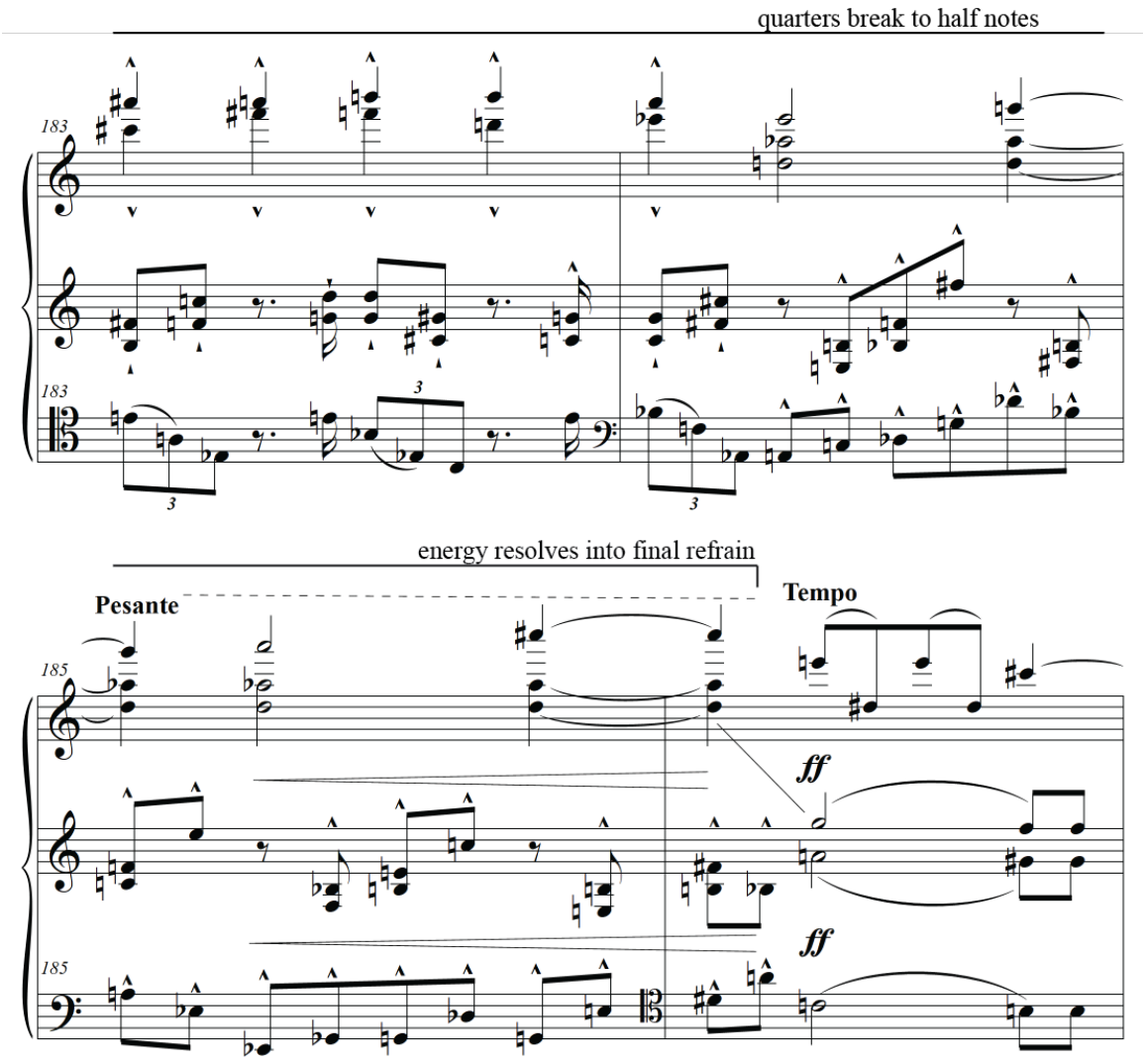
coupled with a large *Pesante* marking. The couplet ends like a rollercoaster at its first peak, just before the ride really begins.



Example 6.11 – Schoenberg Op. 30 iv, couplet 4, mm. 171–186a



Example 6.11 cont. – Schoenberg Op. 30 iv, couplet 4, mm. 171–186a



Example 6.11 cont. – Schoenberg Op. 30 iv, couplet 4, mm. 171–186a

The point in my analysis of the fourth movement is to show that, while Schoenberg's rondo refrains employ a creative variety in phrase structures, they are still complete themes. The opening refrain is very tight-knit with even four-measure phrases, but every other refrain plays with and loosens the material at hand. The couplets introduce looser thematic formations, like couplet 1, but also wildly unstable, almost developmental passages like couplet 4. Even as the refrains are gradually loosened, the couplets match pace by loosening even further than the refrains. Despite this loosening, a

single basic idea or motive is not enough to create a refrain. In highly varied refrains, it may be that a single unvaried motive will give away the repeating content but that alone does not create a refrain. The refrain consists of a complete beginning, middle, and end. That middle may take on earlier material, like the final refrain in mm. 191–201, and the end may be blurred to allow for looser couplets, like in m. 170. Still, a complete theme is a requirement for a rondo's refrain. Now, this specific rondo is 209 measures long and runs for about 6 minutes depending on the performance. It uses nine formal sections, with five refrains and four couplets. It is the sheer number of formal sections that makes this rondo so large, and not because of a particularly expanded refrain or couplet. But someone might think that shorter rondos may not meet the requirement for complete themes as refrains. I do not believe this is the case. Shorter rondos will reduce the number of sections and limit the internal expansion of each section before skimping on the thematic minimum. The requirement for complete themes as refrains in a rondo form plays an important role in the next pieces we will encounter, the first two piano pieces of Op. 11.

CHAPTER VII: OP. 11, NOS. 1 AND 2

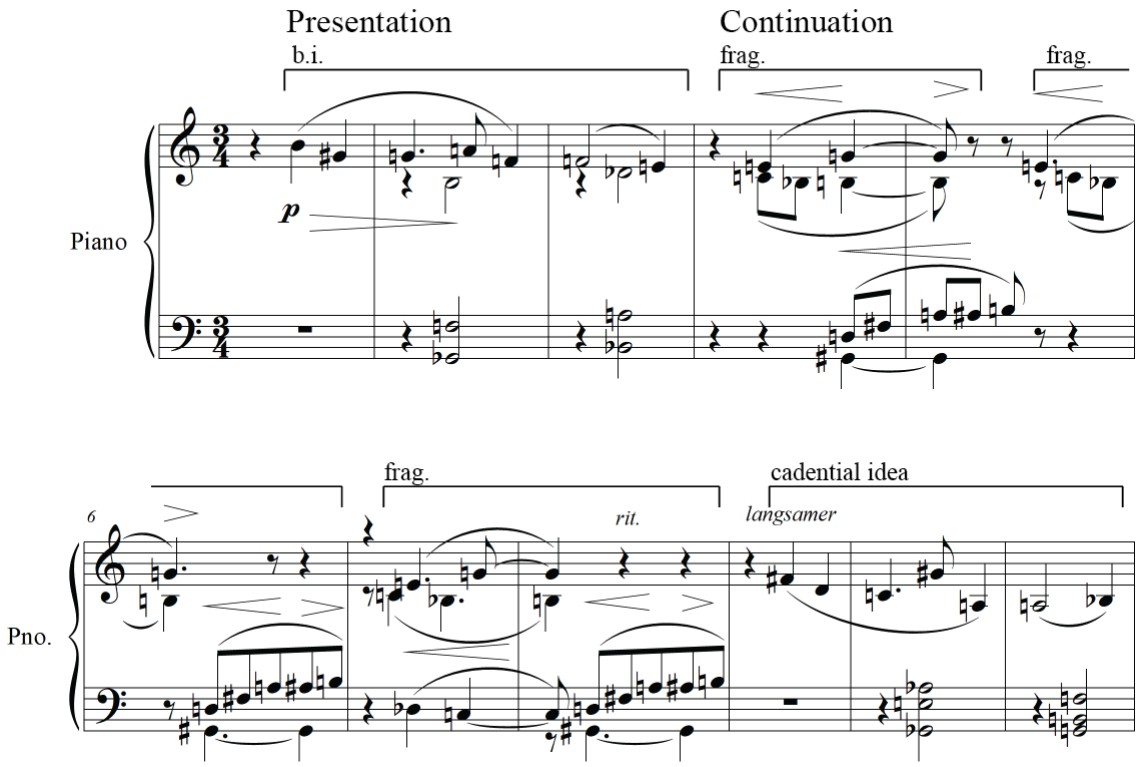
In this chapter, I will be analyzing the first two movements from Schoenberg's Op. 11. This is primarily an application of the techniques described in the preceding chapters, to show how they can be used when the music diverges from the ideal form types. This music, and especially the first movement, is perhaps the most discussed in all of Schoenberg's output. There is also a dizzying array of different formal interpretations. My analyses will decidedly fall into one of the already-established camps, but still, my approach is fundamentally different in defining what motivates musical form. It thus supplies further evidence in support of our interpretation of the piece while opening new possibilities for analytical techniques.

I read Op. 11/1 as essentially an expanded minuet form, although there are a great number of formal oddities. The exposition, which might best be classified as a theme-group, is structured as a small ternary over mm. 1–24 with a closing theme in mm. 25–33. It makes use of an interior theme in mm. 34–47, instead of a contrasting middle, which is based on the same melodic-motivic content. This interior theme is similar to the Op. 25 Musette featuring similar eccentric tendencies, loosening techniques, and the lack of a clear end. From m. 48 on, main theme material begins to return but it is not until m. 53 that the opening measures are repeated almost literally. As such, the end of the middle slowly becomes the recapitulation through a kind of retransition. The piece ends with a 6-bar closing section that restates the primary motive several times before eventually fading away.

The fact that I call the exposition a small ternary structure might make it sound like it is a straightforward formal section in the piece. That is not the case. One thing that

is pretty clear, though, is that the opening three measures present the *Grundgestalt*: motivic content to which the entire piece is somehow related. While many scholars point out the repeated descending motive, I read the whole three measures as a single basic idea, which comprises the entire presentation phrase as what Mark Richards has called a *monofold* presentatio.[131] This presentation begins an 11-bar sentence structure which can be seen below in **Example 7.1**. Most basic ideas do contain more than a single motive, and a 3-bar basic idea is much more common than a 1.5-bar basic idea. Besides the one eighth note in m. 2, this basic idea is rooted in the quarter-note pulse-stream. Also note that while the quarter-note pulse is straightforward, it is not clear exactly what meter that pulse should be grouped into or where the downbeat falls. We can hear either the notated downbeat or the emphasized half notes as the downbeat. This ambiguity makes it feel more like a stream of constant quarter notes without a larger hierarchy.

[131] Richards (2011).



Example 7.1. Schoenberg Op. 11/1, Exposition's Exposition mm. 1–11

A medial function, much like a continuation, begins in m. 4. The melodic idea is fragmented into the quarter note dyad E-G while the pulse-stream jumps to the eighth-note level. This fragment repeats three times, but the left and right hand gestures are displaced further from each other on each repetition. Despite this separation, individual durations are stretched and moved around so that the eighth-note pulse stream is completely uninterrupted during each fragment. As such, each fragment is one quarter note longer than the last, causing the continuation to gradually slacken in intensity. The ascending line in the left hand also contributes to the general loss of energy, despite our usual association of rising pitch with increased energy. Monahan and BaileyShea echo

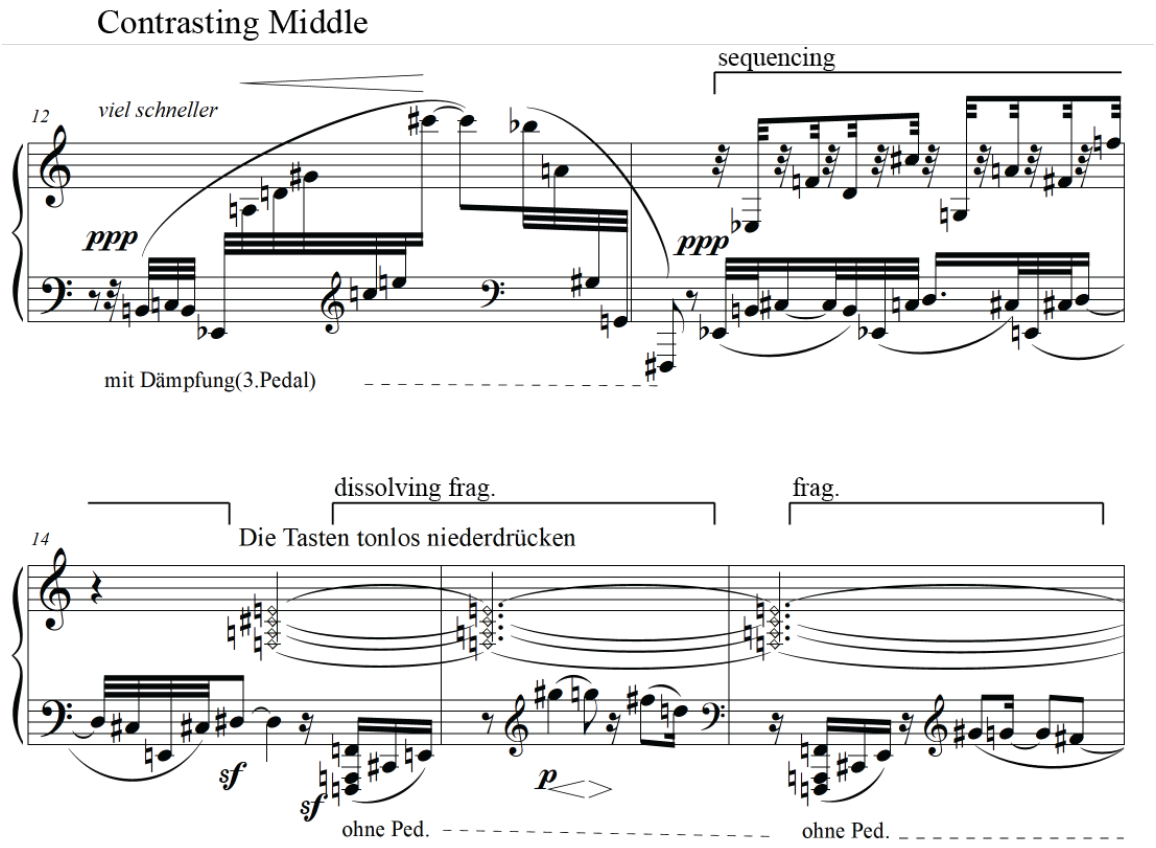
Ernst Kurth's description of a symphonic *melos* when they describe this gesture.[132] They point out how this particular ascent begins with larger leaps that constantly shrink with each step. Every time the gesture is repeated, it never reaches any higher and is taken even slower the last time. Thus it sounds more like a struggling failure to ascend any higher. So far we have heard a stable presentation of one basic idea at the quarter note pulse, and an immediate jump to the quicker 8th-note pulse. However, this continuation almost immediately begins losing energy as the fragments relax rather than quicken. We could then interpret the written *ritardando* in m. 8 as marking the closing gesture on the final struggling ascent. This would mean the return of presentation material in m. 9 as a new beginning. While it is possible to hear this as beginning a new consequent phrase, most performers instead emphasize the *langsamer* instruction in m. 9. The lethargic drop in energy continues even further as the eighth notes literally expand into quarters.

Such a closing gesture is particularly strange for Schoenberg. First, I have not seen Schoenberg use the term *langsamer* as a marking for the end of a phrase or section in any of his music. It is much more common for him to use *ritardando* to mark the ends of themes (as in m. 24), and *langsamer* to mark beginnings of phrases (as in m. 19). Second, it is unusual for Schoenberg to use the entire basic idea to mark the end of a theme. Schoenberg was the first to describe the technique of liquidating out characteristic material to effectively create a cadence. However, there was a trend in the Romantic era of doing just the opposite. In a recent article, Caplin describes how some early Romantic composers in fact repeated the opening basic idea over the cadential harmonies as a type of circular formal organization.[133] The only other Schoenbergian example that is close to

[132] Monahan and BaileyShea (2018, XXX); Kurth (1991, XXX).
[133] Caplin (2008, 9–10).

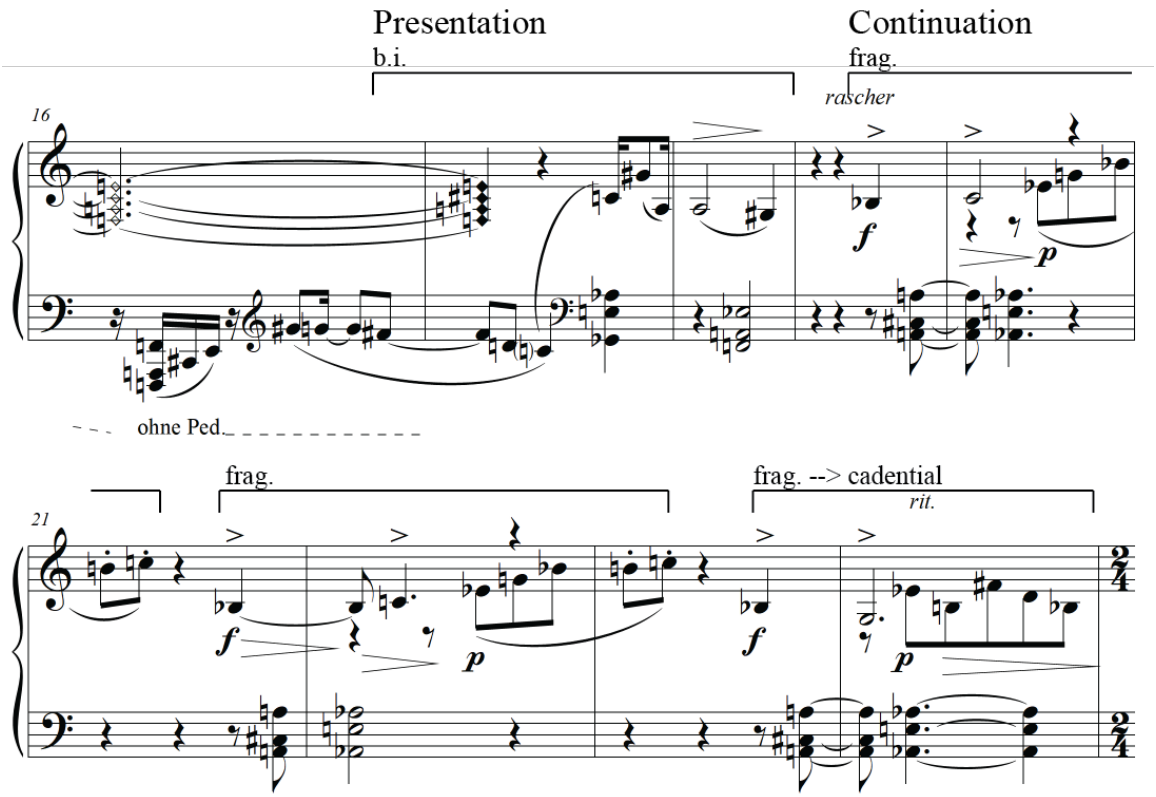
Caplin's description is found in Op. 33b, m. 9 (see chapter 5). The opening motive returns at the cadence, but that is just one motive and not the entire basic idea.

Still, it is best to recognize the opening 11 measures as a single formal unit. It is certainly not a good example of a sentence, though it is the closest type to compare with. The presentation is monofold, the continuation begins to slow down almost immediately, and the cadence recycles the entire basic idea as the theme extends well past the expected eight measures. My reading of these 11 measures might seem to conflict with the traditional interpretation, found in Brinkmann 1969, Forte 1981, and most recently Boss 2019. These analysts all read the opening as a small three-part form: aba'. However, it seems clear that all of these analysts view form as a grouping structure based on the content. The ternary grouping of motivic content is rather clear, and in fact, all of us divide this theme at the same points as my analysis. I would just prefer to include function as well as identify the motivic relationships. I want to point out that the b section does not just contrast in terms of motive forms, but also features medial acceleration with repeating fragments similar to a continuation. The a' section does not just vary earlier motives, it also slows down, both in rhythmic duration and in tempo, effectively marking closure in this opening structure.



Example 7.2 – Schoenberg Op. 11/1, Exposition's Contrasting Middle, mm. 12–16

This means that the remarkable departure in m. 12 is the contrasting middle of the small ternary theme, as shown in **Example 7.2**. This wildly unstable passage features a sudden and dramatic acceleration into 32nd notes and a tessitura explosion into almost four octaves. This middle is significantly more unstable than anything in the exposition as any sense of consistent pulse is lost amongst the flurry of new durations and syncopations. The left hand sequences an arch gesture in mm. 13–14 before fragmenting and liquidating out these motives into m. 16. Rather than ending conclusively, this middle slowly transforms into the opening motive at mm. 15–17, functioning much like a retransition.



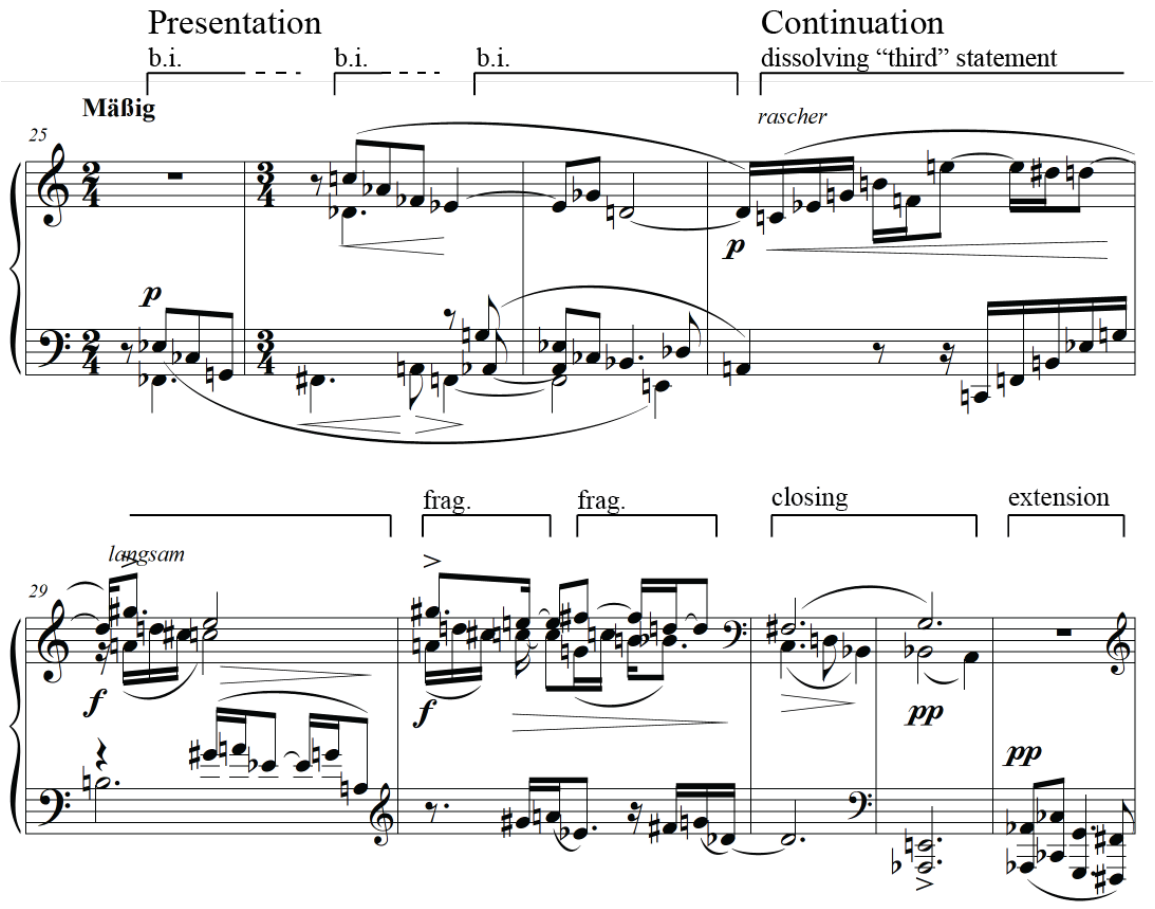
Example 7.3 – Schoenberg Op. 11/1, Exposition's recapitulation, mm. 17–24

Measure 17 is thus the beginning of the recapitulation, shown in **Example 7.3** above. The way he slowly eases the opening *Grundgestalt* back in to the texture is a common technique for Schoenberg's recapitulations, as we've seen in Minuet and Musette Op. 25, the recaps in Op. 33b and Op. 30/1, and in some of Op. 11 yet to come. The original continuation from mm. 4–8 returns with the melodic minor third hidden in the left hand, and hammers out the heavy block chords. The struggling ascending line is then played by the right hand using the rhythmically displaced variation. This fragment is performed three times without rhythmic expansion, although the final time is inverted and marked with a *ritardando*, making a very clear close to the ternary structure in mm. 1–24.

Before moving on, I want to make a few more points about the possible cadence in m. 8. First, it is entirely possible for a performer to make an effective sense of closure in m. 8 by slowing down a great deal in the continuation and starting m. 9 with a slow, but steady, new tempo. Such a performance would create a failed consequent phrase that is then interrupted by the contrasting middle, which would highlight the surprise and bewilderment of the sudden arpeggio. Second, it creates an extremely balanced set of 3 sentential structures each 8 bars long: the opening sentence in mm. 1–8, the failed consequent with contrasting middle in mm. 9–16, and the recapitulation in mm. 17–24. This hypermeter is too regular for an analyst and performer to ignore, and it might also explain the irregular use of the *langsamer* marking.

The main theme section ends by developing material from the opening 11 bars with a closing theme in mm. 25–33, seen below in **Example 7.4**. This theme's proportions curiously emphasize the number three, as the sentence is nine measures long, the presentation is three measures long and it features three voices in imitative polyphony. The descending augmented triad used to close the main theme in m. 24 is adapted as the basic idea for this sentence. While the presentation stays in the 8^{th}-note pulse-level, the continuation immediately jumps to the 16^{th}-note with two large ascending arpeggios and a dramatic crescendo to *forte* in m. 28. The peak of this phrase in m. 29 is fragmented and sequenced in m. 30 before suddenly dropping precipitously into the bass clef and making a decrescendo to a *pianissimo*. This three bar segment in mm. 31–33 serves as the closing gesture for the entire main theme section. Now, I must say that it is particularly strange for such a tight-knit theme to serve as a codetta for the main theme in a large ternary. Accepting the ternary reading with a strong cadence in m. 24 necessarily

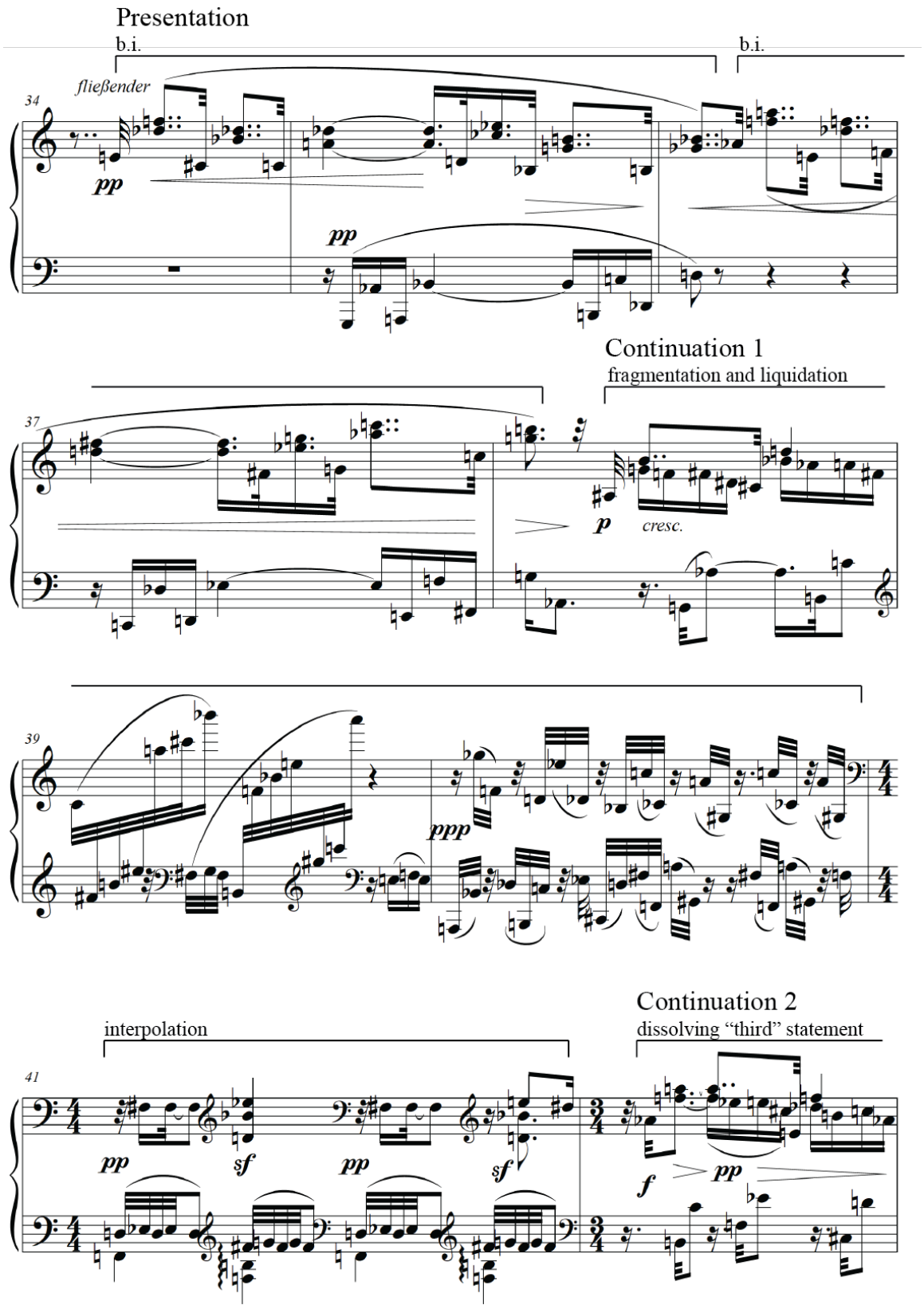
leads us to think of this as a closing theme. As we have seen, expositional closing sections are often non-thematic; a presentation suddenly ending is normally the most thematic description possible. And yet its tight-knit structure also precludes it from functioning as an interior theme. Instead, this seems to be an uncharacteristically thematic development of the opening measures and the cadential material in m. 24.



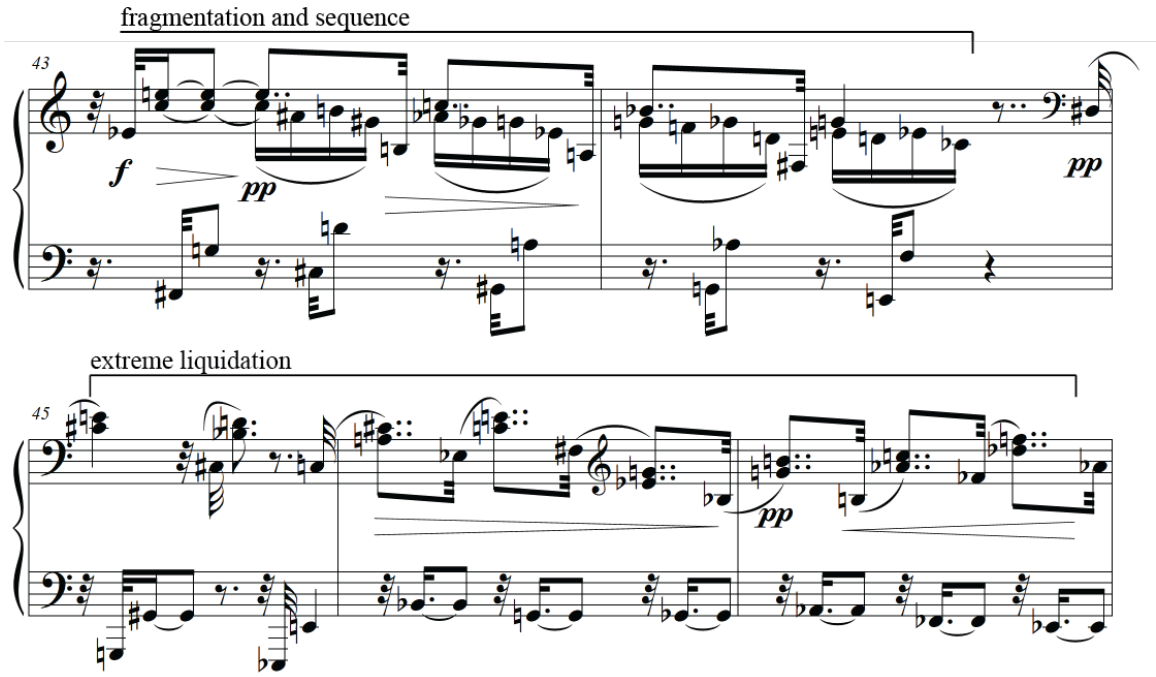
Example 7.4 – Schoenberg Op. 11/1, Exposition's closing theme, mm. 25–33

The contrasting middle of mm. 34–47, shown below in **Example 7.5**, seamlessly combines an unusually stable thematic beginning with an incredibly unstable retransitional ending. The opening *Grundgestalt* is developed into the 2-bar basic idea of a presentation phrase. Each note of the six-note sequence returns a tritone higher, decorated with a 32nd-note that creates a ba-DING embellishment. Note the two other

rhythmic variations in this idea: the final two notes are shortened so that the entire idea is exactly two bars long, and the more active accompaniment actually saturates the 8th-note pulse-level in the second measure. This early step into a more active high-energy state promises a continuation full of fragmentation and acceleration, to contrast with the lethargic opening. This continuation begins in m. 38 as a dissolving third statement. The basic idea is inverted to ascend, features a much more intricate accompaniment, and eventually gives way to two surging arpeggios that recall the earlier contrasting middle. This massive arpeggio is then fragmented and liquidated into a series of near-octave leaps (similar to m. 13 rhythmically). A new idea enters in m. 41, although it is just a new guise for old harmonies. A second continuation begins in m. 42, similar to the loosening techniques in the Musette Op. 25. The ba-DING motive, with 16th-note alto voice, begins another dissolving "third" statement followed by immediate fragmentation and liquidation. This time, m. 12's ascending arpeggio does not interrupt, and the liquidation strips out almost every feature of the basic idea. Eventually, the constant repetition of this one-beat motive begins building up again (from m. 47), rising in pitch and dynamics until material from the main theme's coda returns. The complete liquidation and subsequent build thus functions as a kind of retransition, paving the way for a recapitulation.

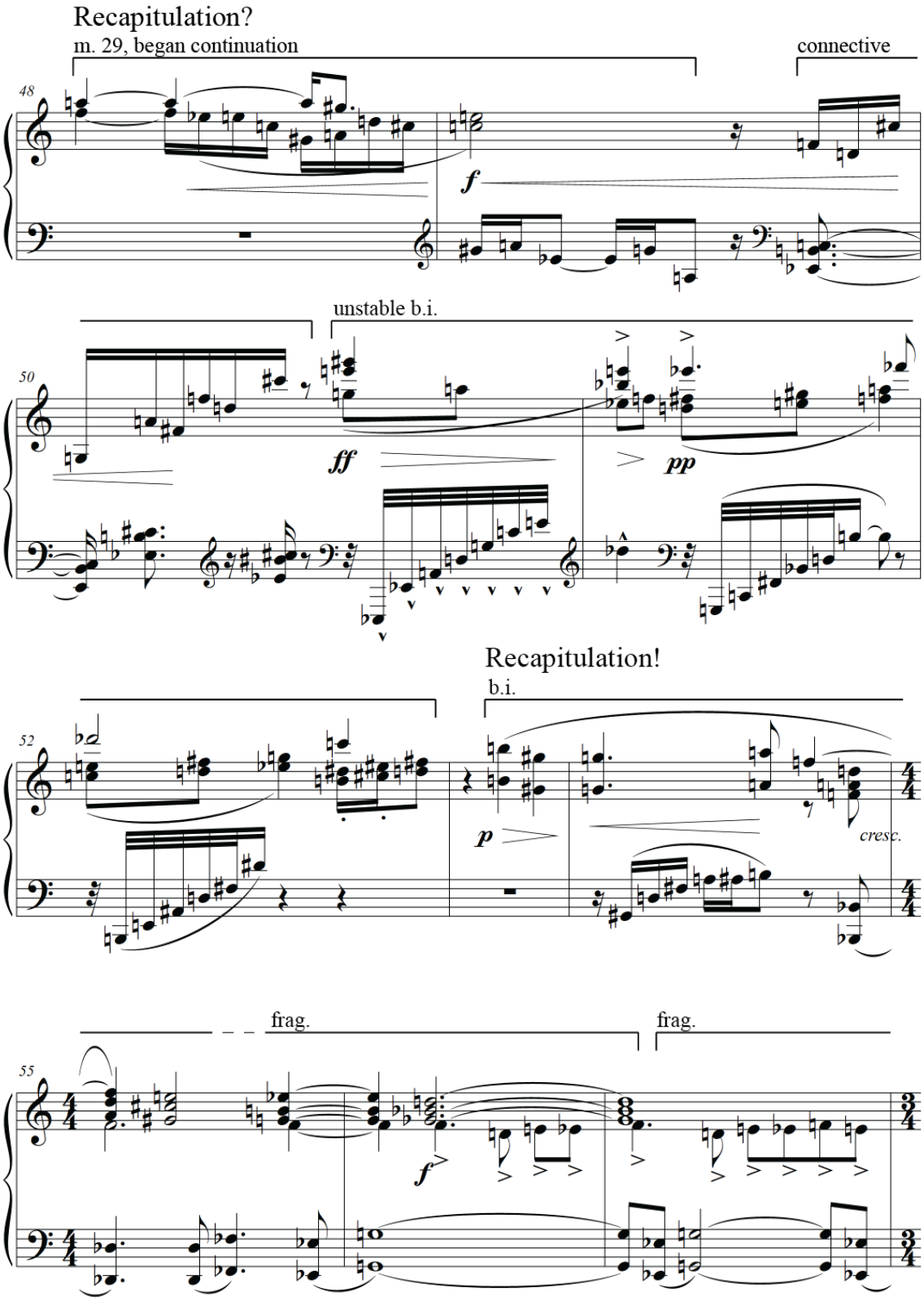


Example 7.5 – Schoenberg Op. 11/1, Contrasting Middle, mm. 34–47

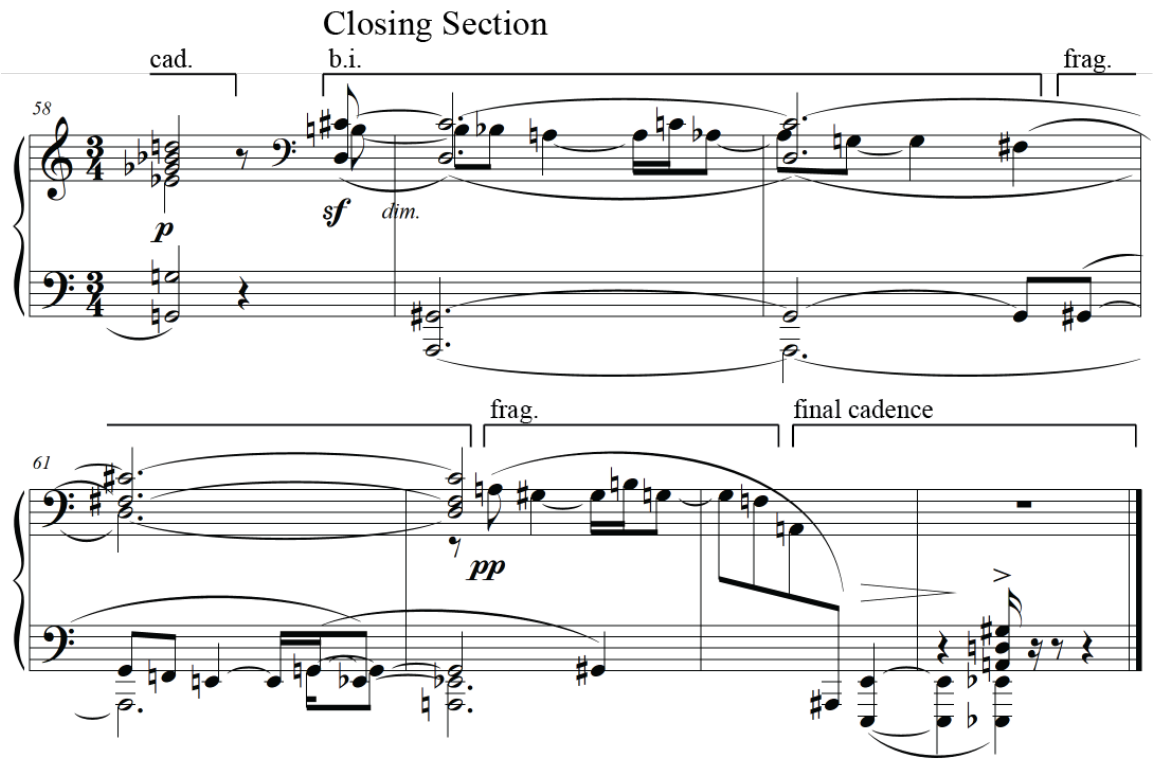


Example 7.5 cont. – Schoenberg Op. 11/1, Contrasting Middle, mm 34–47

I have marked the beginning of the recapitulation in m. 48 for reasons I will explain below, although I should be upfront that it is not a clearly defined beginning. Looking at **Example 7.6** below, measure 48 is simply the earliest possible moment we could mark the recapitulation, as the line between retransition and recapitulation is thoroughly blurred. Measure 53 is the moment that the main theme begins again, at which point the listener would be certain that the recapitulation has begun. However, all of the material between m. 48 and 53 is taken from the main theme-group played in reverse. The passage in mm. 48–49 is copied exactly from m. 29, but retains its medial function.



Example 7.6 Schoenberg Op. 11/1, Recapitulation, mm. 48–64



Example 7.6 cont. – Schoenberg Op. 11/1, Recapitulation, mm. 48–64

It might literally recapitulate earlier material, but it is also clearly still functioning as a transition towards something else. The top line of mm. 50–52 is almost exactly the same as the opening passage, although it has been transposed and reordered. The first leap down is a major third and the second leap down is a minor third, reversing the order of mm. 1–3. Meanwhile, each of these large sweeping arpeggios in the left hand clearly mimics the oft-discussed arpeggio in m. 12. Finally, measures 1–3 are restated almost exactly in mm. 53–55, and the arpeggio from m. 12 collapses into that of m. 4, at which point a listener is finally certain that we are in a recapitulation. But Schoenberg does not recapitulate the entire main theme here. Instead, the sudden arrival of opening material is quickly abandoned for a long descent with more variations of the tenor arpeggios and alto steps from mm. 4–8. The movement then ends with a long winding down as fragments of the opening basic idea are stated again and again at various transpositions.

These larger sections still clearly convey their formal functions, even as their internal structures are very unusual. The exposition provides a very stable 24-bar small ternary and a 9-bar closing sentence, each of which is clearly articulated from the surrounding sections. The sense of a new section beginning in m. 34 is unmistakable, even as it reuses and develops thematic material from the exposition. While the beginning of the contrasting middle is well-articulated, it is internally loosened by the extreme fragmentation, liquidation, and expansion. It is also unclear exactly when the contrasting middle ends and the recapitulation begins. The developmental process slowly reintroduces earlier material until the section's function is finally clear, though we don't quite know exactly when everything fell into place.

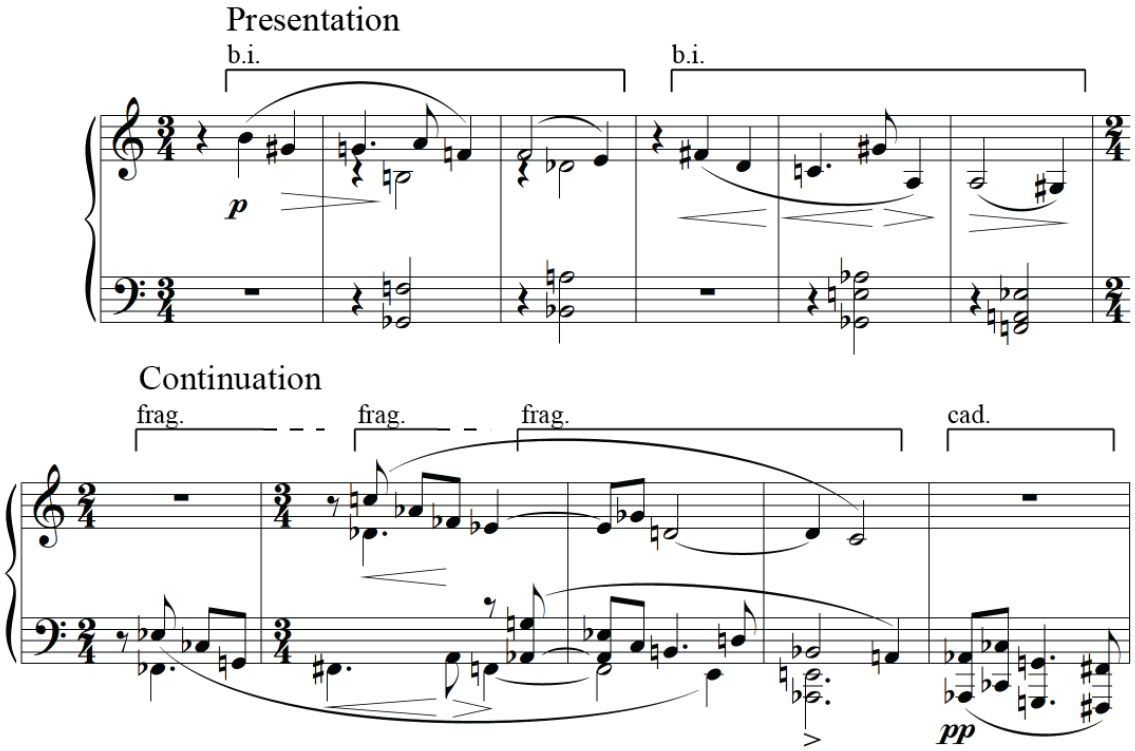
This movement has probably received the most attention and discussion in all of Schoenberg's compositional output. There also seems to be more formal interpretations of the piece than there are scholars who have written about it. This piece poses a great challenge to performers and analysts alike. When we arrive at very different conclusions, it usually stems from our initial assumptions and values about what defines and motivates form in Schoenberg's music. In my own analysis, I pay close attention to the motivic content but more importantly to how that content is used. In the following section, I want to discuss two other scholars' interpretations of this piece. First, I want to contrast my approach with Matthew Arndt's recent article in which he analyzes this same movement with his own set of formal functions. Second, I want to compare my analysis to Jack Boss's, which begins with a very different assumption on what motivates form, but comes to very similar conclusions to my own.

Recently, Arndt has criticized Caplin's theory of formal functions for not clearly distinguishing between the musical *part* that happens and the *function* that it projects.[134] His concern brings up many valid points, for instance showing how a single harmonic technique can project multiple temporalities. Standing on the dominant could signal the close of a transition, a post-cadential extension in a theme, and sometimes even a medial expansion. However, he argues that each possible use of standing on the dominant provides the same function of stabilization. As such, he considers the ideal formal types a *part* in the music, and each part conveys functions. So standing on the dominant at the end of a transition functions to stabilize the modulating progression, delimit the transitional passage, and prepare for the subordinate theme. Furthermore, by generalizing his formal functions beyond the ideal types he can more adequately explain music that does not neatly match typical forms, such as Op. 11/1.

This generalization of function is clearly explained and well-founded, but I take issue with his application of it in Op. 11. He begins by claiming that there is a "textbook sentence" hidden in the opening 33 measures that can be found by removing large portions of the music, seen below in **Example 7.7**. By only considering mm. 1–3, 9–11, 18, 25–28, and 32–33, he fashions an 11-bar sentence. Luckily, he does not stop there or we would need to question if excising 22 measures can still create a "textbook sentence." Because of that pattern, Arndt identifies a mid-level sentence (presentation phrase in mm. 1–24 and a continuation in mm. 25–32) that contains a significant number of expanding episodes and interpolations in between the basic ideas and continuations. While I find his mid-level sentence particularly baffling, every other level of his formal chart shares a lot

[134] Arndt (2018, 208–226).

in common with my own. Both of us label an exposition in the opening 33 measures. We begin with the same 3-bar basic idea, and mark the repetitions in mm. 9 and 17. What I call a contrasting middle in m. 12, Arndt calls an episode with a confrontational function.[135]



Example 7.7 – Arndt's sentence, quilted from excerpts of mm. 1–33

Even where I disagree on the local level, it is a minor difference. For instance, he calls mm. 4–8 and mm. 19–24 interpolations with functions of confrontation and stabilization. I have significant reservations with identifying interpolations that are five and six measures long, but I agree that there is an element of confrontation and stabilization occurring in those passages. Even though the motives are closely related, they are reconstructed into what seems like an entirely new form. These continuations

[135] These episodes are similar to what Brinkmann (1969) calls "outbreak zones," larger disruptions in the overall formal plan.

even stabilize with closing gestures; perhaps Arndt would appreciate the "failed consequent" analysis with a cadence in m. 8. I just want to add that these interpolations also have functions of elaboration and dissolution. If we recast the stabilization as delimitation, then we can easily recognize these as continuations by Arndt's description rather than interpolations. Arndt is trying to force the entire passage into his 33-bar sentence mold. Anything that does not fit that mold must be distorted to allow for it to work.

It also appears that Arndt refuses to identify continuation phrases when they do not obviously reuse the basic idea. His continuation in mm. 24–33, for example, only seems possible because the descending line reuses almost the entire basic idea. The fragmentation is only made possible by the imitative *stretto*. The continuation in mm. 28–33 is almost undeniable, as it features an explosive build in energy with two large arpeggios up through a crescendo into *forte*. Admittedly new material appears at the peak of this arch, but is immediately fragmented and sequenced as it leads down into a low-energy state to close the exposition. It seems either that Arndt has not fully separated function from content as he claims, or that the parts of a sentence cannot be separated from content as Caplin claims. As to the rest of the movement, any differences in our analyses are inconsequential.

As for Boss, our disagreements are more foundational even though our final charts look quite similar. Taking his usual approach, Boss begins with an exhaustively detailed account of the motivic content of the piece described through an ordered pitch-interval and Fortean set-class lens. Every note is accounted for as the motives are developed and varied over the course of the piece. After this intense scrutiny, he

establishes a formal chart that describes the motivic transformation. Groups are created based on the similarity of motive-forms. If one type of variation returns, it is given the same label as the earlier section. His functional labels are concerned with how the dialectic unfolds, developed from Schoenberg's own Idealist philosophical writings. The *Grundgestalt* is opposed by a problem, and the rest of the piece tries to reconcile these two opposing ideas. The ideas involve ordered pitch-interval "motives" and set-class "chords" in the atonal music. Boss's form charts are best understood as a grouping structure, motivated by the similarity of structural motive-forms and set-classes being used, and the patterns created by different motive-forms and set-classes.

Even though our formal approaches are fundamentally opposed, our final interpretations of the form are quite similar. Both of us end up dividing the form into the same groups, but we assign them much different functions. We both hear mm. 1–11 as a single group, although I call it a sentence with an expanded closing section and he calls it a small three-part form. Now there is clearly an ABA' motivic pattern, but considering the opening three-measure *Grundgestalt* a complete exposition of a small ternary isn't similar at all to Schoenberg's other examples of the type. We both start a new section in m. 12, but we disagree on what level of the formal hierarchy it functions in. In my view, it is a brief contrast in the middle of the first 24 measures. Boss, however views it as a B section in a larger 5-part sonata-rondo form for the entire movement. We both identify the reprise in m. 17, the loosely-knit developmental passage beginning in m. 34, and the final recapitulation in m. 53.

Our disagreement then isn't at the local phrase level, but instead how those pieces relate to one another. I find it very difficult to hear a sonata form in this movement. I do

understand that mm. 12–16 introduce new contrasting material, and that Schoenberg resolves the tension between those contrasting elements in a way that might mimic the sonata form. But the sonata is not the only musical form that projects this dialectic. The use of a contrasting harmonic area and its subsequent resolution is the key to most Classical forms. So if I expect a sonata form, the first thing I listen for is a transition into a subordinate theme. I find this expositional rotation necessary for hearing a sonata form, because any deviations in the development and recapitulation are more easily reconciled. The Op. 11/1 does not do this.[136] It does establish a main theme that is both stable and well-articulated. We would then hear m. 12 as the transition, and it certainly could carry that function given how unstable it is. But instead of leading to a new theme, we end up recapitulating material from the beginning. Perhaps we can make the argument that this is a "monothematic" exposition in the style of Haydn. This would even explain the use of a closing theme in mm. 25–33. But it would not suit Boss's needs for establishing a motivic opposition that is resolved in the recapitulation.

One final comment about Boss's analysis: I do not believe that our analytical techniques are fundamentally at odds. I would rather describe them as complementary. I find the way he tracks the motivic development and describes it in a dialectic process of opposition and resolution extremely compelling. Having gone through his analysis multiple times now, it is very difficult for me not to hear that synthesis of conflicting ideas in the recapitulation. But I think an analyst trying to approach any Schoenberg composition for the first time might prefer to begin with my style of formal analysis.

[136] Forte (1981) calls this a ternary form that "resembles a short sonata form." I agree that the contrasting middle is very developmental, and the recapitulation seems undeniable. But it seems that the lack of opposing themes in the exposition is why Forte still calls it principally ternary and only resembling a sonata.

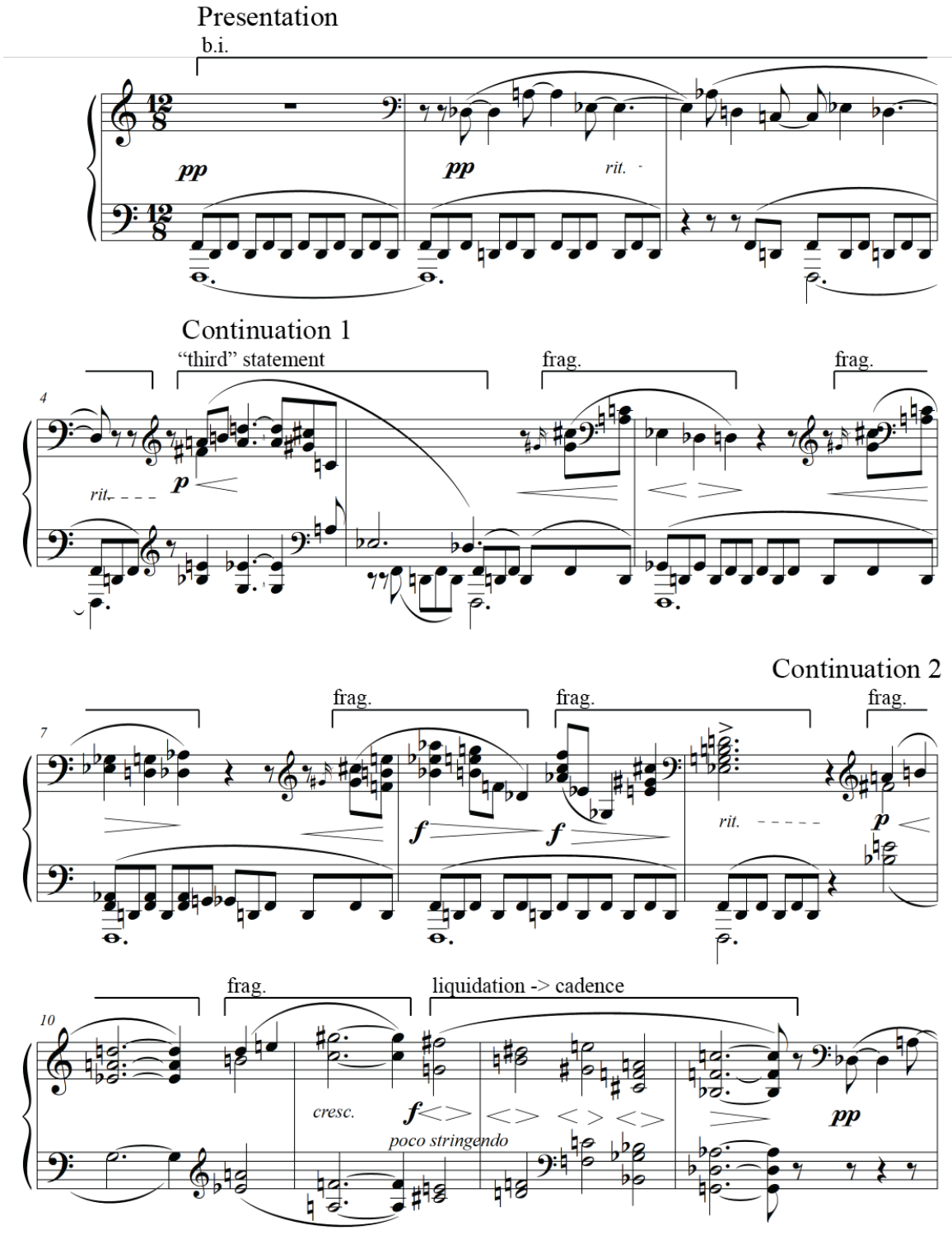
Once those formal markers are in place, they can help identify those crucial moments in an analysis of the motives or row-count. Perhaps the biggest challenge for post-tonal analysis is sifting through all the possible connections and finding those that are actually meaningful. That problem isn't just a matter of performing the analysis. When we present our analyses, post-tonal segmentations face a high degree of skepticism than most tonal theories. Some analysts decided on a scrolling window style of segmentation, identifying every collection of three, four, or however many notes. But the sheer volume of information that produces is usually of no practical use for an analyst. Even slowly sifting through the motives by hand, we run the risk of forcing a pattern, finding connections that aren't audible, or relying on segmentations that even we doubt. Even if we haven't fallen into those traps, we have to convince others who have not spent hundreds of hours poring over the same piece. Instead, we could heed Schoenberg's words that form makes the idea comprehensible. We can find formal design, and then see what segmentations it highlights. I think we'll find that we can recreate Boss's motivic analyses without getting lost in a sea of set-classes.

Op. 11 No. 2

The second movement of the set is very peculiar. Like Op. 11/1, it abandons the ideal types on the lower levels of the formal hierarchy. However, most people familiar with the piece would describe it as the most comprehensible of the three movements. Perhaps it is because it includes nothing as jarring as m. 12 in the first movement. Instead, the contrasting material, both within sections and across sections, is more uniform in character. The ostinato bass line provides constant motion as melodic voices enter and exit the texture seemingly on a whim. Throughout the movement, there is a

dreadful impression that something sinister is watching from just out of sight, although every moment still feels purposeful. I want to show that the formal functions of this movement readily convey their temporality and the phrasing is perhaps the clearest example of coherence and articulation in Schoenberg's music. When musical material returns, it is often simply transposed and easily recognizable. When new material enters, it is clearly set off in new formal sections and well-articulated from the surrounding music. Every moment feels purposeful because those formal functions logically extend from what they just heard. A listener can easily follow the phrasing and trace the form, even though it seems to abandon the ideal types at every turn. The local-level phrasing very rarely matches theme-types, and on a larger scale Schoenberg seems to ride a fine line between different ternary functions.

Like the first movement, the form of the opening passage is the trickiest to parse. The first half of the movement alternates between presenting a single idea and various types of medial phrases. However, I would not characterize it as a rondo, which I discuss more fully after the analysis. I read the exposition as a series of three *Sätze*, each shorter and more aggressively driving than the last. The first of these *Sätze* is shown below in **Example 7.8**. The opening three measures create a basic idea, emphasizing the bass ostinato of F-D with a very low slinking tenor melody. This opening basic idea could easily be split in half, much like the beginning of Op. 11/1. We might have an even stronger case here because the extremely slow tempo invokes Caplin's concept of an experiential measure. I have chosen to call it a single basic idea primarily to keep it in proportion with the following phrase.



Example 7.8 – Schoenberg Op. 11/2, Main Theme *Satz* 1, mm. 1–13 Op. 11/2

This idea is contrasted with two phrases that I am calling a continuation for lack of a better word. A quick point: I know that I am calling these presentation and

continuation functions, but these phrase-groups make for exceptionally terrible examples of a sentence. I'm opting for the German *Satz* here because they do align with the older A.B. Marx usage of the word for a single-part theme, as opposed to the multi-part period.[137] Like many of Schoenberg's medial functions, these two phrases are based on new contrasting material that will resurface throughout the piece. As such, they do not literally "continue" the previous music. However, both of these phrases have an internal structure comparable to BaileyShea's types of continuation. The phrase in mm. 4b–9 resembles a dissolving third statement, even though there is not a first or second statement. Measures 4b–5a create a complete "third" statement, while each fragment after that is abbreviated, fragmented, and liquidated leading into a cadence in m. 9a. The second phrase in mm. 9b–13 creates a more clear sentential continuation, abbreviating that same opening gesture twice before a liquidation towards a second cadence.

However we also face a larger issue. Jack Boss and Reinhold Brinkmann consider the opening three measures the first theme and mm. 4b–13 the second theme providing the main contrast of the movement.[138] Such a short fragment does not constitute a complete thematic statement in the theory of formal functions I have laid out so far. If we wanted to call mm. 4b–13 a new contrasting section, then the opening three measures are an almost non-functional stump of a theme. We might call it an introduction, but it insists on returning so many times. The problem of the "returning slow introduction" has plagued Beethoven analysts for ages now, but Schmalfeldt's analysis of the Tempest

[137] Marx (1997).

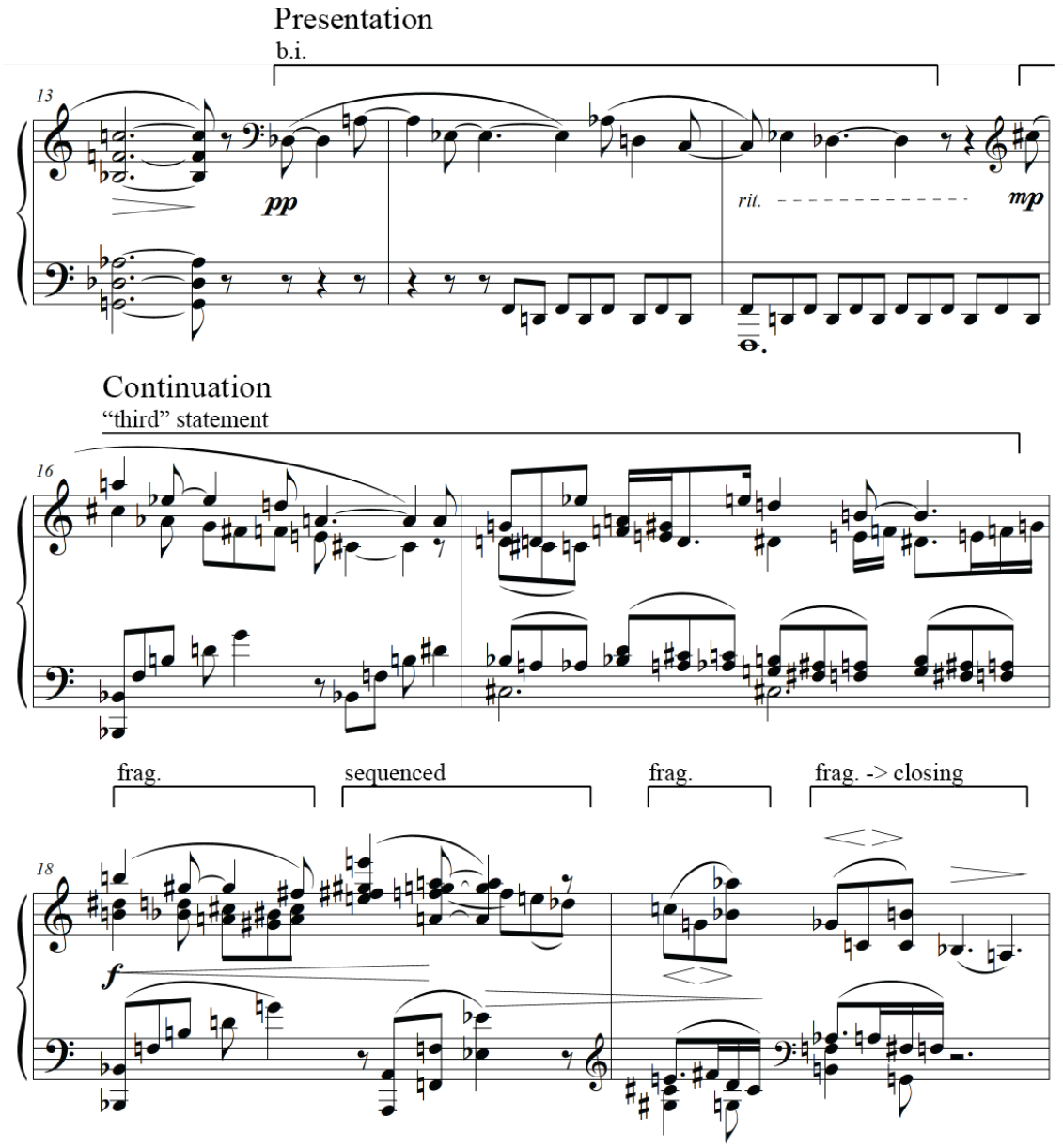
[138] Boss (2019) and Brinkmann (1969). This same debate—is it a continuation or second theme?—played out in Op. 33b, with Alegant, Hyde, and Boss, see chapter 5.

Sonata is perhaps the most relevant here.[139] If we hear the opening three bars as just introductory, then the main theme function occurs in mm. 4b–13. But when the opening passage returns in mm. 13–15, we are forced to question both how it functions now and how it functioned earlier. And we must face this dilemma a third time when it returns again in mm. 20–22. Like Schmalfeldt and the Tempest Sonata, we must retrospectively re-interpret the introductory passage as belonging to and beginning larger thematic content. It only becomes clear that it functions this way after we have progressed into the piece. My form charts thus represent the final interpretation, rather than the process of a first-time listener. I also feel it necessary to point out: just because I am grouping mm. 1–13 together does not mean that m. 4b can't create the primary motivic contrast of the entire piece.

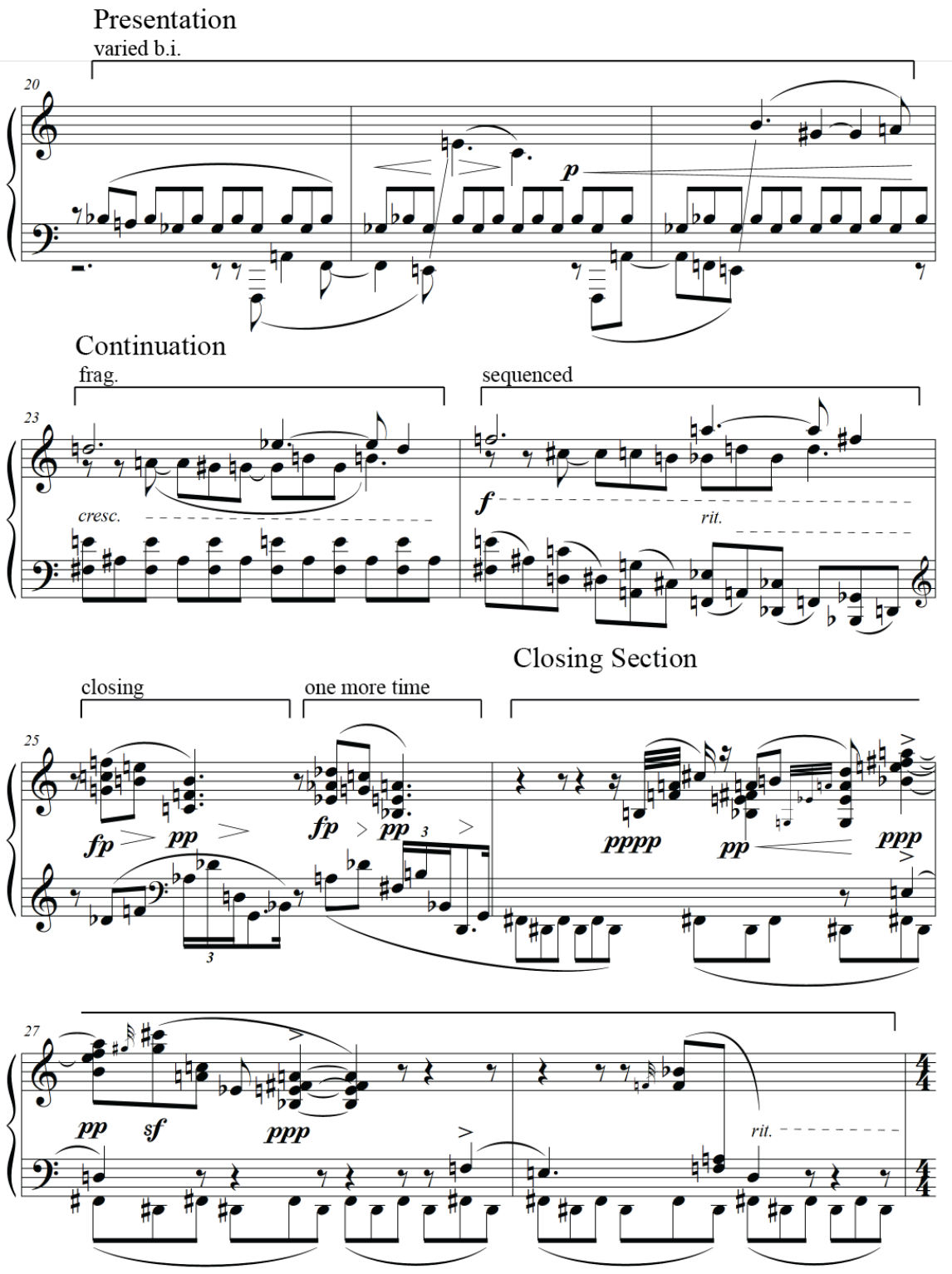
The second *Satz* begins with the same opening idea returning in mm. 13b–15 shown below in **Example 7.9**, although the tenor melody enters before the bass ostinato this time. A new continuation begins in m. 16, this time actually continuing the basic idea by starting with the same pitch-classes. The melodic line immediately leaps higher than any point earlier in the piece and cascades down an octave. Meanwhile the bass line creates vigorous ascending arpeggios, counteracting the sinking melody. We can immediately recognize this build in energy through this distance traveled in pitch-space, even though the pulse-stream has stayed consistent. This new continuation then accelerates to 16th notes in m. 17, and fragments in a sequential drive upwards in mm. 17–18. This precipitous rise is abandoned succinctly in m. 19 before ending on two dotted quarter notes over a *ritardando*. This same pattern plays out a third time in mm.

[139] Schmalfeldt (2011, 39–44).

20–28 with several variations, shown in **Example 7.10**. The bass ostinato is transposed into the tenor, while the melodic line seems to have absorbed some of the earlier energy as it vaults from the lowest range of the piano into the treble clef. This statement builds in energy, as the dynamic increases with the ascending leaps leading into another continuation in m. 23. This time the melodic line is a transposition of the alto line of m. 16, with an added augmented triad bounce at the end. The closing gesture in m. 25 is very similar to some of the cadences in the Op. 25 Suite where the melodic line stumbles into a final chord just as the bass line shifts away underneath it.



Example 7.9 – Schoenberg Op. 11/2, Main theme *Satz* 2, mm. 13–19, Op. 11/2



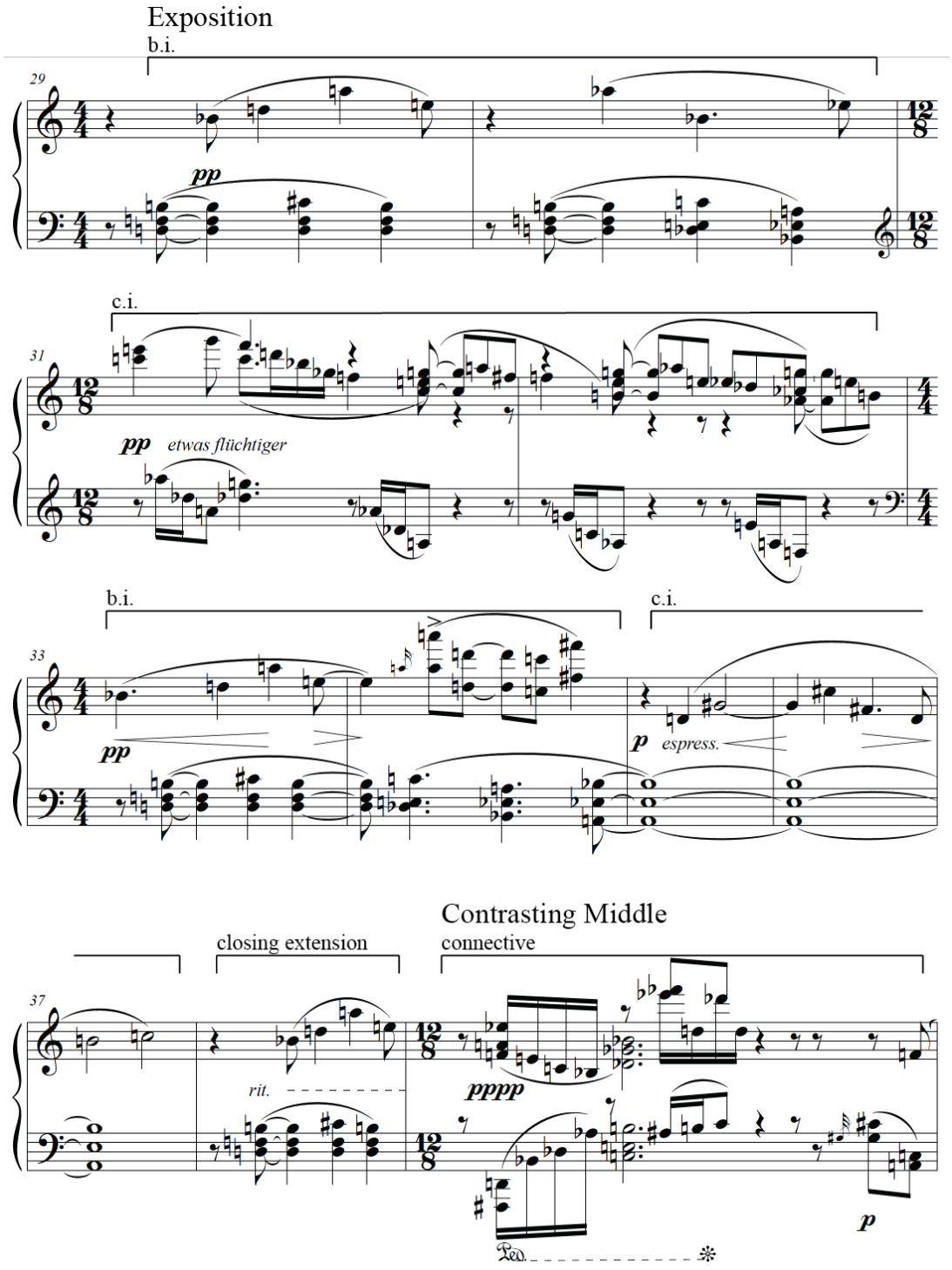
Example 7.10 – Schoenberg Op. 11/2, Main Theme *Satz* 3, mm. 20–28, Op. 11/2

The following passage, mm. 26–28, brings back several motives from the first continuation in mm. 4–9 and serves as a closing section for everything that has happened

so far. Overall, these opening 28 measures serve a stable expositional function but there is no great term for the formal design. It features a three-part organization, pairing up each statement and continuation, but it does not create the small ternary functions. There is no contrasting middle or recapitulation function. It rather feels like three statements of the same material, but each one is shorter, faster, and more energetic. Instead of rounding off this main theme group, it creates a quickening impulse towards a new contrasting section. Second, this does not resemble a rondo form, even though there is similar motivic content separated by new "episodes." As we have seen in Op. 30, rondo forms are not just a matter of repeating motivic content, but rather stating complete thematic units. In this piece, we would have to consider the opening three measures a complete thematic unit, and it simply isn't long enough to convey that formal function.

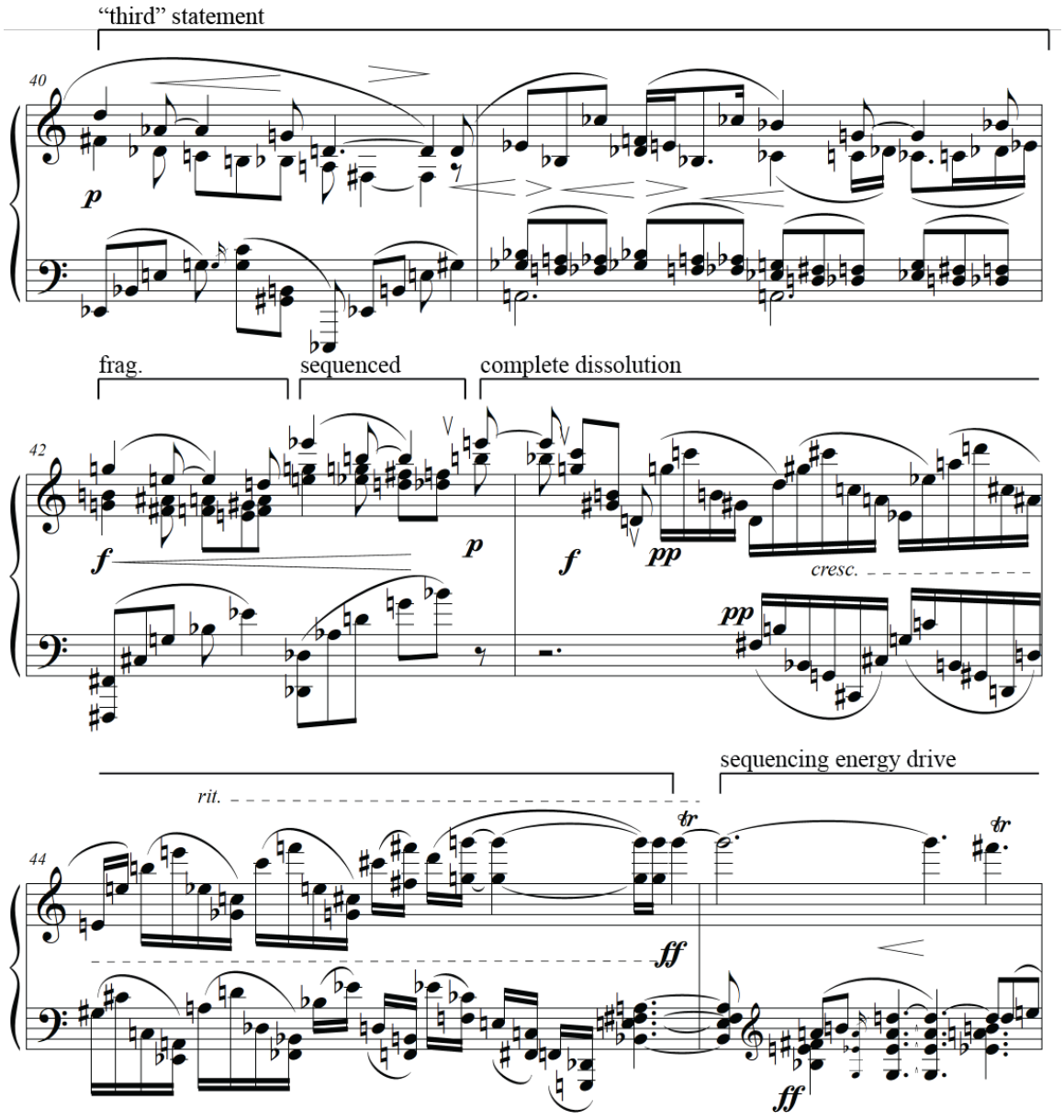
A clearly new idea enters in m. 29 that suggests a periodic structure in mm. 29–38 and a small ternary structure in mm. 29–54, seen below in **Example 7.11**. This new material is separated from the previous section through the disappearance of the bass ostinato, and marks a clear initiating function for a new formal section. The 2-bar basic idea almost saturates the 8th-note pulse-level, although there are several empty gaps. It is followed by a contrasting idea that acts much like a continuation, finally completing the 8th-note pulse-stream and introducing 16th-notes as well. It features fragmentation and sequential patterns, leading into the basic idea's return in m. 33. This basic idea more fully saturates the 8th-note pulse stream while the contrasting idea in mm. 35–38 slows down, rather than speeds up. The left-hand harmony is sustained for three whole measures as the melody slows down significantly and any sense of constant pulse is lost.

Measure 38 is a closing gesture that exactly repeats the period's entire opening measure with a written *ritardando*.[140]

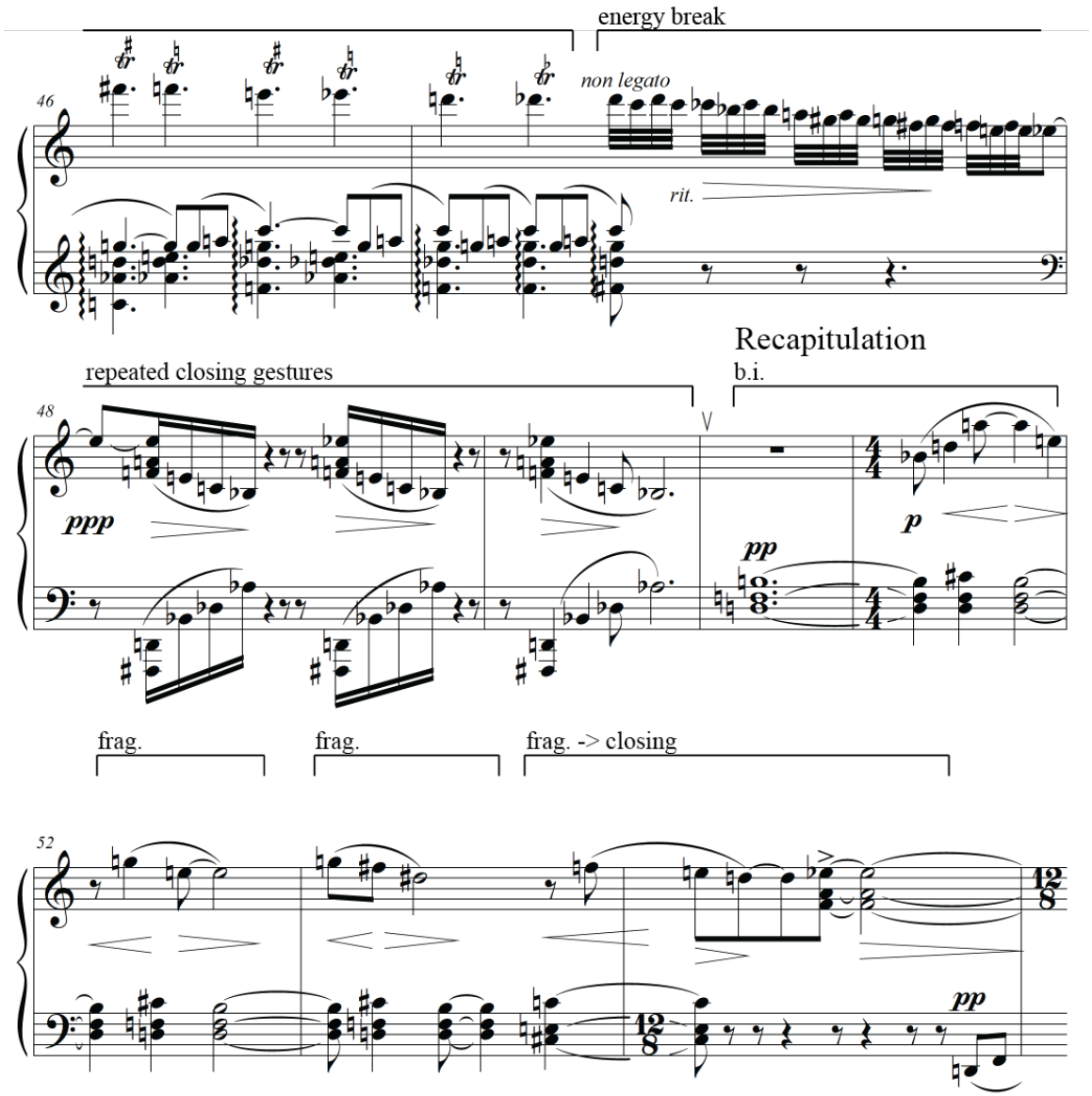


Example 7.11 – Schoenberg Op. 11/2, Interior Theme, mm. 29–49

[140] Perhaps this is more evidence for hearing a cadence in mm. 9–11 in Op. 11/1.



Example 7.11 cont. – Schoenberg Op. 11/2, Interior Theme, mm 29–49



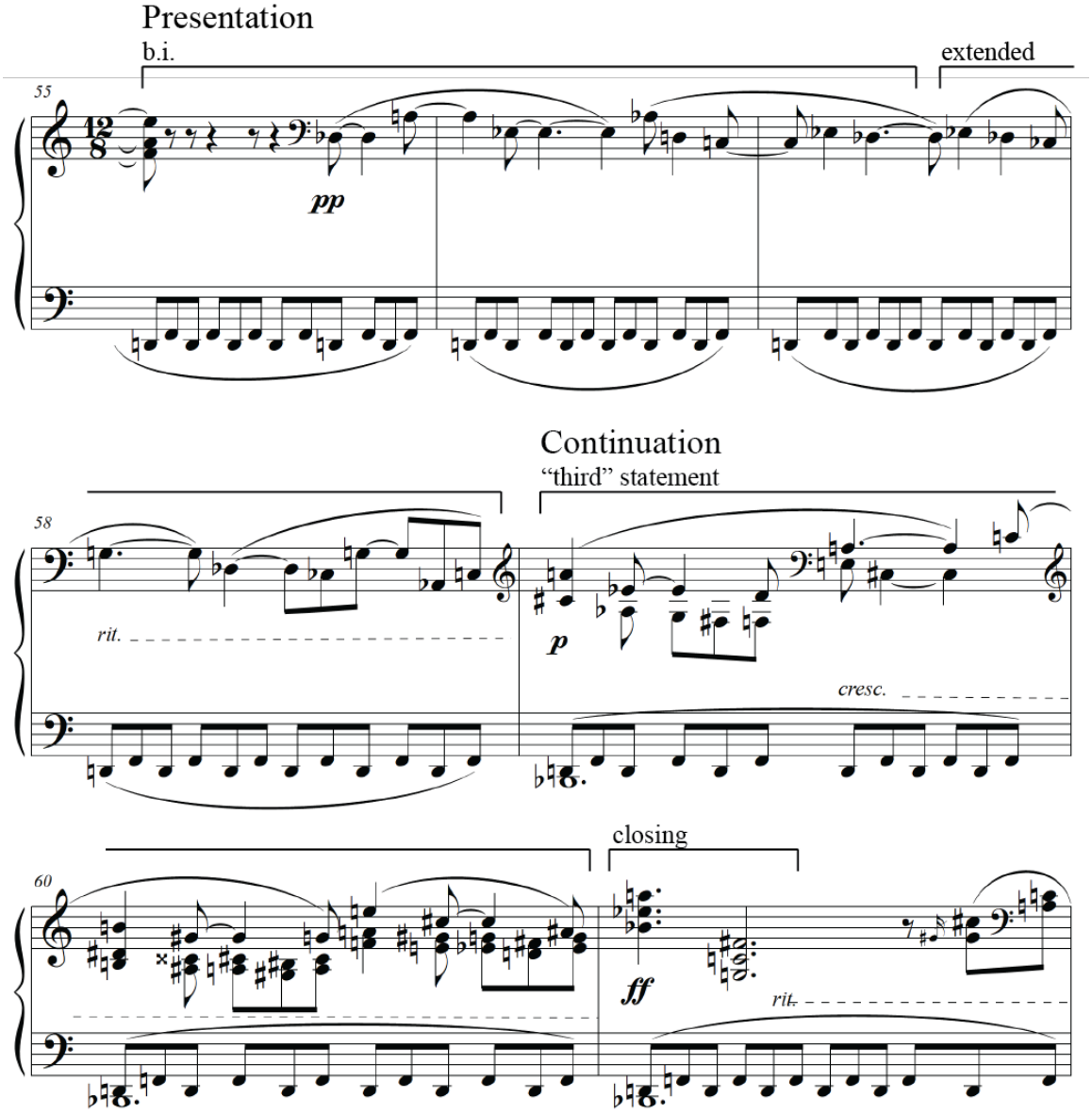
Example 7.11 cont. – Schoenberg Op. 11/2 Interior Theme, mm. 29–49

I have marked the beginning of the contrasting middle in m. 39, although this is another instance where the exact boundary between formal units is not well-articulated. Measure 39 introduces a new pattern that seems to function like a closing extension to m. 38. However it also serves as a connective leading into a transposed restatement of mm. 16–18. As such, there is a vague transformation into the unstable middle without a clear articulation after the opening period. The continuation's fragmentation begins

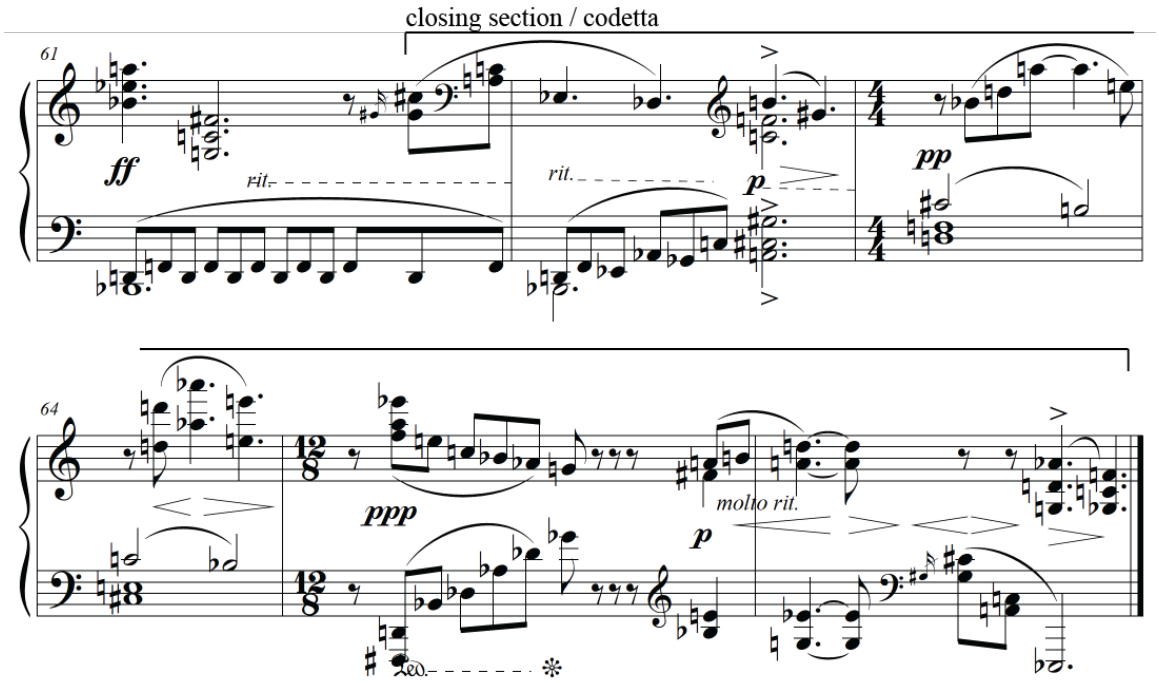
identically, but rather than lead to a quick cadence it instead spills forward out of control. Each hand wildly leaps around in 16th-notes as they climb higher and louder through a sequence driving towards a *fortissimo* trill in m. 45. Underneath that trill, the left hand begins sequencing and fragmenting the continuation motive from m. 4. Each fragment hammers away, louder and louder, while the trills slowly converge with the left hand. Finally, the energy breaks as the left-hand chords cease while the trills turn into 32nd-note neighbor-groups, slowing down and dropping in dynamic. This passage then ends with three statements of that same closing gesture from m. 39. Each one is softer and slower than the last. The incessant energy drive helps establish an unstable middle that effectively contrasts with not only this small ternary but the rest of the movement. Given these clear functions of exposition and contrasting middle, it seems rather easy to call mm. 50–55 a recapitulation. The 2-bar basic idea has been expanded into four measures and vaguely takes on the character of a complete consequent phrase. However, this closure is not nearly as convincing or effective as the end of the contrasting middle in mm. 48–49. This less conclusive cadence is instead marked by the liquidation of characteristic motives and the complete condensation of register. All of the leaps have been expunged from the texture.

Unlike many of Schoenberg's recapitulations, shown below in **Example 7.12**, this final passage is extremely easy to recognize. The opening three measures are repeated almost exactly, but are then extended an extra 1.5 measures. The m. 16 continuation is now stated a third time, down an octave from the original. The sequencing and fragmentation builds towards a peak in m. 61. Everything after that point serves a closing function for the entire movement. Material is reprised from the first continuation in m. 5,

the contrasting material in m. 29, and the closing material from m. 39. Two chords make the final utterance, each a slow dotted-quarter note.



Example 7.12 – Schoenberg Op. 11/2, Recapitulation mm. 55–66



Example 7.12 cont. – Schoenberg Op. 11/2, Recapitulation mm. 55–66

While the phrasing in this piece is much easier to follow than the Op. 11/1, it more strongly resists the larger formal types. It clearly conveys some type of ternary, just by grouping the new contrasting material in mm. 29–54 in between the opening and closing material. This passage introduces *contrasting* material in the *middle* of the movement, but I still hesitate to call it a contrasting middle because of its tight-knit thematic structure. This makes it closer to the large ternary form, which has a main theme, interior theme, and return of main theme. However, there are a number of peculiarities with this.

First, the tight-knit vs. loose relationship is reversed. In a large ternary form, we typically expect the main theme to be more tight-knit than the interior theme, although both are still complete themes. In Op. 11/2, we can clearly see that the main theme is more loosely-structured than the interior theme. The main theme is broken into three pieces that each begin with the same basic idea and are followed by new material. The

first section contains two continuation phrases with cadences. A new section begins in m. 13b, with a more typical continuation. The third section begins in m. 20, although its pitch material has been significantly varied and its continuation is significantly abbreviated. Each statement begins with the same presentation material followed by shrinking continuation functions. Overall, this entire process is very loosely organized when compared to the interior theme, which features a simple small ternary structure. Now, the use of a small ternary form for interior themes is very typical, but it is often truncated so that the end can retransition into the return of the main theme. The small ternary form in mm. 39–54 is complete. This unbalances the process of stability that we expect of ternary structures, where the middle is more unstable than the beginning and end.

Second, the final section is not a complete return of the main theme. The basic idea has been expanded, but only one of the four continuation phrases returns. Material from m. 16 returns again in m. 59, although only two measures of the 4-bar continuation, before quickly leading into a cadence and closing section. Even including the codetta, this final section is only 12 measures long compared to the main theme's 28. In effect, this final section functions as a recapitulation, instead of the larger return of the main theme that is typical for large ternary forms. The end result is a hybrid. It is neither a minuet form with an interior theme, nor is it a large ternary with a recapitulation. It is a unique slow-movement form with a loose main theme, an interior theme, and a recapitulation.

CHAPTER VIII: CONCLUSION

While this study is essentially only about form, a wider array of topics has influenced the concept of form described here. This speaks to the issue of form itself. When confronted with a seemingly simple question (what is musical form?), even the leading scholars in the field seem to struggle.[141] Rather than a straightforward answer, we get a complex network of interrelated concepts like organization, pattern, shape, temporality, and process. I won't be so bold as to claim I solved the nature of form. Instead, I have deliberately pared down the broad field to the work of a single composer and his theoretical writings to explain how a listener or performer might approach temporality in his music. This study has dealt with the generative side of form, as a listener can only experience music as piecemeal as it unfolds over time. But I have also had to address normative structures and the ideal types, or how a piece relates to other pieces a listener has heard before. This learned background sets up a listener's expectations such that they can be met or thwarted. It is no surprise that the Minuet from Op. 25 is also in a straightforward Minuet form, for example.

Our tale began with Schoenberg's Op. 4, *Verklärte Nacht*. This intensely Romantic string sextet demonstrates that the composer was aware of and using the smaller traditional forms very early in his career. While the sextet is still tonal, its chromatic wandering progressions might serve as a precursor to non-tonal formal processes. These ideal types also demonstrate that formal functions are not a purely generative approach to form. Vande Moortele has recently highlighted this ideological conflict, contrasting the positive generative approach with a normative negative

[141] Caplin, Hepokoski, and Webster (2010).

approach.[142] The field certainly treats Caplin's formal functions and Hepokoski's dialogic forms as antagonistic camps, as the principal authors regularly challenge each other at conferences. While the polemics are founded in real and substantial differences in ideology, I want to caution that there are still similarities between the two approaches. There is a reason that Caplin's book only considers Classical form by three composers. Yes, that allows for a homogenous style, but also a self-reinforcing style. Techniques seen in Mozart's music can also be recognized in Haydn's or Beethoven's. Unusual techniques are unusual specifically because they are not common occurrences, otherwise we could recognize their pattern and they would become their own type. The Tempest Sonata specifically challenges formal functions because it does not function the same way as any other sonata introduction.

From there, I showed how energetics, particularly as theorized by Ernst Kurth and Robert Hatten, can play a central role in describing the formal functions of twelve-tone pieces. Phrases and themes can be understood as a "wave" that increases in energy as it drives toward a cadential passage which somehow responds to that energy. For Schoenberg, it is clear that lower energy cadential gestures are more conclusive than high-energy *caesuras*. These waves are also hierarchical, as each individual pulse can be subsumed into a larger wave that drives a much larger portion of the musical work. Kurth demonstrated this with an example from Bruckner, but I have shown how this concept also pays dividends in Schoenberg's music. It cannot be stated enough, but these descriptions are metaphoric and not literal in nature. They draw on centuries of musical thinking in the western world. Pitch is not literally a vertical space, but the European

[142] Vande Moortele (2013).

tradition has thought of pitch in terms of height since the middle ages. Similarly, we conceptualize time in horizontal space, constantly moving forward in time into the future. We understand music as moving through this space, as a melody climbs up to a peak before falling back down. There is also the manner of motion, as the climb may be arduous and difficult or effortless and easy. Kurth's waves describe the totality of the musical energy. Rather than describing an individual voice's motion, the wave is a general state of activity from the combined effect of all the voices: the symphonic *melos*. These metaphors are so central to our lived experiences that we take them for granted. But if we embrace them and exploit them, they can become a valuable tool in describing our musical experience.

However, Schoenberg also uses other techniques for distinguishing formal sections as described in his *Gedanke* manuscripts. Using the Op. 25 movements, I showed how Schoenberg's concept of stability aligns with Caplin's concept of tight-knit phrase formation. Stable themes are well-articulated from the surrounding material, clearly marking their beginnings and endings, and separating the wave-forms from external material. Themes are also structured differently from transitions and contrasting middles, which helps set up the dynamic of larger forms. In the Minuet from Op. 25, the contrasting middle features only simple repetitions while the transition from Op. 33b demonstrates an eccentric tendency as motives transform into something entirely new.

After establishing these techniques, I then turned to the Third String Quartet Op. 30 and the Three Piano Pieces Op. 11 to demonstrate how these concepts can be used in analyzing much larger pieces or pieces that are much less typical in phrase structure. The Op. 30's sonata form features much larger themes than every other example in this

study. These expansions are filled with so much repetition that it becomes very difficult to compare them to the school-forms or Caplin's criteria for tight-knit formations. Instead, it becomes more evident that Schoenberg varies the method of motivic development between the two themes to help distinguish main matters from subordinate matters. In contrast, the Op. 11 examples are much shorter than Op. 30. Each piece is roughly the same measure length as the Op. 33b sonata, but features much less typical thematic structures, particularly in the exposition.

Above all, I want to emphasize that my approach to form is centrally focused on musical features that are aurally salient to a listener. Schoenberg would have never claimed that his music is particularly accessible or comprehensible because he believed that easily comprehensible and overly repetitive music falls under the purview of popular music. In contrast, he intends to challenge a listener's capabilities and claim a higher artistic merit. However, if he offers any consolation for the difficulty, it is that form makes the idea comprehensible. If a listener focuses on the musical techniques I have described in this project, I believe it becomes much more satisfying to listen to Schoenberg's music. When we hear the rhythms shorten and start to syncopate, we can recognize the medial energy gain. We should then expect some kind of closing gesture to occur, likely alongside successive fragmentation and liquidation. If we hear two different themes, say in a sonata exposition, we know more than just which theme comes first. We can listen for the types of repetition, how the phrasing is structured, and we can determine which theme is marked as more central to the idea.

My focus on aural salience places this study in close dialogue with Patricia Howland's recent article on IPS-groups (integrated parametric structure). These IPS-

groups are a "succession of elements in which the whole exhibits coherence and articulation." [143] Surprisingly, she cites Hasty as the source of these terms and not Schoenberg. The coherence of an IPS-group is determined in a processual change of the so-called secondary parameters: such as dynamics, timbre, and register. Again, my study also highly prioritizes these parameters, but we differ in how they are treated primarily because of the music we are analyzing. Howland is focusing on post-war compositions by Babbitt, Carter, and Stockhausen that abstract these parameters. My approach with Schoenberg's music associates specific meaning with high and low energy states. For example, low-energy closing gestures are more conclusive than high energy ones. It would be fair to characterize the typical Schoenbergian theme as a tension/release IPS-group. However, the IPS-group types do not necessarily correlate all high-energy parameters. For example, a directional IPS-group might combine an increasing metric density and registral span with decreasing dynamics. This segment would provide conflicting energetic readings between parameters, but are easily accounted for with an IPS-group. I believe this distinction readily suits the post-war music that Howland is analyzing, because the music is intentionally more abstracted than Schoenberg's music.[144] I think there is some merit in applying IPS-groups to Schoenberg's music. However, I believe that relating the energetic patterns to older formal types is not only more in-tune with Schoenberg's own thinking on the matter but also more accurately reflects his compositions.

There are many avenues to move forward with this project. Certainly, Schoenberg has written more music than I have discussed here. Including more of the atonal

[143] Howland (2015, 71).

[144] Again, see Boulez (1968) on post-war *avant garde* reactions to Schoenberg.

instrumental music would be particularly valuable, as his atonal music seems to contain a wide variety of approaches to form. Within Op. 11, the third movement is particularly striking as are the extremely short pieces from Op. 19. The pieces composed while Schoenberg created the method of composing with twelve tones are also especially intriguing. A cursory search of Opp. 22, 23, and 24 suggests that phrase structures are not as clear cut as in Op. 25. It would be interesting to see how these pieces, all composed at the same time, relate to each other. In a very different vein, Schoenberg composed a significant amount of texted music. The purely instrumental music makes up a relatively small proportion of his compositional output, only 16 pieces from the atonal and twelve-tone periods. I chose to completely exclude all texted music in this dissertation, primarily because Caplin's *Classical Form* and Schoenberg's *Fundamentals* also isolate instrumental music. It appears that form in vocal music operates under a different set of rules, but Rodgers' recent work suggests that may not be entirely true.[145] Still, the addition of text, which has its own form, introduces an additional wrinkle that requires more individualized attention in future studies.

I believe many of the energetic approaches can be easily adapted for other 20th century composers. However, I believe the methodology should be started from the ground up with any other composer. Many of the compositional techniques I have discussed are only directly applicable to Schoenberg's music.[146] There is no inherent reason that conclusive closure is represented by a low energy state. That meaning is only derived from the established pattern in Schoenberg's music. It may be an abstraction of

[145] Rodgers (2014, 2017).

[146] In discussing closure in neo-tonal music, Eng (2019) argues that our concept of closure must relate to a composer's conventional approach.

earlier harmonic practice. For example, the dissonance of a dominant seventh resolving to a consonant tonic might be an analogue for higher energy state resolving to a lower energy state. When this project is expanded to other composers, it would be necessary to find a typical theme structure to identify that particular composer's approach to marking closure. Given their relationship with Schoenberg, Berg and Webern are obvious targets. Schoenberg may have developed his ideas on how to effectively mark closure without harmonic progressions in conjunction with his close colleagues. As such, the analytic methodology will likely require less adaptation to analyze Berg than others.

Take for example Hindemith. As another German-speaking composer in the early to mid-20th century, Hindemith faced many of the same compositional pressures. Many of his pieces, especially in his middle period, demonstrate a familiarity with traditional forms, but the harmonic language avoids some of the traditional clichés. Sure, there are occasional resolutions to central pitches that are strikingly obvious, but perhaps energetic shaping contributes more to defining those centers than we've given them credit for. Moving to wildly different styles, formal energetics seems tantalizing for popular music studies.[147] Even though most popular music is fundamentally triadic, it still strikes me that our understanding of the harmonic progressions is still taken for granted. If the dominant V is not a requirement for establishing a tonal center anymore, then what defines the tonic? In most cases, the tonic chord seems intuitive, even without purely diatonic progressions. But how did we intuit it? Perhaps energetic lines, similar to the ones I have described in Schoenberg's music, can be found in all of these musical styles. After all, the common point to all of this music is us. We rely on these conceptual

[147] Osborn (2013) and Attas (2015) have applied energetic descriptions to specific functions for introductions and conclusions, but I believe energetics also apply within the verse-chorus form proper.

metaphors just to talk about music at all. They structure our basic assumptions about how music works. They shape how we listen to music, and how we think music should be composed. It is past time that we give these metaphors our due diligence and examine how they influence our musical experience.

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