Arnold Schoenberg in America

Bericht zum Symposium
Report of the Symposium
2. – 4. Mai 2001

UNIVERSITÄT
FÜR MUSIK UND
DARSTELLENDE
KUNST WIEN

Gedruckt mit Unterstützung von
Bundesministerium für Bildung, Wissenschaft und Kultur in Wien
Wissenschafts- und Forschungsförderung der Stadt Wien, MA 7 – Kultur

Cover-Abbildung:
Arnold Schönberg beim Unterricht in seinem Haus in Brentwood Park, West Los Angeles. Im Vordergrund: Natalie Limonick, H. Endicott Hansen und Alfred Carlson.

Impressum

Medieninhaber:
Arnold Schönberg Center Privatstiftung
Schwarzenbergplatz 6
A-1030 Wien
www.schoenberg.at

Eine Kooperation von
Arnold Schönberg Center
und
Arnold-Schönberg-Institut der Universität
für Musik und darstellende Kunst Wien

Herausgeber
und für den Inhalt verantwortlich:
Christian Meyer

Redaktion:
Therese Muxeneder, Iris Pfeiffer und Verena Zemanek

Lektorat und Satz:
Forte OEG, Renate Stark-Voit und Thomas Stark

Koordination:
Edith Barta

Cover und Gestaltungskonzept:
Bohatsch Graphic Design GmbH

Druck:
G. Grasl GesmbH

ISBN 3-902012-04-8

Richard Kurth

The Art of Cadence in Schönberg's Fourth String Quartet

Metric Discourse or Metric Dialectic?

I.

One of the remarkable aspects of Schönberg's music is the stunning variety and originality of the cadential gestures he invents. Cadences articulate the temporal experiences that compose a musical form, and moments of cadence (within a piece or movement) are experienced as temporal turning points, through which the recent past comes into fully-formed shape, and the impending future arouses an invigorated sense of expectation. At cadences, formal processes are shaped in the act of ending and then beginning anew (final cadences excepted), and cadences articulate continuity or discontinuity, balance or imbalance, and expectation or surprise. Cadential formation can be inflected by any active musical factor – melody, harmony, duration, loudness, articulation, timbre, register, and so forth. But above all, cadences shape time through the interplay of rhythms and the establishment of a meter (or several interacting meters, as in the cadential hemiola). The rhythms of Schönberg's music are remarkably fluid and vital, and the music's meter – no matter whether it is explicit or implicit in the musical notation – is characterized by rapid change and contrast, by metric discourse between different instrumental parts, and sometimes by dialectical opposition. Because cadences articulate musical time, they are vortexes in the constantly changing flux of rhythmic and metric energies, and they provide an interesting context in which to study the extraordinary rhythmic and metric vitality of Schönberg's music.

I shall examine here how metric interaction articulates musical form in several cadences from the first movement of the Fourth String Quartet, op. 37. This will involve some very detailed analysis of rhythm and meter in several passages, but it will help us to appreciate an aspect of Schönberg's art that has only rarely received all the attention and admiration it deserves.[1] Analytical sections of the paper explore how Schönberg's music often involves two (or more) independent metric strata, and how his cadences manipulate the metric tension between

those strata. Among other things, we shall see that his cadences sometimes involve simultaneous sensations of both acceleration and deceleration.[2] Commentary in other sections of the paper will consider whether the independent metric strata engage in a discursive interaction – taking the concept of "musical prose" to a second degree – or whether their interaction can legitimately be called "dialectical."[3]

II.

We shall begin with an extended examination of rhythm and meter in the small ternary design (bars 1–16) that opens the Fourth String Quartet. The first section in this passage (bars 1–6) is derived from the row form that I shall simply call P; the middle section (bars 6–9) uses its combinatorial inversion, henceforth called I; the final section (bars 10–16) closes the ternary design by restating the initial row form in retrograde (RP).[4] As is well known, each of these row forms is declaimed melodically by the *Hauptstimme* and each of its segmental trichords is accompanied by the other three trichords – stated as simultaneities – so as to form twelve-tone aggregates.[5] Except for some occasional remarks, the serial structure will receive little comment here, since I will henceforth concentrate on rhythmic and metric factors that shape the cadences at bar 6 and bar 16, and

1 In addition to contributions to be cited later, some diverse approaches to rhythm and meter in Schönberg's music can be found in Philip Friedheim, "Rhythmic Structure in Schoenberg's Atonal Compositions," in *Journal of the American Musicological Society* 19 (1966), no. 1, 59–72; Martha M. Hyde, "A Theory of Twelve-Tone Meter," in *Music Theory Spectrum* 6 (1984), 14–51; Charles D. Morrison, "Syncopation as Motive in Schoenberg's Op. 19, Nos. 2, 3, and 4," in *Music Analysis* 11 (1992), no. 1, 75–93; John Roeder, "Interacting Pulse Streams in Schoenberg's Atonal Polyphony," in *Music Theory Spectrum* 16 (1994), no. 2, 231–249; and Wolfgang Schmidt, *Gestalt und Funktion rhythmischer Phänomene in der Musik Arnold Schönbergs* (Wilhelming 1973). Also relevant to the present study, though not explicitly about rhythm and meter, is William E. Benjamin, "Abstract Polyphonies: The Music of Schoenberg's Nietzschean Moment," in *Political and Religious Ideas in the Works of Arnold Schoenberg*, edited by Charlotte M. Cross and Russell A. Berman (New York 2000), 1–39 (Border Crossings 5).

2 In the Classical style, cadences typically involve either a general slowing or a general acceleration in the harmonic and motivic rhythm; acceleration is the more common trajectory, and Schönberg often referred to it as the "tendency of the smallest notes." See, for instance, Arnold Schoenberg, *Fundamentals of Musical Composition*, edited by Gerald Strang with the collaboration of Leonard Stein (London 1967), 29. For some interesting comments comparing the compression of energies at cadences to the psychology of crowd behavior, see Arnold Schoenberg, *The Musical Idea and the Logic, Technique, and Art of Its Presentation*, edited, translated, and with a commentary by Patricia Carpenter and Severine Neff (New York 1995), 248–249.

3 The concept of metric dialectic has recently received heavy emphasis in a very fine analytical study of rhythm and meter in Schönberg's Third Quartet, op. 30. See Jeff Nichols, "Metric Conflict as an Agent of Formal Design in the First Movement of Schoenberg's Quartet Opus 30," in *Music of My Future: The Schoenberg Quartets and Trio*, edited by Reinhold Brinkmann and Christoph Wolff (Cambridge 2000), 95–116. My analysis of passages from the Fourth Quartet explores features similar to those Nichols considers, but I will advance a somewhat different interpretation of rhythmic and metric interaction later in the present paper.

4 For reference, P = D–C♯–A–B♭–F–E♭–E–C–A♭–G–F♯–B, and I = G–A♭–C–B–E–F♯–F–A–C♯–D–E♭–B♭.

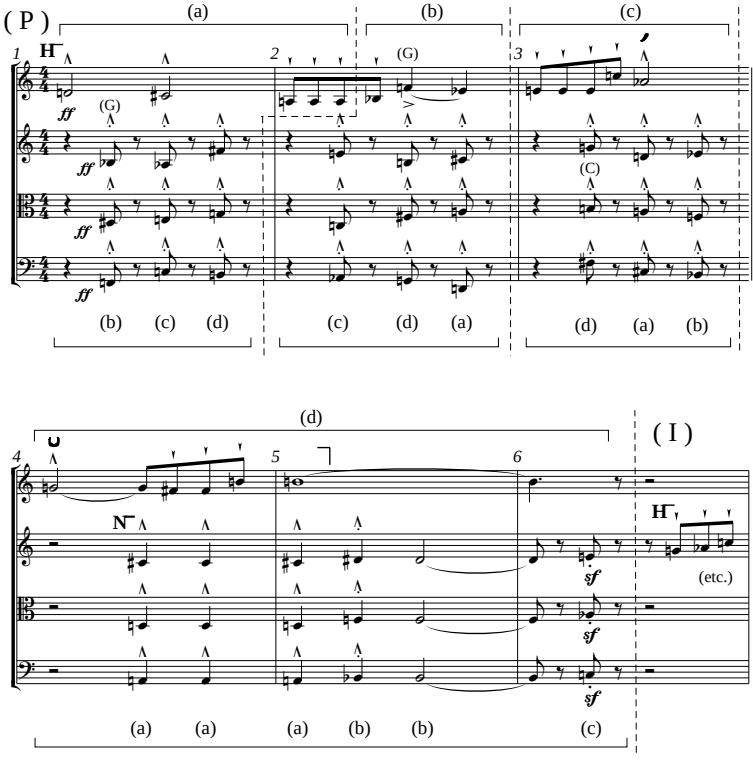
5 For an analytical introduction to the movement, see Ethan Haimo, "The Mature Twelve-tone Method," in *The Arnold Schoenberg Companion*, edited by Walter B. Bailey (Westport, Connecticut 1998), 129–155, and also J. Peter Burkholder, "Schoenberg the Reactionary," in *Schoenberg and His World*, edited by Walter Frisch (Princeton 1999), 162–191, at 178–186. Some more advanced aspects of Schoenberg's serial technique in the movement are discussed in Ethan Haimo and Paul Johnson, "Isomorphic Partitioning and Schoenberg's Fourth String Quartet," in *Journal of Music Theory* 28 (Spring 1984), no. 1, 47–72.

to a lesser extent at bar 9. The entire movement is notated in 4/4, but we shall see how the music induces many other meters, which interact with remarkable effect.[6] Readers may wish to have a score at hand in order to facilitate comparison of the published notation in 4/4 with the metric interpretations to be presented shortly.

Example 1 introduces some preliminary observations about the initial P section alone (leading up to the cadence at bar 6). This section presents four aggregates built from a single melodic statement of P that is declaimed by the first violin *Hauptstimme*, and accompanied by its segmental trichords circulating through the other three instruments. The segmental trichords are labeled (a), (b), (c), and (d) on the example, and the aggregates formed from them are delineated by horizontal braces above and below the music.

On the first system of Example 1, the first three aggregates unfold at a fairly regular pace. In each case the *Hauptstimme* trichord has a distinct rhythm that spans more or less one bar; meanwhile, the three remaining accompaniment trichords – which generally proceed in contrary motion – always span e x a c t l y one bar, in uniform attacks after a downbeat rest. In comparison, the fourth aggregate unfolds much more slowly, over the course of two-and-a-half bars, so that the cadence is delayed until the second beat of bar 6. In several ways, the accompaniment chords now create contrast with the first three aggregates, to signal and inflect the coming cadence: they are still preceded by a downbeat rest, but it is now twice as long as before; at first they still fall every quarter (although they are full quarter notes now), but they are now repeated to decelerate the harmonic rhythm, which soon slows further with longer durations; they also now proceed in strictly parallel motion, in contrast with predominantly contrary motion of the first three aggregates. The cello's repeated A♮'s and B♭'s produce an augmented – and then extended – version of the first violin's eighth-note figure at the beginning of bar 2. That violin figure had considerable forward motion, and could be heard as an anacrusis to the accented F♮ that followed it. But the slower cello variant, and the overall harmonic rhythm

6 In attempting to convey the metric vitality of this passage through detailed technical observations, the following commentary explores the same general concerns as does Alban Berg's famous discussion of irregular phrase construction and rhythmic variation in the opening of Schönberg's First String Quartet, op. 7. See Alban Berg, "Warum ist Schönbergs Musik so schwer verständlich?," in *Arnold Schönberg zum fünfzigsten Geburtstage 13. September 1924. Sonderheft der Musikblätter des Anbruch* 6 (August–September 1924), 329–341; English translation in Willi Reich, *The Life and Work of Alban Berg*, translated by Cornelius Cardew (London 1965), 189–204. Schönberg himself considers various examples of metric irregularity in Mozart and Brahms in his famous 1947 essay "Brahms the Progressive," in *Style and Idea. Selected writings of Arnold Schoenberg*, edited by Leonard Stein with translations by Leo Black (Berkeley, Los Angeles 1984), 398–441. Two of Schönberg's analyses in that essay will be discussed later. Schönberg also discusses irregular phrase construction in two other essays in *Style and Idea:* "My Evolution," 79–82, especially 80 and 84; and "National Music (2)," 172–174. The latter essay lists compositional techniques that Schönberg learned from his "teachers" Bach, Mozart, Beethoven, Brahms, and Wagner. These include "[d]*isregard for the 'strong' beat of the measure," "inequality of phrase-length,"* "[c]*o-ordination of heterogeneous characters to form a thematic unity," "displacement of* [rhythmic] *figures on to other beats of the bar," "odd barring, and extension and abbreviation of phrases"* and "[p]*lasticity in molding figures.*"; 173–174. All of these techniques are employed in the passage to be discussed here.



Example 1. Arnold Schönberg, Fourth String Quartet, op. 37, first movement, bars 1–6.[7]

of the accompaniment ensemble, seem to stall when chord (b) is reiterated and sustained for more than a half note (bars 5–6). This chord takes a very strong agogic accent, and could easily be misconstrued as the point of cadential arrival. That false impression is corrected by the surprising *sforzando* attack on chord (c) in bar 6, which completes the fourth aggregate and is thus the proper cadential event. The unexpected arrival and brevity of this last chord powerfully inflect how we comprehend the meter leading up to the cadence, and anticipate the meter after it. We shall see later how it also complicates the feeling of cadential deceleration that has just been described.

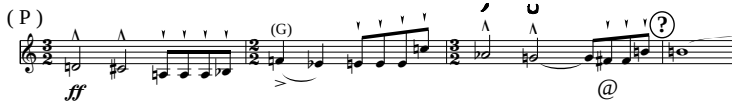
7 This and the following examples (except example 4a) cited from Arnold Schönberg, *Sämtliche Werke. Abteilung VI: Kammermusik. Reihe A, Band 21: Streichquartette II, Streichtrio.* Herausgegeben von Christian Martin Schmidt (Mainz, Wien 1982).

The accompaniment rhythms support the notated 4/4 meter in the first three aggregates, even though they do not mark its downbeats. (Indeed, the fact that the 4/4 downbeats are marked instead by the first violin *Hauptstimme* already belies a discursive metric interaction between the *Hauptstimme* and accompaniment.) The rhythms of the fourth aggregate, however, become increasingly awkward in 4/4. In fact, the *Hauptstimme* has been staging a subtle campaign against the notated 4/4 meter for some time. In an important essay on meter in Schönberg's music, David Lewin interprets the *Hauptstimme* meter in bars 1–6 essentially in the manner given by Example 2a.[8] As Lewin notes, the interpreted meters reflect the accent on the F♮ and Schönberg's special *"betont"* articulation on the A♭; they also articulate the segmental tetrachords of the row, which become important later in the movement. Example 2a also *"interprets the theme as a thrice-stated rhythmic motive, distorted* [...] *upon its second appearance* [by contraction in the duration of the first two notes] *but restored, upon its third, almost to its original form."*[9] In metric terms, the variation of this rhythmic motive is depicted by the example as an A–B–A structure involving a discourse between 3/2 and 2/2. (This miniature ternary structure also bears analogy with the larger ternary design of bars 1–16, as will be discussed shortly.) Lewin shows how this metric interpretation is reinforced on a large scale when the opening theme is reprised in bar 165. Here I will concentrate on how the discourse of triple and duple meters interpreted by Example 2a is further engaged by the full texture in the opening bars, and how other triple and duple – and also quadruple – meters arise in the emerging metric interplay.[10]

8 See David Lewin, "Vocal Meter in Schoenberg's Atonal Music, with a Note on a Serial Hauptstimme," in *In Theory Only* 6 (May 1982), no. 4, 12–36, at 34. My Example 2a duplicates Lewin's Example 4a, except that Lewin notates the second bar in 4/4 instead of 2/2. I opt for 2/2 in order to keep a consistent half-note pulse throughout the interpretation, and it does no real disservice to the observations Lewin makes about the scansion, which will be reviewed in the main text immediately. The choice of 2/2 over 4/4 will also heighten the contrast with some other meters that will arise later in the analysis.

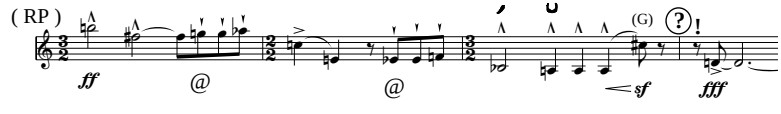
9 Ibidem.

10 There is also circumstantial documentary evidence for the relevance of this metric interpretation in the sketches. The beginning of the Coda (bar 239) is articulated by a statement of P in the violoncello, at first using rhythms identical to the violin at the opening of the movement. On an early sketch for this passage, Schönberg erased a barline that would have parsed the beginning of P in 3/2, just as it is interpreted by Example 2a. The sketch (Arnold Schönberg Center, Wien, MS 41, Archive No. 1011, staffs 1–4) is transcribed in Arnold Schönberg, *Sämtliche Werke. Abteilung VI: Kammermusik. Reihe B, Band 21: Streichquartette II, Streichtrio. Kritischer Bericht, Skizzen, Fragmente.* Herausgegeben von Christian Martin Schmidt (Mainz, Wien 1984), 79.



Example 2a. Arnold Schönberg, Fourth String Quartet, op. 37, first movement. Metric interpretation of the *Hauptstimme* in the P section (bars 1–6).

Let us first observe some other features that support the metric interpretation given by Example 2a. Its downbeats unfold an ascending chain of "minor thirds," D♮–F♮–A♭–B♮, to create a symmetrical skeleton that helps to reinforce the asserted metric interpretation of the melody. By referring back to Example 1, one sees how the viola in bars 4–6 reprises much of that skeleton by stating D♮–F♮–A♭ an octave lower than did the violin; the viola thus summarizes the *Hauptstimme* downbeats – as Example 2a interprets them – as it approaches and attains the cadence in bar 6. A question mark above the last barline on Example 2a indicates that no specific metric context is asserted at present for the final sustained B♮, because its extended duration makes it seem relatively unmetered. Even so, the B♮ demarcates the more clearly proportioned trajectory of the three preceding bars. That proportion – interpreted as 6:4:6 when measured in quarter notes – corresponds quite well to the ternary design overall, since the P section spans the better part of 6 bars (in the notated 4/4), the I section the better part of 4 bars, and the RP section a bit more than 6 bars. As a result, the full ternary shape reflects the metric interpretation of Example 2a at a larger level, and vice versa.



Example 2b. Arnold Schönberg, Fourth String Quartet, op. 37, first movement. Parallel metric interpretation of the *Hauptstimme* in the RP section (bars 10–16).

To reinforce this aspect of the overall ternary design, Example 2b shows how the *Hauptstimme* in the closing RP section of the ternary design submits to a metric interpretation parallel to the P section in Example 2a. Example 2b involves the same sequence of meters, and slight variations of the same rhythmic motive. The strong rhythmic and metric parallelisms between the P and RP sections are appropriate to the rounding and closure we associate with ternary designs, and

other details in the music reinforce that effect. For instance, we observed earlier how the three eighth-note A♮'s near the beginning of Example 2a are echoed by the cello in bars 4–5 (Example 1), in anticipation of the first cadence at bar 6. They are later echoed again by the first violin near the end of Example 2b, where they return once more in augmentation as quarter notes, and again begin to induce cadential deceleration. Those quarter-note pulsations are violently disrupted, however, by the ensuing *sforzando* C♯ (played on the G string to emphasize its contour accent), and especially by the eighth-note rest that unexpectedly delays the long *fortississimo* D♮, which cadences the melody by recapturing the first pitch of the movement. Later we shall observe the metric implications of these striking cadential rhythms and accents. For the present, a question mark over the final barline on Example 2b represents an unmetered interpretation for the D♮ and the unexpected rest that delays it. In fact, the eighth-note rest was not part of the initial conception. In an early sketch, Schönberg placed a whole-note D♮ an eighth-note earlier, on the downbeat of notated bar 14, and had the accompaniment cadence one bar later, on the downbeat of bar 15.[11] In the final version, he delayed the *Hauptstimme* D♮ with the eighth rest, and in response extended the accompaniment by more than a bar, into the middle of bar 16. We shall display the passage later with a metric interpretation that responds to these changes.

Examples 2a and 2b both display a rhythmic figure involving three upbeat eighth notes. This rhythmic figure will henceforth be called the anacrusis motive, and will be marked with the "@" symbol. This motive is clearly derived from the four-eighth-note figures in the first two bars of Example 2a, but it also incorporates – and alters – a rhythmic idea presented (at the quarter-note level) by the opening accompaniment rhythms: the avoidance of an attack on the preceding (metrically strong) position. The accompaniment quarter-note figures are best understood as afterbeats, even if they also project some anacrustic potential. By contrast, the eighth-note Anacrusis motive will always function as an upbeat figure in our metric interpretations, and it will be observed in various other meters elsewhere in the passage. Its total duration of three eighth notes will also become significant later on.

Examples 2a and 2b have depicted the *Hauptstimme* in the P and RP sections as a discourse between 3/2 and 2/2. To explore this notion of metric discourse, we shall now examine the metric properties of the full texture and the

11 The sketch in question (Arnold Schönberg Center, Wien, MS 41, Archive No. 1023, staffs 8–12) is transcribed in Arnold Schönberg, *Sämtliche Werke,* see fn. 10, 76.

entire ternary design of bars 1–16. We now recast our earlier preliminary observations in more formal terms, to explore how the *Hauptstimme* meters interact with the implicit metric properties of the accompaniment.

Example 3 (see pp. 254–255) proposes a metric interpretation of the full passage, to be commented on section by section. The *Hauptstimme* (alternating between the first and second violins) appears on the top staff, and the interpreted bars are given H-numbers for future reference; the interpretations of Examples 2a and 2b are incorporated, and supplemented by a metric interpretation of the intervening I section. On the three lower staffs, the accompaniment presents coordinated rhythms that are generally metrically independent of the *Hauptstimme*, and the accompaniment interpretation is given A-numbers for later reference. Bar numbers corresponding with the downbeats of the notated 4/4 meter appear on the lowest stratum beneath the music.

Some of the interpreted downbeats do coincide with those in Schönberg's 4/4 notation, but 4/4 meter actually plays a very limited role in the metric interpretation. The notated 4/4 must be understood, I think, as a notational convenience rather than as a dominant or even referential meter in the movement. The following analysis and later discussion will reveal why I hold that opinion. The analysis makes use of various interpretive meters and their time signatures, just as Examples 2a and 2b have already done. It is important to caution that these analytical devices carry the danger of over-crystallizing the metric implications of Schönberg's rhythms. The interpreted meters are *not* to be understood as adding (metric) accentuation; they are meant instead to interpret and organize the various other kinds of accents in the music (agogic, dynamic, registral, etc.) to show how they interact. Once these interactions have been observed, the interpreted meters will have served their didactic purpose, and can be replaced by a less rigid understanding. So long as we bear that caution in mind, these analytical meters will be useful for exploring the characteristic metric vitality implicit in the music.[12]

In the P section, the accompaniment does at first support the notated 4/4 and its quarter-note beat, even though the accompaniment bars begin with rests. The rhythmic/metric figure repeated in bars A1, A2, and A3 appears later in several variants, and I will henceforth call it the afterbeat motive. Motives in

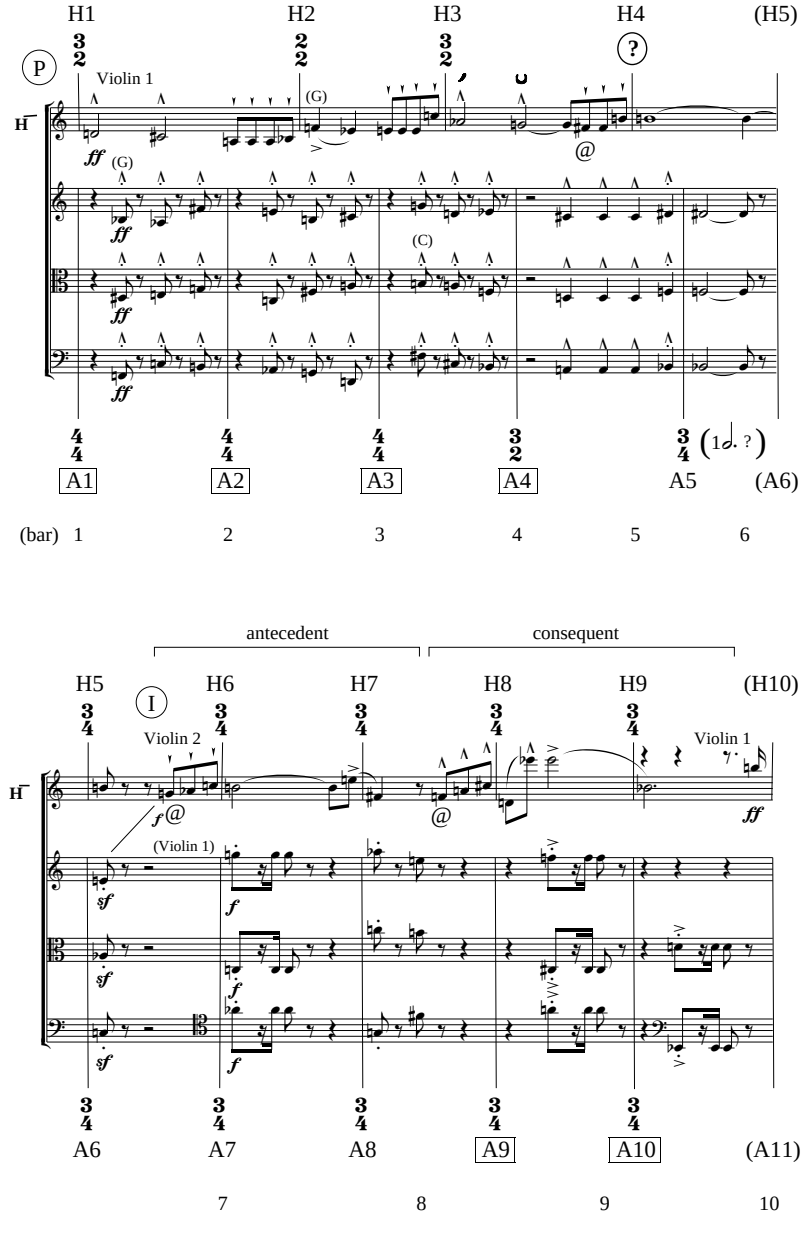
12 By and large, I adopt a practical and *ad hoc* approach to metric interpretation in this analysis. There is not space here to consider in detail concepts (such as "projection") recently introduced by Christopher Hasty in his *Meter as Rhythm* (New York 1997).

this family appear only in the accompaniment, and all its forms feature a downbeat rest, an attack on the second beat (in the interpreted meter), and two or three further attacks, all falling within a single bar (again in the interpreted meter). Instances of this motive are signaled on Example 3 by boxes drawn around the relevant A-numbers.[13]

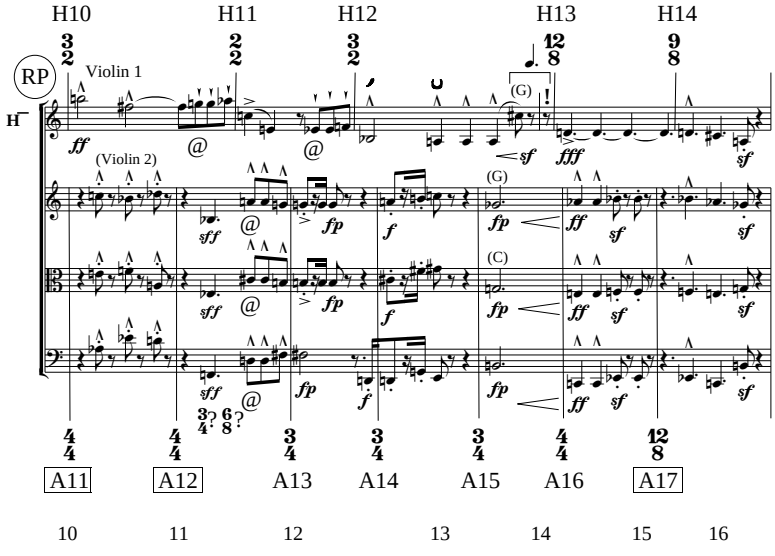
Bar A4 presents the first variant of the Afterbeat motive. The half-note duration of the rest, the ensuing quarter notes, and the agogic accent on B♮ at H4 together conspire to establish a (subdivided) half-note pulse in the accompaniment; the agogic accent at A5 then frames A4 as a 3/2 bar. The accompaniment thus relinquishes its 4/4 meter and adopts 3/2 meter from the *Hauptstimme*, even while still retaining its own characteristic Afterbeat motive. The metric imitation (between H3 and A4) nonetheless maintains the metric tension between the two strata. If A4 had been another 4/4 bar, the accompaniment would have made its next downbeat coincident with the *Hauptstimme's* melodic cadence at H4. Schönberg could have easily given chords (a) and (b) fewer or quicker values, so that chord (c) would have arrived with the *Hauptstimme* B♮. That was evidently not the desired effect. Instead, he prolongs the harmonic rhythm by repeating the accompaniment chords in lengthening durations. The two metric strata remain out-of-phase by a half note (as they have been since A2) and do not cadence together. This extension of the cadential process has important metric implications. The *Hauptstimme* B♮ at H4 is so lengthy that one cannot attribute an independent *Hauptstimme* meter during its duration, as the question mark at H4 indicates. The metric discourse thus defers to the accompaniment now that it adopts and asserts its own 3/2 alignment. The accompaniment will now manipulate the metric tension between the two strata in an unexpected way.

In particular, the agogic accent at A5 and the *sforzando* attack at A6 activate 3/4 meter, which in fact will receive continued support throughout the I section of the ternary design. The agogic accent at A5 initiates this meter, but it is the unexpected cadential attack at A6 that actually defines it. By recognizing the implicit metric function of the striking cadential *sforzando* we begin to better understand the effect of its unexpected placement, duration, and dynamic (as it appears in Schönberg's 4/4 notation on Example 1). Indeed, the downbeat of A6 is a cadential turning point of the type described at the outset.

13 The downbeat of the afterbeat accompaniment bars is usually marked clearly by the *Hauptstimme*, with a new pitch and a local change in rhythm. Bars A12 and A17 are the only exceptions to this rule, and they involve other rhythmic and metric complications that will be discussed later. The anacrusis motive is closely related to a diminuted form of the afterbeat motive, but it is also oriented toward the following (articulated) downbeat, rather than from the preceding (unsounded) one.



Example 3. Arnold Schönberg, Fourth String Quartet, op. 37, first movement. Interpreted metric discourse of the full texture (bars 1–16).



It completes the fourth aggregate derived from P to conclusively (and abruptly) end a formal unit, and it simultaneously establishes a new 3/4 meter that remains in effect throughout the ensuing middle section of the ternary design. The new 3/4 meter will provide metric contrast with the preceding music, and new terrain for the introduction and development of rhythmic motives.

The new 3/4 meter that begins to emerge at A6 retrospectively lends a hemiola quality to bar A4.[14] The 3/4 meter also (temporarily) resolves the earlier metric tensions between the *Hauptstimme* and accompaniment, by combining the triple structuring of the earlier 3/2 *Hauptstimme* bars with the quarter-note pulse of the earlier 4/4 accompaniment bars. Bars A4 and A5 are especially important as the pivotal stages in the resolution of that metric discourse. A4 extends and slows the preceding 4/4 accompaniment meter by regrouping the old quarter-note pulses into three half-note pulses. The sustained chord at A5 at first seems to continue the deceleration of the pulse, since a full dotted-half-note duration will pass before the next attack at A6. But the events which follow

14 This impression is related to the fact that H3 and A4 both project 3/2, producing a strong sensation of half-note pulsing that is nonetheless metrically unstable because H3 and A4 are out-of-phase by a half note. This metric instability can be heard retrospectively as a hemiola-like sensation once 3/4 is established by A5 and A6.

A6 will induce a rapid quickening, in which the faster quarter-note pulse returns while the triple structuring of A4 is retained, producing a 3/4 sensation that can be assigned retrospectively to A5.

Bars A4 through A6 thus witness a flux of deceleration followed by acceleration, and the listener experiences conflicting sensations of slowing and quickening as the cadence takes shape. The increasing durations in A4, A5, and H4 all contribute to the sensation of slowing, but what follows immediately after A6 brings a new awareness that the (effective) dotted-half-note duration in A5 is in fact the site of metric modulation, through its retrospective subdivision into quarter-note pulses. The beat has therefore accelerated from the half note at A4 to the quarter note afterward, and the bar length has also contracted to three quarters, from the longer 3/2, 2/2, and 4/4 bars that preceded. Schönberg is a master at creating multiple senses of time, and the effect of simultaneous deceleration and acceleration is very palpable at this cadence.[15]

The cadence at A6 certainly produces considerable closure, since it completes the fourth aggregate constructed from P and its trichords. But the metric modulation to 3/4 – once it is perceived – also lends this cadence a degree of "openness" that creates strong expectations for continuation, and thus motivates the further unfolding of the ternary design. The metric modulation thus performs the kind of formal function that was once accomplished almost solely by harmonic modulation in tonal composition. Rhythm and meter therefore take on new significance as means for creating formal articulation, continuation, contrast, and development. The cadential extension of the fourth aggregate by the accompaniment, after the *Hauptstimme* has reached its own cadential B♮, exemplifies at least one aspect of Adorno's remark that twelve-tone melody is typically *"too complete, and the terminal force present in the twelfth tone can be overcome by the energy of rhythm, but hardly by the gravitation of the intervals themselves."*[16]

15 This two-sided effect is reminiscent of Carl Dahlhaus's comment that *"Mahler's musical prose* [...] *exhibits* [...] *the quality of being exaggeration and retraction at one and the same time."* ("Musical prose," in *Schoenberg and the New Music. Essays by Carl Dahlhaus*, translated by Derrick Puffett and Alfred Clayton [Cambridge 1988], 107. Dahlhaus is discussing Schönberg's analysis (in "Brahms the Progressive," in Arnold Schoenberg, *Style and Idea*, see fn. 6, 398–441, at 426) of irregular phrase construction in the F major oboe melody in "Der Abschied" from Mahler's "Das Lied von der Erde."

16 Theodor W. Adorno, *Philosophy of Modern Music*, translated by Anne G. Mitchell and Wesley V. Blomster (New York 1973), 73. Adorno himself mentions the present passage as a case in point, but does not discuss any details of the rhythm or meter. In my opinion, Adorno overstates his assertion that "[i]*n the final analysis, melos is the victim of thematic rhythm*" in Schönberg's twelve-tone compositions (75). I certainly concur with him on the importance of rhythm (and meter) in this music, but his rhetoric underestimates the "gravitational" power of certain characteristic intervals (and interval combinations) that signal the beginning or end of row forms in each composition.

Overall, the P section sets forth a metric discourse involving triple and duple meters with half-note beats in the *Hauptstimme*, against an accompaniment that generally presents quadruple and triple meters with quarter-note beats. A4, the only accompaniment bar to adopt a meter from the *Hauptstimme*, is the middle term through which the accompaniment resolves the metric discourse – or perhaps "dialectic" – between the two strata, by modulating to 3/4, a meter that will be adopted by both strata in the ensuing section.[17]

In the first section the *Hauptstimme* is played by the second violin, which just helped establish the 3/4 meter, and the *Hauptstimme* is thereby oriented to 3/4 at H5. 3/4 is supported by both strata throughout this section, but new rhythmic energies will compensate for the relaxation of metric tension between the strata. Horizontal brackets above the music indicate how two parallel anacrusis motives in the *Hauptstimme* configure the I section as an antecedent-consequent structure.[18]

In the antecedent, H6 and A7 – the first coincident downbeat attacks so far – create a powerful structural downbeat that signals the new row form and the new section, and that stabilizes the new meter. H6 reinforces the structural downbeat with an agogic stress on B♮, powerfully echoing the first violin's sustained B♮ from H4. A7 supports it with a new dotted rhythm that articulates the first two beats in the 3/4 meter. A8 articulates those two beats even more bluntly, to create the *Hauptstimme* downbeat on F♯ at H7, against the accent on the preceding E♮.[19] The consequent segment progressively destabilizes the 3/4 meter. The anacrusis motive induces the downbeat at H8, where a strong contour accent reinforces the D♮ as another echo of the movement's first note. The ensuing half-note E♭ consequently takes a very strong syncopation accent in addition to its registral and contour accent, but the tension of its rhythm and

17 H4, unmetered on example 3, effectively becomes 2/4 + 3/4 under the influence of the interpreted accompaniment meter during the sustained B♮. The first violinist might want to think about it that way in performance, but I prefer to leave H4 unmetered on the example, to reinforce the fact that the sustained B♮ induces no independent metric interpretation o n i t s o w n. Instead, it merely awaits and passively undergoes the metric fluctuations wrought by the cadential extension in the accompaniment.

18 The *Hauptstimme* thus contrasts the two combinatorial hexachords that are shared by row forms P and I. The I section continues to adopt the trichordal accompaniment texture of the preceding section, but without the circulating technique; aside from rhythmic reiterations, each of the four I-trichords appears only once in the accompaniment during this section. The *Hauptstimme* and the accompaniment therefore each state a single aggregate. The I-trichords are in fact related to the P-trichords not only by inversion; in unordered content, the I-trichords are also respectively equivalent to T1(d), T1(b), T1(c), and T1(a). As a result, the P and I sections can to some degree be heard to present both an inversional and a transpositional progression.

19 The A8 rhythms amplify the relatively weak agogic and contour accent on the *Hauptstimme* F♯, to cast the immediately preceding accented E♮ as an anacrusis. Until now, accents in the *Hauptstimme* have been interpreted as downbeats, but this one, operating at the eighth-note level, must be heard as an offbeat accent.

register is soon relaxed by the middle-register B♭, which is agogically accented to stabilize the downbeat of H9 and cadence the periodic *Hauptstimme* melody. Meanwhile, the accompaniment has also become progressively more unstable. A9 and A10 displace the dotted rhythm introduced in A7, instantiating Schönberg's interest in the *"displacement of* [rhythmic] *figures on to other beats of the bar"* (see note 6 above). By hearing their accents as syncopations (rather than barline displacements) we also recognize A9 and A10 as new variants of the afterbeat motive. They include the same number of attacks after a quarter rest in 3/4 as did the original afterbeat motive in 4/4, and the original motive in fact follows immediately in A11, to begin the RP section. Meanwhile, the antecedent-consequent structure of the *Hauptstimme* has suggested a 6/4 hypermeter that mutates easily into the 3/2 that returns at H10 with RP, to reprise the opening *Hauptstimme* meter. Overall, the I section presents a relatively stable metric synchrony in the 3/4 meter established by the cadence at bar 6, although the increasing use of syncopation and developmental variation prepares for the return of more complicated metric interplay in the next section.[20]

The RP section generates new metric energies that will be stabilized in unexpected ways by the cadence that will complete the ternary design. H10 and A11 reprise the opening meters to articulate the last part of the emerging ternary shape, and they also mark the last coincident downbeat on Example 3. The original 4/4 Afterbeat motive in A11 brings a sense of elongation and slowing, compared to the 3/4 versions in A9 and A10, and the 3/2 of H10 is effectively twice as slow as the preceding 3/4 bars. On the other hand, the new half-note beat in H10 also feels like an acceleration compared to the dotted-half-note spans of the preceding 3/4 bars, and the combined effect of both slowing and acceleration – reminiscent of the end of the P section – sets the stage for renewed metric development. Indeed, A12 brings a new and very unstable variant of the Afterbeat motive. The agogic and dynamic accents on the dotted-quarter, followed by an Anacrusis motive, entice the listener to recalibrate in favor of 3/4, or perhaps even 6/8. In fact, the dotted-quarter beat of 6/8 will become significant soon, but it is 3/4 that is immediately confirmed by A13 and A14, with dotted rhythms from the I section. The sustained chord in A15 also recalls the similar rhythmic gesture in A5, and is likewise positioned in anticipation of an impending cadence.

20 The dotted rhythms that characterize the first section become very prominent in a large antecedent-consequent period in bars 116–127 (in the "development" section). There they sustain an extended 3/4 scansion in the accompaniment, against a more freely "ametric" melody (in the viola, later inverted in the second violin) and countermelody (initially in the first violin, later in the violoncello).

At this point the *Hauptstimme* produces an unexpected change of beat value. H12 is cast as a 3/2 bar (in parallel with H3), but its final C♯ is jogged by contour and dynamic accents, and the following D♮ is delayed by an eighth-note rest. That rest, not found in an earlier sketch (as mentioned above), has interesting implications that Schönberg exploits. In particular, the dotted-quarter-note inter-onset duration between the C♯ and D♮ attacks now becomes the effective pulse.[21] The sustained D♮ lasts exactly four such beats, and is followed by three more attacks that confirm the new beat value. H13 is therefore interpreted as a 12/8 bar (a quadruple meter with dotted-quarter beat), while H14 is interpreted as a 9/8 bar (a triple meter with the same beat).[22] The accompaniment explicitly delineates quadruple meter at this point, but A16 still has a quarter-note beat. A17 also projects quadruple meter, but finally adopts the slower dotted-quarter beat from the *Hauptstimme*. This adoption makes a strong analogy between A17 and A4, which adopted 3/2 meter from the *Hauptstimme* in a similar way, also in preparation for a cadence. Both bars involve afterbeat motives, and both involve cadential extension in the accompaniment, beyond a sustained cadential tone in the *Hauptstimme*. From A15 onward the accompaniment projects a very consistent deceleration, since the bars lengthen and the beat slows as we hear 3/4, then 4/4, and finally 12/8. A17 cadences the accompaniment with strong echoes of A1, because both bars use the same simultaneous trichords in the same order; the pitch classes are a bit differently distributed between the instruments, but the last trichord in both bars is identical in pitch and duration. A17 also presents an afterbeat motive with essentially the same rhythm as A1, but in s l o w e r tempo. Meanwhile, the cadential 9/8 bar in the *Hauptstimme* also echoes its opening 3/2 bar, stating the first three pitches in the original order, but now effectively in a f a s t e r tempo. As before, we witness a kind of simultaneous deceleration and acceleration at the cadence, and this remarkable effect allows the *Hauptstimme* and accompaniment to end with variants of their initial bars – in triple and quadruple meters respectively – but now in agreement on the same dotted-quarter-note pulse. This pulse is in fact the exact arithmetic average of their respective half-note and quarter-note pulses at the opening, and the cadence – as Schönberg revised it from its earlier from – thus appears to offer a dialectical synthesis of the metric energies at work since the beginning.[23]

21 The rhythms that were heard in A12 are very important in this regard, since the dotted quarter note and the anacrusis motive both anticipate the new beat value.

22 I shall suggest in a subsequent note why I have not interpreted the last attack as a downbeat.

23 I have not interpreted the last cadential chord as a downbeat, preferring to hear its *sforzando* accent as an abrupt gesture of completion rather than a new metric impulse. Of course, it would be easy to alter the interpretation to accommodate a new downbeat on the *sforzando* chord, although the afterbeat motives would be altered. Moreover, the chords in A17 retrograde the chords of A15 and A16, forming a palindrome whose own qualities of closure militate against beginning a new bar.

III.

The preceding analysis of the full ternary design has made explicit some of the metric tension and development that the music implicitly invokes, despite its notation in 4/4 throughout. The analysis also suggests why I consider the ternary design as a whole to constitute the first theme of the movement, and it quite clearly instantiates Schönberg's interest in the "[c]*o-ordination of heterogeneous characters to form a thematic unity."*[24] I recommend following by turns the interpreted *Hauptstimme* meters and especially the accompaniment meters of Example 3, in order to sense how the rhythms and various kinds of accents produce a rhythmic/metric counterpoint and a fluctuating elasticity that the analytical meters are meant to model.

As mentioned earlier, however, the analytical meters must be treated cautiously and must not be construed as adding new accents. Vice versa, our observations about fluctuating meter in the passage suggest that we should probably also treat the notated 4/4 time signature with the same caution, and even wonder why Schönberg never wrote a single time signature change in the whole movement. Our puzzlement can be reduced if we bear in mind remarks by Carl Dahlhaus that were written with regard to Stravinsky's rhythm but that apply equally to Schönberg's:

> *"One would have to be blind to history to see in our notation* [...] *a neutral supply of signs, independent of any style and capable of doing justice to any style. It is the expression and equivalent of the metrical rhythm that evolved in the seventeenth century, and it implies assumptions which Stravinsky does not share."*

In the New Music, adds Dahlhaus,

> *"the barlines are not markings of stress, but merely a method of ordering the notes"* and *"are mere indications of division and orientation without a rhythmically qualitative meaning, with the result that it is of no consequence where in fact they divide the motifs."*[25]

The preceding analysis has demonstrated that the notated 4/4 barlines in Schönberg's Fourth String Quartet are open to the same assessment, since the rhythmic motives seem to be parsed more effectively by other meters. We can surmise that Schönberg may have used 4/4 – the most common time signature, and therefore perhaps the easiest to ignore – so that performers would be less likely to add metric accents; he could then trust that his own careful

24 Arnold Schoenberg, "National Music (2)", see fn. 6, 173. For several relevant distinctions between "melody" and "theme" that resonate with the preceding analysis, see also Arnold Schoenberg, *Fundamentals of Musical Composition*, see fn. 2, 102.

25 Carl Dahlhaus, "Problems of rhythm in the New Music," in *Schoenberg and the New Music*, see fn. 15, 45–61, at 46, 48, and 51 respectively.

compositional manipulation of rhythm and various other types of accents would produce the fluid and dynamic plasticity he had in mind, without it being exaggerated or distorted by performers' responses to changing time signatures. In fact, the case in hand is remarkably similar to Schönberg's own analysis of shifting meters in the opening melody of the "Andante moderato" from Brahms's String Quartet, op. 51, no. 2. That movement is also notated in common time, and Schönberg analyses the opening in a mixture of 6/4 (really 3/2) and 4/4, in much the same way that example 2a used 3/2 and 2/2 to model the opening *Hauptstimme* in Schönberg's own quartet.[26] Dahlhaus observes that if

> *"the* [Brahms] *theme is a piece of musical prose, as Schoenberg says, it derives its prose character not from the alternation which Schoenberg perceived between 6/4 and 4/4 meter but from a method of grading the stress that cannot be notated undistorted either in 6/4 or 4/4."*[27]

The same must be concluded, I believe, about the prose-like flexibility of the opening of the Fourth String Quartet. Any time signature will distort the implicit rhythmic/metric interaction, by unnecessarily adding accents beyond those already carefully produced by other parameters. In a letter to Erwin Stein (dated 8 April 1927), Schönberg laments having divided several 4/4 bars into pairs of 4/8 bars in the string orchestra arrangement of the Second String Quartet, op. 10, complaining that *"it only meant even more accents being given than otherwise."*[28] After this experience, Schönberg evidently took a judicious attitude toward introducing time-signature changes in his music, presumably using them only when an explicit change was necessary and the associated accents would be tolerable. Schönberg's use of only 4/4 in the Fourth String Quartet does not mean that metric fluctuation is precluded, only that it can and should be produced solely by other musical parameters (just as it often is in the music of Brahms). Shifting time signatures would only stiffen the fluidity, plasticity, and spontaneity that the other parameters already achieve with greater subtlety. The analytical time signatures of Example 3 are revealing and instructive, but what they show also makes them superfluous.

These considerations also bear on a question that commentary on Example 3 has raised but not resolved: whether the passage involves a metric "discourse" or perhaps a stricter metric "dialectic."

26 See Arnold Schoenberg, "Brahms the Progressive," in *Style and Idea*, see fn. 15, 430–435.

27 Carl Dahlhaus, "Musical prose," see fn. 15, 110.

28 Letter from Arnold Schönberg to Erwin Stein, 8 April 1927 (carbon copy in The Library of Congress, Washington D.C., Music Division [Arnold Schoenberg Collection]); published in Arnold Schoenberg, *Letters*, selected and edited by Erwin Stein, translated from the original German by Eithne Wilkins and Ernst Kaiser (Berkeley, Los Angeles, 1987), 124.

I shall take the latter term to mean something more than just binary opposition or conflict, and to include the synthetic implications of its Hegelian conception.[29] The dotted-quarter-note pulse observed in both strata at the end of the passage might well suggest a synthetic resolution of a dialectical contrast between those strata. But the rhythmic and metric interaction of the two strata is characterized rather too formally by the analytical meters of Example 3. Arguably, their interaction is more loosely discursive, and prose-like, than truly dialectical. Carl Dahlhaus also speaks of a kind of rhythmic/metric *"mediation"* in Song no. 4 of the "Fifteen verses from 'The book of the hanging gardens' by Stefan George," op. 15, but he too seems diffident to describe the situation as truly dialectical.[30] Concepts such as "dialectic" may be enticing, but in certain circumstances they may be unnecessary – and possibly misleading or even false. It is quite possible to describe the rhythmic/metric interactions of Example 3 in purely musical terms, as "contrapuntal" or "polyphonic," or simply "heterogeneous." The passage illustrates not only the fluid, "unbound" meters of musical prose, but also a discourse between at least two prose-like strata. If those strata do engage in a purportedly "dialectical" relationship, it is not so that their differences can be resolved in order to attain a higher level and a new stability, but so that their interplay can continually produce new variations and developments. There is no real *Aufhebung* in this passage, but rather a constant and ever-changing renewal – call it "developing variation" – that results from continuously changing rhythmic and metric interactions. The signal feature of the cadence that closes the ternary design is nonetheless the fact that – for the first time – the two strata not only agree on the same pulse but also strike three consecutive simultaneous attacks. For the first time, polyphony and counterpoint give way to a momentarily synchronous homophony. The effect is certainly striking, but it involves a cadential relaxation to a simpler homophonic state, rather than *Aufhebung* to a higher one. The dotted-quarter-note pulses return elsewhere in

29 The *locus classicus* for a Hegelian concept of musical dialectics regarding Schönberg's music is Theodor Wiesengrund-Adorno, "Der dialektische Komponist," in *Arnold Schönberg zum 60. Geburtstag, 13. September 1934* (Wien 1934), 18–23; reprinted in Theodor W. Adorno, *Impromptus* (Frankfurt 1968), 39–44. Most of Adorno's discussion focuses not on dialectical relationships between musical configurations in specific compositions, but on the historical dialectic of Schönberg's rapid and radical advances in compositional technique, and a dialectical relation between the artist's subjectivity and the objective tendencies of his compositional material.

30 Carl Dahlhaus, "Musical Prose," see fn. 15, 119.

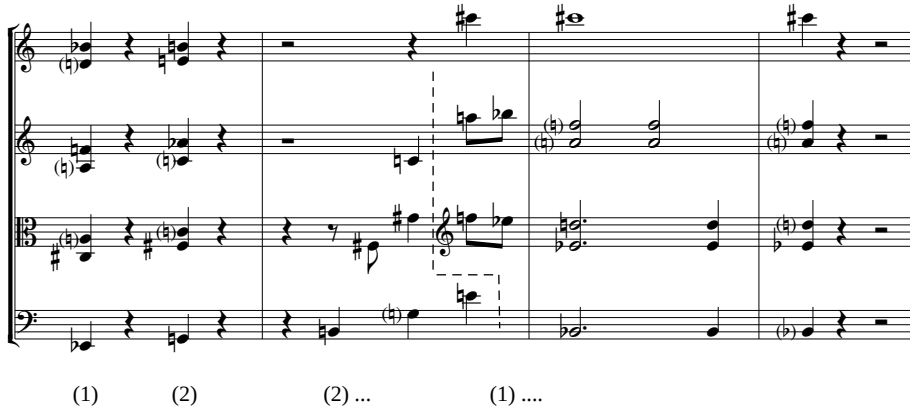
the movement, but they usually organize eighth-note rhythms in alternation or interaction with quarter or half-note pulses. By mixing freely with other groupings of eighth notes, the dotted-quarter-note pulse shows itself not to be a true dialectical synthesis, but rather a new rhythmic motive that was generated by a discursive and developmental counterpoint between the *Hauptstimme* and accompaniment strata.[31]

IV.

The final cadence of the movement also helps to underscore the difference between developing variation and the notion of a (Hegelian) dialectic in the music's rhythmic/metric dimension. Developing variation does not necessarily produce *Aufhebung* through negation and the synthetic production of a new stability, but instead combines (and recombines) similarities and differences to populate the music with ever new shapes, which also proliferate and multiply. In the process, developing variation ensures continuity, but also creates and controls widely differing levels of intensity; these may induce contrast and even opposition, but not necessarily a Hegelian dialectical negation. Schönberg's "musical logic," in effect, involves connections and affiliations, finds similarity within difference, and engenders proliferation, but it does not aim for *Aufhebung* through dialectical negation. Developing variation is the musical equivalent of the Old Testament injunction to "go forth and multiply," and musical logic (for Schönberg) is a matter of genetic relationships between musical entities.

The final cadence does, however, invoke an opposition between the hexachords of row form P. While there may be a dialectical aspect to the harmonic complementarity of the hexachords, the rhythmic profile of the cadence produces no real metric resolution whatsoever, even though all four instruments agree on a single final attack. Instead, the concluding bars produce remarkable force by sustaining and even increasing metric tension to the very end. That effect is considerably heightened by revisions Schönberg made to the cadence.

31 For instance, see bars 57–59 and 59–60, derived from RT4P and RT4I respectively. These brief passages present short cadential gestures to "round off" the first theme group, and are followed immediately by further motivic liquidation in preparation for the subordinate theme, which begins at bar 66. Both passages mix dotted-quarter and quarter-note pulses; the three upper voices are homophonic, but their individual voice-leading trichords correspond in set-class with the accompaniment voice-leading trichords in the cadences at bar 16 and bars 4-6 respectively, so that the two brief passages echo and summarize the principal cadences of the first theme's ternary design. Dotted-quarter and quarter-note pulses also interact with striking effect in bars 229–238, an extended cadential climax that prepares for the Coda (at bar 239). Both passages merit extended analysis, for which there is not space here.

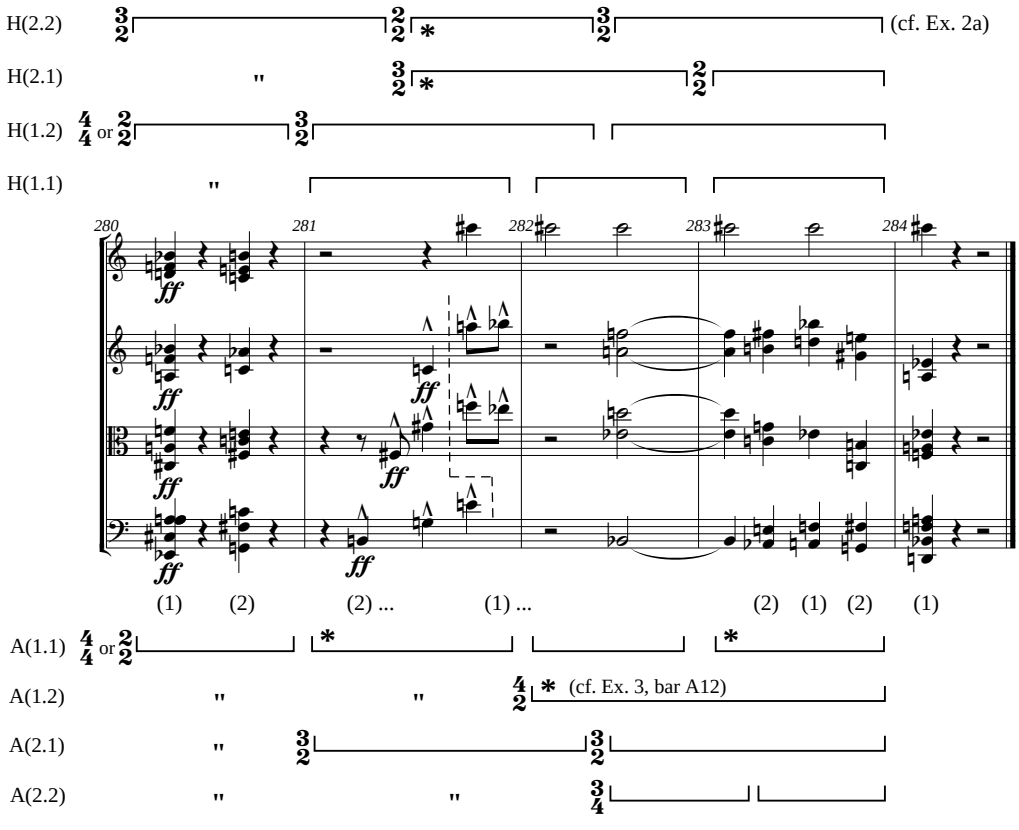


Example 4a. Arnold Schönberg, Fourth String Quartet, op. 37, first movement, sketch for the final cadence.

Example 4a transcribes a sketch for the ending; it retains the anomalous stemming, and adds cautionary accidentals and parenthesized numerals beneath the score.[32] In this initial version, the cadence presents a summary opposition between the hexachords of P, labelled (1) and (2) beneath the music. The hexachordal rhythm slows as the sketch proceeds, with the last two bars prolonging only hexachord (1). Example 4b shows the revised and final form of the ending, which substitutes two bars for the sketch's penultimate one, and considerably increases the dialogical alternation between the two hexachords.[33] The texture is also thickened by numerous doublings that heighten the emphatic effect of the passage, and that also tempt the listener to follow various short voice-leading strands in the different registral strata of the texture. The revised texture offers more for the listener in other ways as well. In the sketch, the closing bars essentially submit only to 4/4 (or 2/2) meter, and this is especially true for the penultimate bar. The final version, by contrast, now submits to a wide range of metric interpretations.

32 Arnold Schönberg Center, Wien, MS 41, Archive No. 1006; the transcription shows the end of staffs 6–9 and the continuation on staffs 11–14. Schönberg added bar numbers on the sketch, starting at 272 and ending at 284, but the music actually corresponds to bars 271 ff., so that the sketch would actually end in bar 283. This discrepancy will be taken up in the next note. The last two bars of the sketch are reproduced in Arnold Schönberg, *Sämtliche Werke,* see fn. 10, 52.

33 By adding an extra bar, the revision also ensures that the quartet still ends in bar 284, once the erroneous bar numbering of the earlier sketch had been corrected. (See the preceding note.) I do not know whether the number 284 had any special significance and motivated the revisions in any way.



Example 4b. Arnold Schönberg, Fourth String Quartet, op. 37, first movement, final cadence (bars 280–284).

Just like the opening, the final few bars pit the three lower instruments against the first violin, which stubbornly repeats C♯. The revisions to the accompaniment in bars 282–283 on example 4b – the inserted half-note rest, and the more extended alternation of hexachords following the agogically accented chord – once more revitalize the metric discourse of the opening, for a final appearance at the closing cadence. Example 4b offers several metric interpretations of the two rhythmic strata, above and below the music respectively, to explore this idea. These potential meters invoke duple, triple, and quadruple groupings with quarter-note and half-note beats, and also engage the Afterbeat motive (indicated on this example by asterisks). It is remarkable how so many different meters can be invoked by so few rhythms. Readers may explore for themselves how rhythmic interactions between the strata help to support – to varying degrees – the several distinct metric scansions of the *Hauptstimme*

and accompaniment strata. Every option has something to speak for it, but I find that the most compelling alternatives are interpretation H(2.2) at the top and interpretation A(2.2) at the bottom. Interpretation H(2.2) responds to the three-voice accompaniment attack at the third quarter of bar 281 and the big agogic accent in bar 282 to parse the *Hauptstimme* exactly as Example 2a parsed the opening bars. Interpretation A(2.2) likewise recalls rhythmic and metric features of the accompaniment in the opening six-bar passage, by creating a metric progression through 4/4, 3/2, and 3/4.[34] The dotted-quarter-note pulse observed at the end of Example 3 is not present here. Its triple subdivision can be sensed in augmented form, in the dotted-half-note and dotted-whole-note spans of the 3/4 and 3/2 figures, but those observations only reinforce the idea that the dotted-quarter-note pulse is a product (and a subject) of developing variation, rather than an entity invested with a higher dialectical stability. In concert, interpretations H(2.2) and A(2.2) produce a hemiola formula (setting the two accompaniment 3/4 bars against the corresponding 3/2 *Hauptstimme* bar), but this formula is also somewhat obscured by additional metric cues (suggested by the other interpretations) that the listener responds to as the passage unfolds.

Readers who contemplate the various different metric interpretations shown on the example will be able to sense the huge tension and conflicting rates of acceleration and deceleration that are generated when all the different metric potentialities vie for prominence as the cadence unfolds. Rhythmic and metric conflict, and the developing variation of rhythmic/metric motives, are thereby sustained until the final chord.[35] That chord offers no real dialectical resolution, in my opinion, since it simply ends the metric discourse abruptly. The developing variation of rhythm and meter, which in principle could continue inexhaustibly, is brought to an end not by resolution and synthesis, but by sheer force. In the 1922 edition of the "Harmonielehre" Schönberg had remarked:

> *"Now I must say at once I do not believe it possible to fashion a close, an ending, in such a way as to rule out every possibility of continuation.* [...] *there could undoubtedly be a continuation, the idea could be spun out further or new ones attached.* [...] *In this respect music is comparable to a gas, which is in itself without form but of unlimited extension."*[36]

Even though the large-scale trajectory of the quartet movement employs many features of sonata-allegro form, and thus articulates formal completion along

34 Interpretation A(1.1) involves a compelling emphasis on the original version of the Afterbeat motive. The penultimate 4/2 bar on interpretation A(1.2) also presents a more extended variant of the Afterbeat motive, one that in fact is an augmentation of bar A12 on Example 3.

35 I discuss some other aspects of this passage in Richard Kurth, "Moments of Closure: Thoughts on the Suspension of Tonality in Schoenberg's Fourth Quartet and Trio," in *Music of My Future: The Schoenberg Quartets and Trio*, see fn. 3, 139–160, at 149–152.

36 The English translation is from Arnold Schoenberg, *Theory of Harmony*, translated by Roy E. Carter (Berkeley, Los Angeles 1978), 126–127, and is based on the third edition of 1922. For the German text, see Arnold Schönberg, *Harmonielehre* (Reprint: Wien 2001 [1922]), 148–149.

such lines, the force applied to textural and rhythmic/metric opposition in the final cadence illustrates that closure must nonetheless be asserted by force, against the possibility of further developmental continuation inherent in the material and in the compositional aesthetic.[37]

V.

The idea that metric conflict is sustained to the very end of the movement and is never really resolved undermines the notion that the music's metric interactions might instantiate a Hegelian dialectic. Michael Cherlin, however, has recently shown with compelling and insightful arguments that a Heraclitan concept of opposition *"seems generally more consistent with Schoenberg's writings and practice."*[38] For Heraclitus, the relationship between

> *"contrasting elements necessarily and always involved a tension or strife between the opposites of which it was composed. The tension is never resolved. Peace and war do not succeed each other in turn: always in the world there is both peace and war. Cessation of struggle would mean disintegration of the universe."*[39]

Cherlin succinctly contrasts

> *"dialectical systems in which opposition is neutralized as it gives rise to a higher unity, as in a Hegelian A u f h e b u n g , versus dialectics where opposition is sustained within a higher unity, as in the thought of Heraclitus."*[40]

A Heraclitan concept of opposition indeed seems particularly relevant to Schönberg's thought, especially considering that one of his rare uses of the word "dialectic" makes direct reference to Heraclitus:

> *"All good music consists of many contrasting ideas. An idea achieves its distinctness and validity in contrast with others. Heraclitus called contrast 'the principle of development'. Musical thinking is subject to the same dialectic as all other thinking."*[41]

37 In 1936 Schoenberg wrote introductory analytic notes on his four quartets, to accompany recordings made by the Kolisch Quartet. These notes are reproduced as "Notes on the Four String Quartets," in *Schoenberg, Berg, Webern: Die Streichquartette. Eine Dokumentation. The String Quartets. A Documentary Study.* Herausgegeben von/Edited by Ursula v. Rauchhaupt (booklet accompanying CD Deutsche Grammophon 419 994-2) (Hamburg 1987). For brief remarks on how the first and fourth movements of the Fourth String Quartet *"resemble catalogued forms"* (such as sonata-allegro form) but also *"differ from the conventional,"* see 58. The original manuscript of the notes is at the Arnold Schönberg Center, Wien (T 70.01–03).

38 Michael Cherlin, "Dialectical Opposition in Schoenberg's Music and Thought," in *Music Theory Spectrum* 22 (2000), no. 2, 157–176, at 158.

39 W. K. C. Guthrie, *A History of Greek Philosophy* (Cambridge 1962), vol. 1, *The Earlier Presocratics and the Pythagoreans*, 220. Cited in Michael Cherlin, "Dialectical Opposition," see fn. 38, 159.

40 Michael Cherlin, "Dialectical Opposition in Schoenberg's Music and Thought," see fn. 38, 158.

41 Arnold Schoenberg, *Fundamentals of Musical Composition*, see fn. 2, 94; cited in Michael Cherlin, "Dialectical Opposition," see fn. 38, 168–169.

Cherlin believes that the phrase *"the principle of development"* is not in fact a direct quote from Heraclitus. It is, to be sure, a rather Schönbergian paraphrase, and it adds insight into the concept of developing variation.

It was suggested earlier that the relation between the metric strata of Example 3 could be conceived as a contrapuntal one, rather than as a dialectical opposition of a Hegelian type. As Cherlin points out, Schönberg defines a rather Heraclitan concept of counterpoint near the outset of an eight-page manuscript written on 2–3 December 1931: *"counterpoint means an 'opposing point' whose combination with the original point is needed if the idea is to exist."*[42] The contrapuntal idea would not exist at all if it did not arise from the creation and assertion of an opposition. Presumably it would also be destroyed if the opposition were to be resolved in the course of the piece, and so the oppositional relationship must be sustained, in some form, to the end.

A question nonetheless remains. How are such contrapuntal ideas worked out in the course of a composition, and what role – if any – does developing variation play? We can perceive at least the beginnings of an answer to this question in the striking formulation found in "Zu: Darstellung des musikalischen Gedankens," a two-page manuscript written a few months earlier, on 16 August 1931.

> *"Komponieren ist: denken in Tönen und Rhythmen*
> *Jedes Musikstück ist die Darstellung eines musikalisches Gedankens.*
> *Das musikalische Denken unterliegt den Gesetzen und Bedingungen unseres sonstigen Denkens und hat hiebei noch die sich aus dem Material ergebenden Bedingungen zu berücksichtigen.*
> *Alles Denken besteht im Wesentlichen darin, die Dinge (Begriffe etc) zueinander in Beziehung zu bringen*
> *Ein Gedanke ist die Herstellung einer Beziehung zwischen Dingen, zwischen denen diese Beziehung nicht ohne die Herstellung existiert.*
> *Das Denken sucht also die Zusammenhängen zwischen den Dingen auf*
> *Jeder Gedanke beruht also auf Zusammenhängen, ist aber erst gedacht, wenn der Zusammenhang der betreffenden Dinge zur Darstellung einer Beziehung dieser Dinge benutzt würde."*

42 Arnold Schönberg, "Der lineare Kontrapunkt" (Arnold Schönberg Center, Wien, T 35.22); published "Linear Counterpoint," in *Style and Idea*, see fn. 6, 289–295, at 289; cited in Michael Cherlin, "Dialectical Opposition in Schoenberg's Music and Thought," see fn. 38, 171. Schönberg's manuscript immediately goes on to describe three abstract types of contrapuntal opposition, using analogies from mathematics and grammar; see Michael Cherlin, 171–172, for a detailed and useful discussion. For further commentary on Schönberg's concept of counterpoint, see also Severine Neff, "Schoenberg as Theorist: Three Forms of Presentation," in *Schoenberg and His World*, see fn. 5, 55–84 (especially 73–80, on "Presenting Contrapuntal Combinations"); see also P. Murray Dineen, "The Contrapuntal Combination: Schoenberg's Old Hat," in *Music Theory and the Exploration of the Past*, edited by Christopher Hatch and David Bernstein (Chicago 1993), 435–471.

"Composing is: thinking in tones and rhythms.
Every piece is the presentation of a musical idea.
Musical thinking is subject to the laws and conditions of all our other thinking, and beyond that must take into consideration the conditions resulting from the material.
All thinking consists essentially in bringing things (concepts, etc.) into relationship with each other.
An idea is the production of a relationship between things, a relationship that would not exist were it not produced.
Thinking therefore searches out the connections between things.
Every idea is thus based on connections, but is first conceived when the connection of the things concerned would be used for the presentation of a relationship between those things."[43]

In careful stages, Schönberg here formulates a concept of the musical idea that must have also influenced the definition of contrapuntal ideas (quoted above) that he wrote a few months later. The contrapuntal definition gives more stress to the concept of opposition, but in this slightly earlier formulation a (musical) idea also involves a certain kind of opposition, for it produces, posits, or asserts a relation between things that would otherwise be considered completely unrelated. In both definitions, Schönberg stresses how the very existence of the idea is predicated on an oppositional relationship: in counterpoint, the *"opposing point* [...] *is needed if the idea is to exist"*; in the more general definition, the idea posits *"a relationship that would not exist were it not produced."* The relationship posited by the idea does not exist prior to its invention, but connections (*Zusammenhänge*) can nonetheless be perceived between the distinct constituents that the idea relates or joins through opposition. These connections are in turn deemed useful for the presentation of the idea, in the culminating sentence of the passage just quoted. Developing variation – of rhythmic/metric motives for instance – takes up these connections and works with them, and thus aids in the presentation of such a Schönbergian idea in all its *Mannigfaltigkeit*. The idea is nonetheless not "resolvable." For the contrapuntal idea in particular, the internal opposition basic to its production is also essential to its existence, and the idea would disintegrate if the opposition were resolved or neutralized. Schönberg

43 Arnold Schönberg Center, Wien (T 35.40); published in Arnold Schoenberg, *The Musical Idea*, see fn. 3, 421–422, emphasis as in the original. For a description and dating of the manuscript, see 405. The cited passage is also reproduced on 369–370, but the last sentence is corrupt, with *"nicht"* in place of *"erst."* The English translation given here is adapted from Carpenter and Neff's (on p. 370). They use "relationship" to translate both *Beziehung* and *Zusammenhang*; I use "connection" for the latter.

thus adheres more closely to a Heraclitan – rather than a Hegelian – concept of opposition, and even makes it basic to his formulation of musical ideas. Opposition, tension, difference, and interaction – these are always developed and sustained, and kept in play to create varying energy levels; they are modulated, but they are not resolved.

The counterpoint of distinct metric strata in the passages studied here exemplifies the definitions of idea and counterpoint just cited. The musical idea is shown here to involve a sustained oppositional interplay between distinct rhythmic/metric strata, which constantly evolves through developing variation but is never reduced, neutralized, or resolved. The cadence that ends the opening ternary shape briefly collapses into a simple homophony, but it does so only to introduce a new pulse value that will be employed for later rhythmic/metric developments, oppositions, and counterpoints that will populate the rest of the movement. The final cadence of the movement sustains the stratified metric conflict to the end. What Schönberg achieves through the counterbalancing of distinct rhythmic/metric strata is something more than just the "musical prose" of the individual strata themselves: he uses the temporal dimension of the music to project and reinforce his notion of the musical idea as an ever-productive interaction of connections and oppositions.