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WHAT BEETHOVEN LEARNED FROM K464

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ABSTRACT

Beethoven imitated Mozart's String Quartet in A major K464 more openly than any other work by a fellow composer. Yet critics have never explained his fascination with the fifth 'Haydn' quartet. This article argues that Beethoven responded to a rare and unexplored transformation of sonata form in which the primary theme returns at its original pitch in the secondary area. This preserves the melody of the theme, but reinterprets its harmonic and schematic function. Mozart explored this device with unusual rigour in K464, recalling the primary theme at pitch in both outer movements. The two primary themes share a common chromatic line whose invariant return wittily probes late eighteenth-century tonal conventions.

Beethoven emulated Mozart's harmonic design in his own Quartet in A major, Op. 18 No. 5, and even intensified its more problematic features. He imitated K464 most literally in the finale of the 'Kreutzer' Sonata, which provided a model for similar harmonic experimentation in the Sonata in G major Op. 31 No. 1, the 'Waldstein' Sonata and the first 'Razumovsky' quartet. K464 suggests an important source for Beethoven's use of chromatic elements to problematize tonal and thematic function, a practice most evident in the 'Eroica' Symphony.

Carl Czerny's 'Erinnerungen aus meinem Leben' (1842) includes a familiar anecdote concerning Mozart's 'Haydn' quartets:

> Einst sah Beethoven bey mir die Partitur der 6 Mozartschen Quartette. Er schlug das 5te /:in A:/ auf (K. V. 464) und sagte: 'Das ist ein Werk! Da sagte Mozart der Welt: "seht was ich machen könnte, wenn für euch die Zeit gekommen wäre!"'.[1]
>
> Once when he was with me, Beethoven saw the score of the six Mozart quartets. He flung open the fifth in A (KV. 464) and said: 'That is a work! Mozart was saying to the world here, "Look what I could do, if only you were ready!"'.

Beethoven's choice is puzzling. The following Quartet in C major, K465, has always impressed critics as the more avant-garde work. For two centuries, the chromatic introduction to the 'Dissonance' Quartet has marked Mozart's modernist frontier, his boldest departure from musical convention.[2] In fact, Beethoven seems to have nodded to K465 in the dissonant introduction to his own Quartet in C major, Op. 59 No. 3. We may perhaps detect another homage in the chromatic 'La Malinconia', aptly located in the sixth quartet of Op. 18. Can Czerny have mixed up his Mozart quartets?

Beethoven's oeuvre bears out the story. He may have alluded to K465 in isolated passages, but he devoted an entire quartet to K464. As Joseph Kerman and Jeremy Yudkin have shown, Beethoven carefully modelled his Quartet in A major, Op. 18 No. 5, on Mozart's work, and even copied out at least one movement for

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1 Carl Czerny, 'Erinnerungen aus meinem Leben', as excerpted in *Über den richtigen Vortrag der sämtlichen Beethovenschen Klavierwerke*, ed. Paul Badura-Skoda (Vienna: Universal, 1963), 14. My translation.

2 On the reception of K465 see Julie Anne Vertrees, 'Mozart's String Quartet, K. 465: The History of a Controversy', *Current Musicology* 17 (1974), 96–114; Marshall Brown, 'Mozart and After: The Revolution in Musical Consciousness', *Critical Inquiry* 7/4 (1981), 689–706; William DeFotis, 'Mozart, Quartet in C, K. 465', *Nineteenth-Century Music* 6/1 (1982), 31–38; and John Irving, *Mozart: The 'Haydn' Quartets* (Cambridge: Cambridge University Press, 1998), 74–78, 82–83.

study.[3] He adopted the order of movements, imitated the variation set, replicated structural features from the first movement and virtually quoted a theme from the finale. Nor did Op. 18 exhaust Beethoven's fascination with K464. He revisited it a quarter of a century later in the Quartet in A minor, Op. 132, whose Allegro ma non tanto patently reworks Mozart's contrapuntal minuet. Beethoven imitated K464 more openly than any other work by a fellow composer.

Beethoven's critics have never explained what he found so visionary in Mozart's quartet. To be sure, K464 makes strong demands on the listener. The most chromatic of the 'Haydn' quartets, it abounds in unexpected modulations and modal switches. Counterpoint plays an unprecedented role, saturating the minuet, finale and much of the first movement. Subtle connections between the movements also suggest a cyclical design: the minuet begins with a motive derived from the first movement, while the finale absorbs a rhythmic figure from the preceding variations.[4]

Yet these features can scarcely have startled Beethoven. Strict counterpoint had appeared in string quartets since the earliest years of the genre, and the fugal writing in Haydn's Op. 20 provided a more spectacular example than K464.[5] The chromatic modulations in the Quartet in A may inspire admiration, yet they pale beside the openings of K465 or the Piano Concerto in C minor, K491, not to mention the 'twelve-tone' passage in the finale development of the Symphony in G minor K550.[6] Mozart's cyclic ambitions appear more overtly in the Quartet in D minor K421, where, as Elaine Sisman noted, Mozart deployed the baroque *lamento* figure across three movements.[7] It seems doubtful that we shall find Beethoven's futuristic Mozart, the restless genius who cries 'Seht was ich machen könnte!', in harmonic, contrapuntal or formal complexities.

Certainly Beethoven's imitations of K464 give no such indication. His own Quartet in A steers clear of structural or expressive complications, minimizing counterpoint, chromaticism or rhetorical urgency. It exemplifies that blank 'classicizing' tendency that Charles Rosen detected among Beethoven's early works.[8] For Kerman, Op. 18 No. 5 remained a cipher, 'the least personal of the quartets'.[9] Opus 132 also filters Mozart's quartet through a nostalgic lens, juxtaposing his learned counterpoint against musette drones and melodic snippets from Beethoven's youthful Redoutensaal waltzes. The Allegro ma non tanto serves as a lyrical intermezzo, separating the anguished first movement from the monumental 'Heiliger Dankgesang'. It shares the whimsical spirit of the Alla danza tedesca of the Quartet in B flat major Op. 130, the original fourth movement of Op. 132.[10]

Nevertheless, Beethoven rightly viewed K464 as a progressive work, or better, as a work from which he could derive progressive ideas. I shall argue that Beethoven responded to a peculiar feature of Mozart's

3 Joseph Kerman, *The Beethoven Quartets* (New York: Norton, 1966), 54–64; Kerman, 'Beethoven Quartet Audiences: Actual, Potential, Ideal', in *The Beethoven Quartet Companion*, ed. Robert Winter and Robert Martin (Berkeley and Los Angeles: University of California Press, 1994), 13–14; Jeremy Yudkin, 'Beethoven's "Mozart" Quartet', *Journal of the American Musicological Society* 45/1 (1992), 30–74.

4 Mark Evan Bonds has pointed out the latter connection in *Music as Thought: Listening to the Symphony in the Age of Beethoven* (Princeton: Princeton University Press, 2006), 56–57.

5 See Warren Kirkendale, *Fugue and Fugato in Rococo and Classical Chamber Music*, trans. Warren Kirkendale and Margaret Bent (Durham, NC: Duke University Press, 1979).

6 See Heinrich Jalowetz, 'Twelve-Tone Writing in Mozart', in *Wolfgang Amadeus Mozart, Symphony in G Minor, K. 550*, ed. Nathan Broder (New York: Norton, 1967), 99–100.

7 Elaine Sisman, 'Observations on the First Phase of Mozart's "Haydn" Quartets', in *Words about Mozart: Essays in Honour of Stanley Sadie*, ed. Dorothea Link with Judith Nagley (Woodbridge: Boydell, 2005), 55–56.

8 Charles Rosen, *The Classical Style: Haydn, Mozart, Beethoven* (New York: Viking, 1971), 381.

9 Kerman, *The Beethoven Quartets*, 64. Yudkin detected a Bloomian 'misprision' in Op. 18 No. 5, designed to allay the anxiety of influence; 'Beethoven's "Mozart" Quartet', 30–36, 64–72.

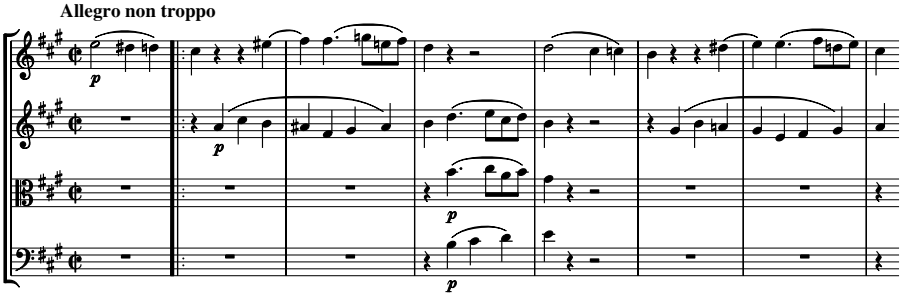
10 See Sieghard Brandenburg, 'The Autograph of Beethoven's Quartet in A Minor, Opus 132: The Structure of the Manuscript and Its Relevance for the Study of the Genesis of the Work', in *The String Quartets of Haydn, Mozart, and Beethoven: Studies of the Autograph Manuscripts*, ed. Christoph Wolff (Cambridge, MA: Harvard University Press, 1980), 278–300.

harmonic design, a rare transformation of sonata form that has eluded systematic study. Beethoven imitated Mozart's idiosyncratic design, even elaborating his play with tonal structures, and not only in Op. 18. The harmonic anomalies of K464 appear most suggestively in Beethoven's works of 1802–1806 and offer a new perspective on his much-discussed 'new path'. An analysis of three of these works – the Quartet in A major, the 'Kreutzer' Sonata and the F major 'Razumovsky' Quartet – will explore the role Mozart's work may have played in Beethoven's astonishing reinterpretation of the Viennese tradition.

K464

The harmonic design of K464 hinges on a four-note chromatic line. This line (e^2–$d\sharp^2$–$d\natural^2$–$c\sharp^2$) appears most obviously in the ubiquitous head motive of the finale (see Example 1). It first emerges, however, in the opening Allegro. After a firm statement of the tonic triad, the first violin dips from e^2 to $d\sharp^2$, initiating the turn motive that permeates the primary theme (see Example 2). The raised fourth begins as a surface ornament, part of a double-neighbour-note embellishment of $\hat{5}$. As the phrase unfolds with a descending sequence of the turn motive, the $\sharp\hat{4}$ assumes a passing function, filling in the chromatic space between $\hat{5}$ and $\hat{3}$. In bar 7 the viola explicitly states the chromatic line (e^1–$d\sharp^1$–$d\natural^1$–$c\sharp^1$). Moreover, the theme continues in bars 9–12 with an inversion of the viola's line. It now ascends in the upper notes of the melody, which trace the foreground line ($c\sharp^1$-d^1-$d\sharp^1$-e^1).

The secondary area of the Allegro also begins with a chromatic motive, derived from the end of the transition (see Example 3). After a lyrical parenthesis in C major, a rising chromatic line in bars 29–33 ($g\natural^1$-$g\sharp^1$-a^1-$a\sharp^1$-b^1) leads to the medial caesura. The opening motive of the secondary theme continues the ascent (b^1–$b\sharp^1$–$c\sharp^2$) in bars 37–38. The secondary theme thus preserves the $\hat{5}$–$\sharp\hat{5}$–$\hat{6}$ motion from bars 29–31, now applied to E major. The theme also inherits another chromatic element from the transition. The medial caesura arrived through an augmented sixth with a C$\natural$–B progression in the bass. This $\flat\hat{6}$–$\hat{5}$ semitone relative to E major returns as an inner voice in the first violin (bars 58–59, 62–65), but now as part of the chromatic line C$\sharp$–C$\natural$–B. This is, of course, the enharmonic inversion of the second theme. The end of the secondary area unites both chromatic motives, as the head motive of the primary theme returns in bars 69–71 (see Example 4). The first violin plays an abbreviated version of the opening phrase at its original pitch, but now within the harmonic context of E major. The line from the primary theme, originally $\hat{5}$–$\sharp\hat{4}$–$\natural\hat{4}$–$\hat{3}$ of I, thus returns as $\hat{1}$–$\hat{7}$–$\flat\hat{7}$–$\hat{6}$ of V. The recollected theme ends with the $b\sharp^1$–$c\sharp^2$ semitone that began the secondary theme. This $\hat{5}\sharp$–$\hat{6}$ semitone creates an audible link between the beginning and end of the secondary area.[11]



Example 1 Mozart, String Quartet in A major K464/iv, bars 1-8 (*Neue Mozart-Ausgabe*, series 8, part 20, section 1, volume 2, ed. Ludwig Finscher (Kassel: Bärenreiter, 1962)). Used by permission

11 As Roger Kamien and Naphtali Wagner noted, the cello reinstates the original spelling at the end of the secondary area, signalling 'the victory of B$\sharp$ over C': 'Bridge Themes within a Chromaticized Voice Exchange in Mozart Expositions', *Music Theory Spectrum* 19/1 (1997), 12. Memories of the flat sixth haunt the retransition, however, where the cello persistently injects an accented F$\natural$ against the E pedal.

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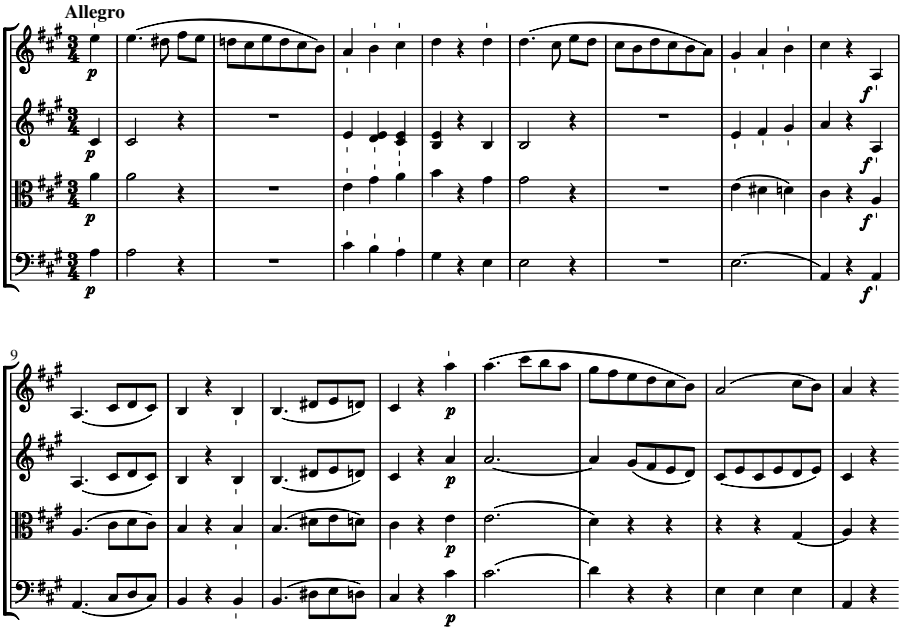


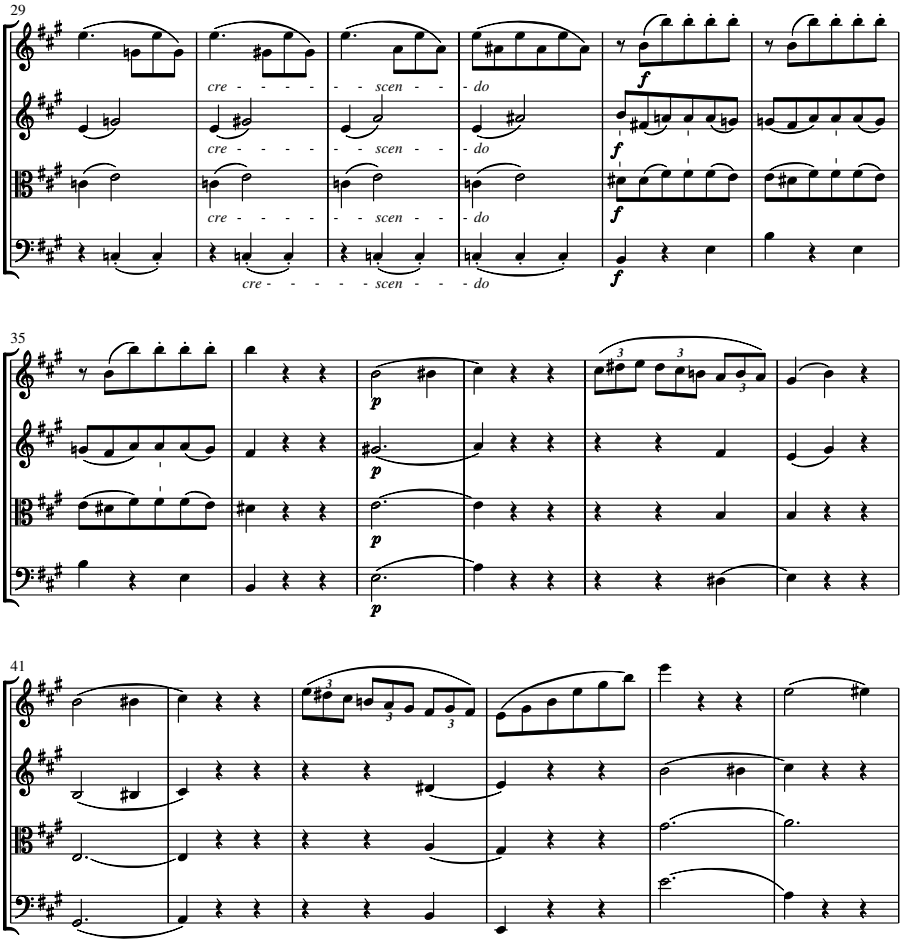
Example 2 Mozart, String Quartet in A major K464/i, bars 1–16

Mozart's development of chromatic motives culminates in the finale, where the (e^2-$d\sharp^2$-$d\natural^2$-$c\sharp^2$) line surfaces as the *Hauptmotiv* of a monothematic sonata form. Moreover, the chromatic motive again returns at pitch in the secondary theme, reinterpreted as $\hat{1}$–$\hat{7}$–$\flat\hat{7}$–$\hat{6}$ of E major (see Example 5). The secondary theme presents the head motive canonically, with entries on B, E and A. Although the theme begins with the motive transposed to the dominant, this version arrives unaccompanied and sounds almost like post-cadential filler. The untransposed version, which coincides with the onset of the *Trommelbass* and is stated in both bars 41 and 42, carries greater weight. This $\hat{1}$–$\hat{7}$–$\flat\hat{7}$–$\hat{6}$ version will also dominate the first half of the development.

The most noteworthy aspect of Mozart's motivic design in K464 lies in a rare formal device that, to my knowledge, has escaped systematic study. The Quartet in A belongs to a handful of works by Mozart and Haydn in which the primary theme returns at pitch in the secondary key. Primary themes frequently return in the second half of the exposition, in either the secondary or closing area. Yet almost invariably they return transposed into the new key. In the outer movements of K464, the head motive of the primary theme returns in the dominant with its pitches (or pitch-classes) unchanged. This invariant return preserves the melody of the theme, but reinterprets its harmonic function. To grasp the originality of Mozart's design, let us consider some neighbouring examples of this device.

In Haydn's Quartet in B minor Op. 33 No. 1, the primary theme (Example 6a) returns at the beginning of the second group at its original pitch (Example 6b). In this case, the changing harmonic function illuminates a marked feature of the primary theme. Haydn's quartet famously begins in the wrong key, with a melody that implies D major.[12] When the melody returns at pitch in D major, stated *forte* over a tonic pedal, the secondary key triumphantly realizes the implied tonality. The fifth and sixth quartets of Haydn's

12 See Rosen, *The Classical Style*, 114–118, and also James Webster, *Haydn's 'Farewell' Symphony and the Idea of Classical Style: Through-Composition and Cyclical Integration in His Instrumental Music* (Cambridge: Cambridge University Press, 1992), 127–130.



Example 3 Mozart, String Quartet in A major K464/i, bars 29–46

Op. 50 bear a closer resemblance to K464. The finale of the Quartet in F major opens with a gigue-like motive that dwells on the dominant (Example 7a). This head motive returns at pitch in the closing area, but now reinterpreted as a tonic pedal in the cello (Example 7b). The finale of the Quartet in D major ('Frog') also begins with a motive that emphasizes the fifth degree, the *bariolage* figure on a^1 that prompted the nickname (Example 8a). The head motive returns at pitch in the closing area, with the sonorous open-string a^1 now reinterpreted as an inverted tonic pedal (Example 8b). The similarity to K464 may not be coincidental. Opus 50 followed the publication of Mozart's quartets by only two years; Haydn might well have borrowed a formal quirk from a quartet written in his honour and introduced it, fittingly, in the fifth quartet of his own set.

K464 stands apart from these examples (and any others I have discovered) not only because the same chromatic cell returns untransposed in both outer movements. Mozart's chromatic line also straddles two different galant schemata. In its original form, the primary theme of the Allegro exemplifies Robert Gjerdingen's Sol–Fa–Mi schema, a popular opening formula. As Gjerdingen has documented, galant composers regularly embellished the diatonic passing motion with the raised fourth, producing a $\hat{5}$–$\sharp\hat{4}$–$\natural\hat{4}$–$\hat{3}$

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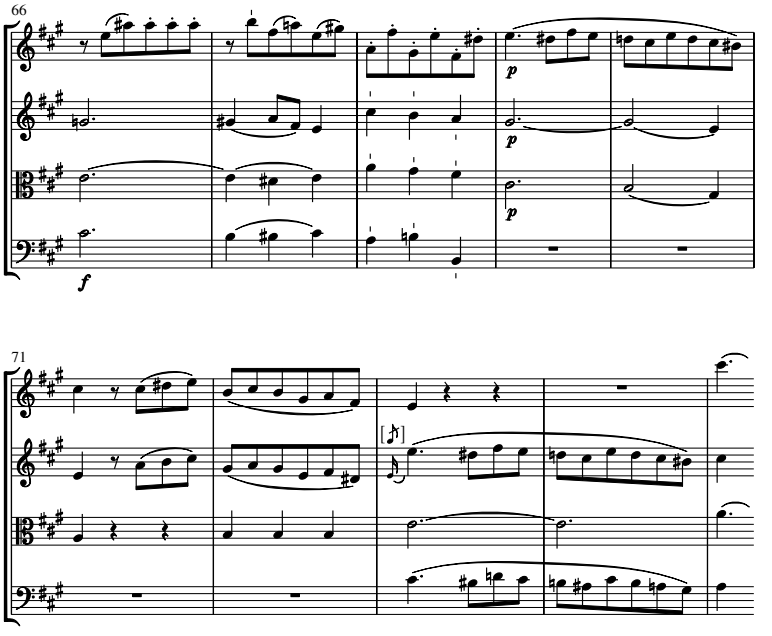
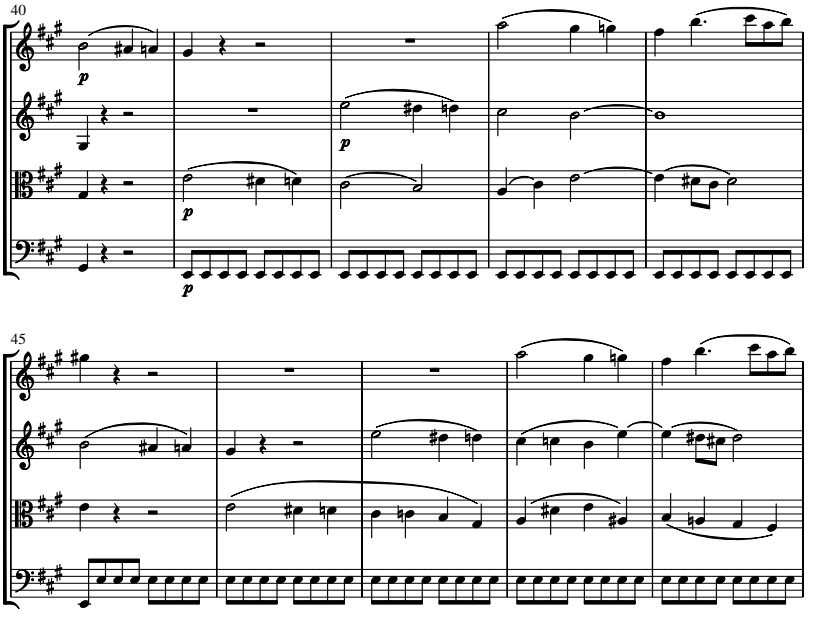


Example 4 Mozart, String Quartet in A major K464/i, bars 66–75



Example 5 Mozart, String Quartet in A major K464/iv, bars 40–49

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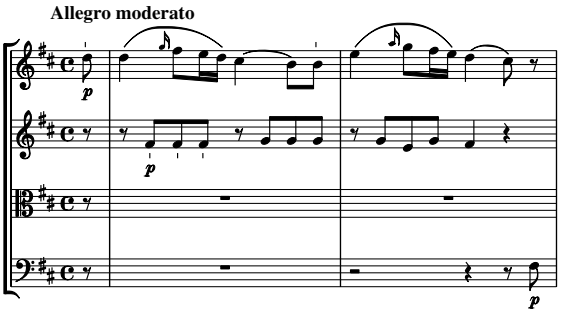
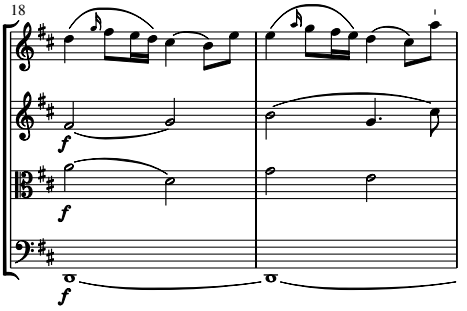


Example 6a Haydn, String Quartet in B minor Op. 33 No. 1/i, bars 1–2 (*Joseph Haydn Werke*, series 12, volume 3, *Streichquartette 'Opus 20' und 'Opus 33'*, ed. Georg Feder and Sonja Gerlach (Munich: Henle, 1974)). Used by permission



Example 6b Haydn, String Quartet in B minor Op. 33 No. 1/i, bars 18–19

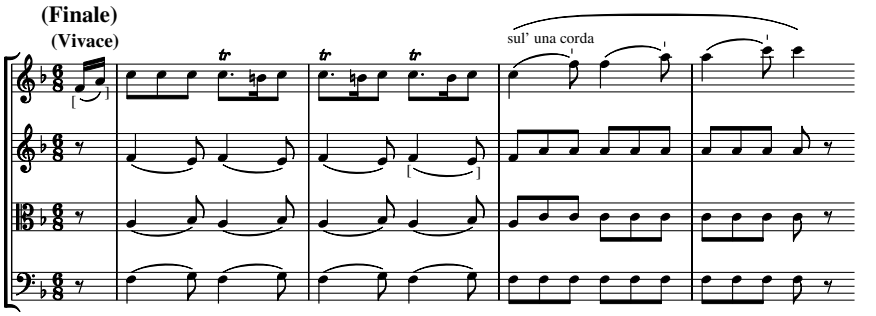
foreground line.[13] The Sol–Fa–Mi schema returns in the primary theme of the finale, where the chromatic line rises to the surface. The $\hat{1}$–$\hat{7}$–$\flat\hat{7}$–$\hat{6}$ version of the line, on the other hand, belongs to Gjerdingen's Quiescenza schema, with its characteristic $I^{\flat 7}$–IV–V–I progression.[14] The Quiescenza clearly underlies the secondary theme of the K464 finale, where the chromatic line unfolds over the *Trommelbass* pedal. By recollecting his primary theme at pitch in the new key, Mozart has transformed both its harmonic function and its schematic identity.

Mozart's aria 'Vedrommi intorno' from *Idomeneo* provides an instructive comparison with K464. The aria opens with a five-bar Quiescenza, featuring the $\hat{1}$–$\hat{7}$–$\flat\hat{7}$–$\hat{6}$ line in an inner voice (Example 9a). After modulating to the dominant, the Andantino sostenuto culminates in a chromatic Sol–Fa–Mi with the $\hat{5}$–$\sharp\hat{4}$–$\natural\hat{4}$–$\hat{3}$ line in the melody (Example 9b). The order of schemata, in this case, dictated that Mozart transpose the second chromatic line. In the Quartet in A, which reverses the Sol–Fa–Mi and Quiescenza, the modulation to the dominant itself effects the shift. The untransposed melody provides a fixed point around which the schemata revolve.

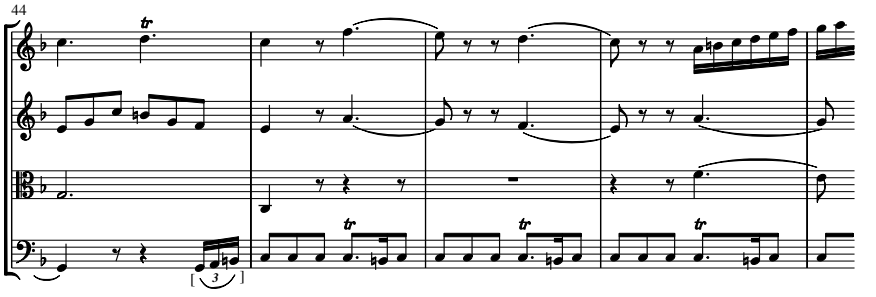
This leads us to what for Beethoven would prove the most productive aspect of K464. The ingenuity of Mozart's design lies in his witty exploitation of the formal implications of his invariant chromatic line. The two versions, $\hat{5}$–$\sharp\hat{4}$–$\natural\hat{4}$–$\hat{3}$ and $\hat{1}$–$\hat{7}$–$\flat\hat{7}$–$\hat{6}$, differ critically in harmonic function. The first version reinforces the tonic, functioning as a passing-note prolongation of the tonic triad. The second version, on the other hand, triggers a move to the subdominant with its flat seventh, reinterpreting I as V^7 of IV. As a result, when the head motive of Mozart's primary theme returns in the secondary key, it no longer outlines the

13 See Robert O. Gjerdingen, *Music in the Galant Style* (New York: Oxford University Press, 2007), 258–260.

14 Gjerdingen, *Music in the Galant Style*, 181–195.



Example 7a Haydn, String Quartet in F major Op. 50 No. 5/iv, bars 1–4 (*Joseph Haydn Werke*, series 12, volume 4, *Streichquartette 'Opus 42', 'Opus 50' und 'Opus 54/55'*, ed. James Webster (Munich: Henle, 2009)). Used by permission



Example 7b Haydn, String Quartet in F major Op. 50, No. 5/iv, bars 44–48

tonic triad. Instead, it deflects the new key toward the subdominant – that is, the original key, A major. The reinterpretation of the head motive, I would suggest, is not merely a harmonic pun, but a subtle play with formal conventions. The untransposed theme tweaks the sonata structure by unravelling, ever so briefly, the all-important modulation to V.

The placement of the untransposed theme in the opening Allegro certainly supports this reading. The head motive returns at what James Hepokoski and Warren Darcy have termed the 'essential expositional closure' (EEC), the perfect authentic cadence that confirms the modulation to the new key.[15] In K464 the approach to the EEC is particularly dramatic, with several dodged opportunities and a great wind-up of tension before the expected cadence. The return of the untransposed primary theme, however, deflects the cadence with an abrupt swerve to the subdominant, triggered by the $\hat{1}$–$\hat{7}$–$\hat{\flat 7}$–$\hat{6}$ line. The sudden drop into A major, emphasized by the following rest, creates a sense of comic deflation. The new key, for a brief delicious moment seems to have been pulled out from under the secondary theme.

We might dismiss this moment, of course, as a routine cadential evasion. But consider the beginning of the secondary area. The chromatic head motive that follows the medial caesura veers even more strongly toward the subdominant (bars 37–38). Like the beginning of the 'Jupiter' Symphony trio, the root-position chords followed by a rest evoke a V–I cadential formula, wittily displaced to the beginning of the phrase. The 'cadence', however, leads to the subdominant, A major. Following the laborious modulation to the dominant, the secondary theme of K464 immediately drops back to the tonic. The symmetrical passages suggest a deliberate strategy across the exposition of the Allegro. The secondary area begins and ends with the same droll reversal of the tonal plot.

15 James Hepokoski and Warren Darcy discuss this passage in *Elements of Sonata Theory: Norms, Types, and Deformations in the Late-Eighteenth-Century Sonata* (New York: Oxford University Press, 2006), 140–141.

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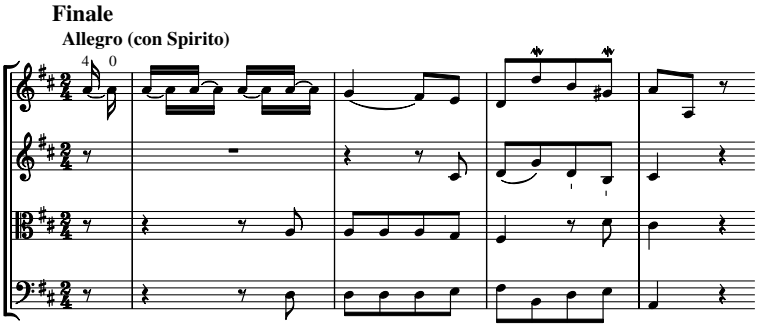
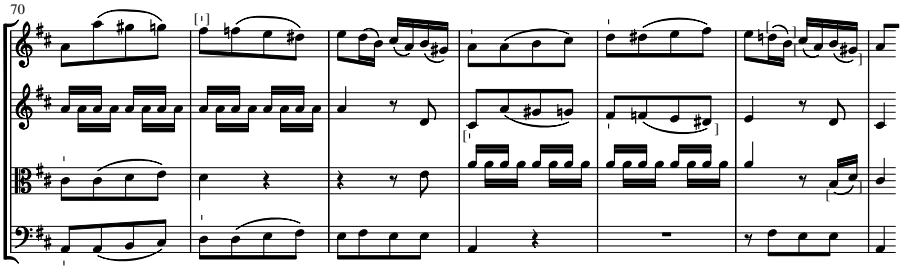


Example 8a Haydn, String Quartet in D major Op. 50, No. 6/iv, bars 1–4



Example 8b Haydn, String Quartet in D major Op. 50, No. 6/iv, bars 70–76

Striking parallels connect the two passages. In both progressions (bars 37–38 and 69–71), the A major chord is reached through a $b\sharp^1$-$c\sharp^2$ melodic line. Both A major detours follow a dramatic registral and dynamic build-up, with b^2 in the first violin and E minor shadings in the inner voices. Both are punctuated by a rest, and both arrive *subito piano* in the middle register, a deflation of tension that complements the sudden drop to the subdominant. Most importantly, both progressions are triggered by a chromatic line that transgresses normal boundaries in the formal structure. In bars 37–38 the chromatic line from the transition continues its ascent across the medial caesura, prompting the move to IV; in bars 69–71 the chromatic head motive returns at pitch in the new key, deflecting the EEC toward A major. In both passages, the chromatic element trumps the expected diatonic progression.

Mozart's chromatic head motive creates the same tension in the finale of K464. The secondary theme of the Allegro non troppo, as noted, exemplifies the Quiescenza schema. The Quiescenza most often occurs in closing sections, but can also appear in primary themes (as in Mozart's Piano Sonata in F major K332 or Haydn's Piano Sonata in E flat major HXVI:52). Its unusual appearance after the medial caesura complements Mozart's strategy in the opening Allegro: no sooner is the new key reached than it sags toward IV, the original tonic. The repetition of the untransposed version of the head motive lends added weight to this subdominant dip.

The development of the Allegro non troppo 'composes out' the subdominant tendency of the untransposed theme in a striking harmonic disjuncture. During the first half of the development, in bars 85–113, the unstable $\hat{1}$–$\hat{7}$–$\flat\hat{7}$–$\hat{6}$ line passes into the bass, propelling a modulatory passage to a half cadence in F sharp minor (see Example 10). But the development does not settle in the relative minor. A breathtaking move to D major ushers in the chorale that will occupy the remainder of the development. The sudden shift to the subdominant coincides with a drop of registral and dynamic energy, as in the first movement, enhanced by the *Innigkeit* of the chorale topic. This striking harmonic move hinges upon C♯–D in the cello, the pivotal semitone in the $\hat{1}$–$\hat{7}$–$\flat\hat{7}$–$\hat{6}$ version of Mozart's chromatic line.

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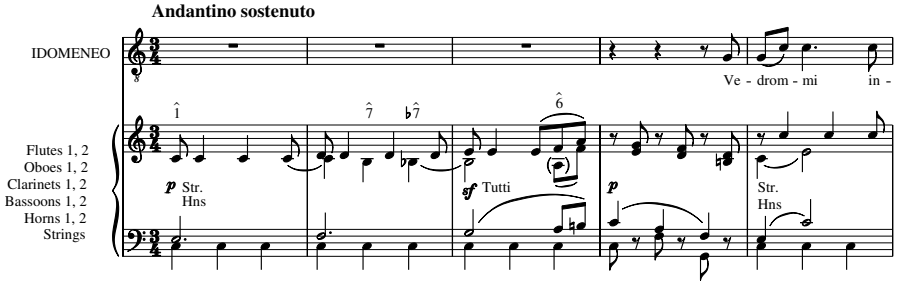
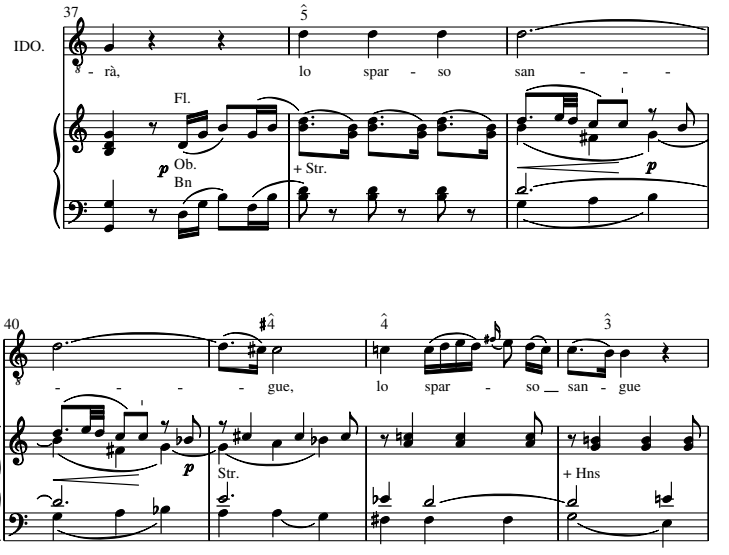
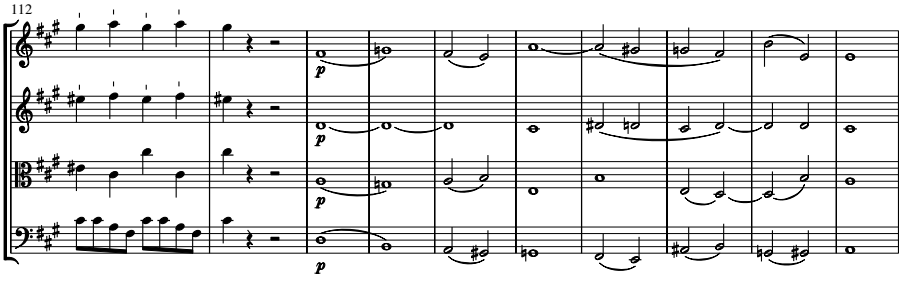


Example 9a Mozart, 'Vedrommi intorno', from *Idomeneo*, K366, piano-vocal score, bars 1–5 (Kassel: Bärenreiter, 1973). Used by permission



Example 9b Mozart, 'Vedrommi intorno', bars 37–43



Example 10 Mozart, String Quartet in A major K464/iv, bars 112–121

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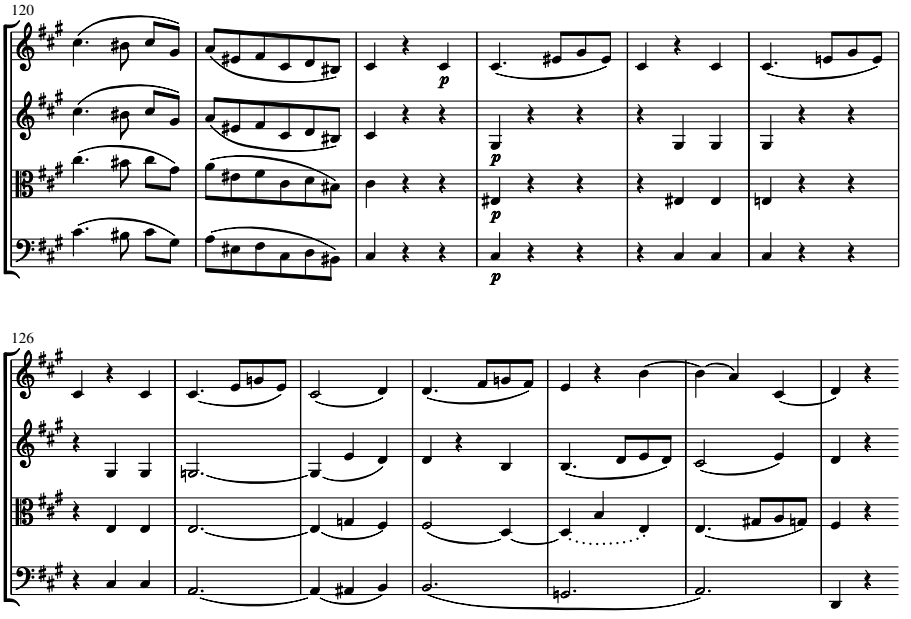

Example 11 Mozart, String Quartet in A major K464/i, bars 120–132

As we might hope, the same disjuncture occurs midway through the first-movement development, hinging again on the C♯–D semitone. The Allegro development begins with an abridged rotation through the primary theme and transition and reaches another half cadence in F sharp, a transposition of the medial caesura (see Example 11). Had Mozart remained true to the exposition, the second group would have returned here in F sharp major. Instead, the C♯ chord moves again to D major, this time through a series of chromatic adjustments. Mozart had used almost the identical progression the previous year in his Piano Concerto in G major, K453, in the development of the Andante. Susan McClary justly argued that the concerto modulation was 'achieved irrationally, not by means of the pure, pristine logic of conventional tonality'.[16] Her reading holds true for K464, although it tells only half the story. The Quartet in A juxtaposes two distinct logics: functional tonality, governed by the circle of fifths, and chromatic voice-leading, arising from an invariant pitch-class collection.

The paradoxes in Mozart's design deepen in the first-movement recapitulation. When the head motive of the primary theme returns at the end of the secondary area, it is transposed down a fifth, as in the recapitulations of Haydn's Op. 50 quartets. But note Mozart's inversion of the 'sonata principle': a secondary theme that did not depart from the tonic in the exposition returns transposed in the recapitulation! Despite the transposition, however, the recollected theme still leads away from the tonic. The trouble lies with the $\hat{1}$–$\hat{7}$–♭$\hat{7}$–$\hat{6}$ version of the chromatic line, which continues to pull toward the subdominant. The recapitulation resolves this structural glitch with a clever stroke. Mozart extends the secondary area, inserting yet another untransposed recollection of the primary theme (bars 254–256). But since the recapitulation has not modulated to V, the head motive now returns in its original $\hat{5}$–♯$\hat{4}$–$\hat{4}$–$\hat{3}$ version (see Example 12). Preceded by a mysterious fantasia-like passage (bars 250–253), the head motive bursts through the chromatic mist supported by a radiant cadential 6/4 chord and descends emphatically from $\hat{5}$ to $\hat{1}$ (via a C♮). Restored at last to its stable Sol–Fa–Mi version, the chromatic line no longer swerves to the subdominant. Instead,

16 Susan McClary, 'A Musical Dialectic from the Enlightenment: Mozart's *Piano Concerto in G Major, K. 453*, Movement 2', *Cultural Critique* 4 (1986), 151.

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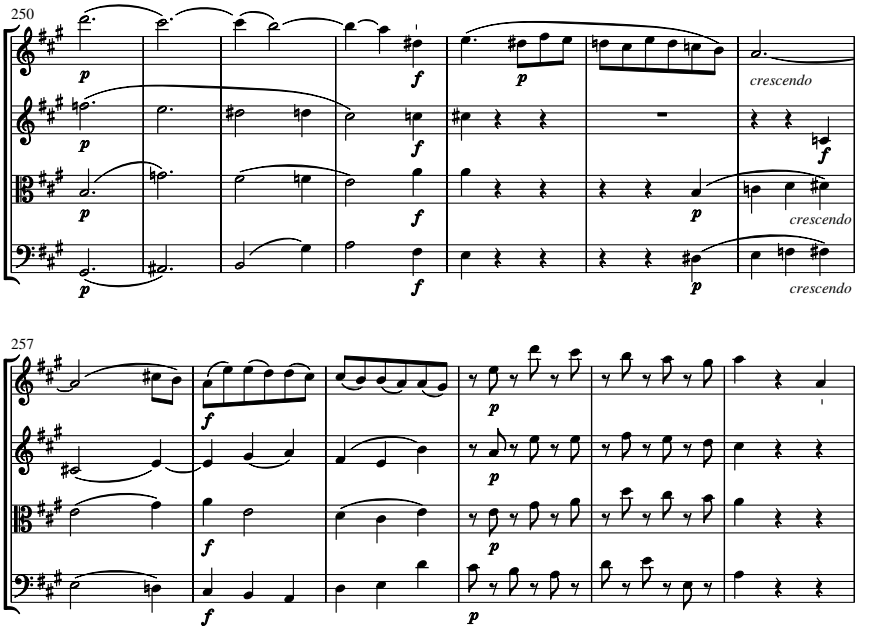

Example 12 Mozart, String Quartet in A major K464/i, bars 250–262

the return of the primary theme supplies the solid cadential gesture missing from the exposition. Highlighting the structural import of this passage, the primary theme returns *forte*, as at the beginning of the recapitulation.

In hindsight, we can hear this last apparition of the primary theme as the hypothetical 'correct' version of the exposition. For what is this passage but the normal cadential gesture that Mozart suppressed when he failed to transpose his primary theme? According to sonata convention, the primary theme should have returned in this $\hat{5}$–$\sharp\hat{4}$–$\hat{4}$–$\hat{3}$ version, transposed to begin on B. The secondary area would then have cadenced decisively in E major instead of veering to the subdominant; that is, back toward A major. This recapitulatory 'correction' allows us to savour Mozart's witty manipulation of formal conventions.

It becomes clear how Beethoven could salute K464 as Mozart's forward-looking quartet rather than K465. The Quartet in C more obviously flouts harmonic conventions. Yet for all its provocative dissonances, the chromatic Adagio behaves like an exemplary slow introduction. Its harmonic chaos ultimately enhances the *fiat lux* of the C major Allegro. Not so the chromatic opening of K464. The Quartet in A nibbles at the roots of the tonal structure, quietly probing its underlying premises. Strikingly modern is the way an invariant chromatic collection complicates the logic of functional harmony. If the dissonant opening of K465 ultimately reinforces tonal conventions, the untransposed motive of K464 hints at the way a refractory chromatic element might subvert those conventions.

OP. 18 NO. 5

Listening to the first movement of Beethoven's Quartet in A major, the suspicion quickly arises that Beethoven grasped Mozart's idiosyncratic design. Beethoven did not overtly recall his primary theme in the secondary key. Nevertheless, the Allegro contains the other salient features traced in K464 – the sudden dips to the subdominant, the $\hat{1}$–$\hat{7}$–$\flat\hat{7}$–$\hat{6}$ line and the disruptive return of untransposed chromatic pitch-classes in the secondary key.

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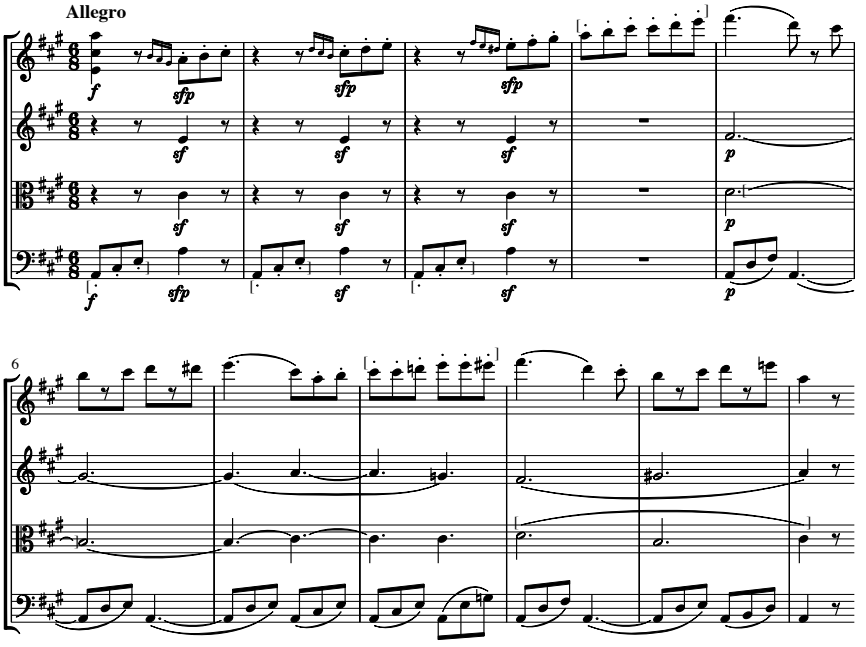


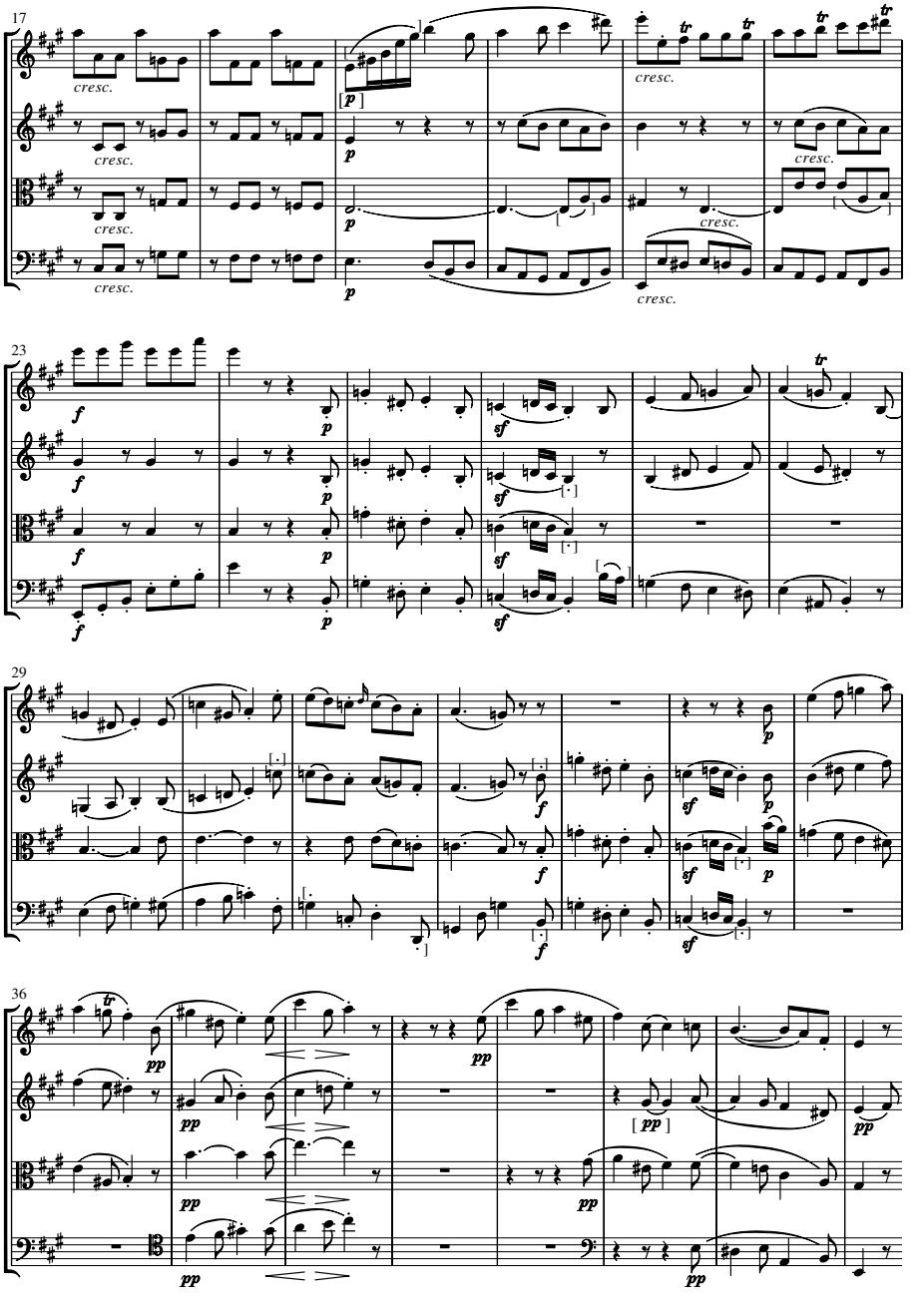
Example 13 Beethoven, String Quartet in A major, Op. 18 No. 5/i, bars 1–11 (*Beethoven Werke*, series 5, volume 2, ed. Sieghard Brandenburg (Munich: Henle, 1974)). Used by permission

The subdominant swerves no longer await the secondary area in Beethoven's quartet. The primary theme already strongly profiles IV (see Example 13). The lyrical theme in bars 5–11 is another Quiescenza, with the prototypical 1–$\flat\hat{7}$–$\hat{6}$–$\natural\hat{7}$–$\hat{8}$ line in the second violin. While such gambits were common enough, the structure of Beethoven's theme sets the subdominant in unusually sharp relief. The opening A major flourishes in bars 1–4 stand apart from the rounded melody that follows, functioning more like an introductory fanfare. As Robert Hatten has noted, 'a conventional opening turns out not to be the theme proper, but an unconventional tonic anacrusis to the structural downbeat at m. 5'.[17] When the lyrical melody arrives over IV^6_4, outlining the D major triad, it marks a point of release. The first violin relaxes its thrusting ascent and settles into a lazy circular melody, a drop in tension that matches the subdominant turn.

While Beethoven could have derived the Quiescenza from many sources, the use to which he put the flat seventh points to K464. The influence of the G♮, introduced in bar 8, continues across the transition and secondary theme (see Example 14). The flat seventh initiates the transition in bar 17, leading downward to the Phrygian cadence in bar 19. The second theme continues to stress G♮, now functioning as $\hat{3}$ of E minor, the dominant minor. The antecedent begins with a pick-up to G♮ on the final quaver of bar 24 and even cadences on the relative major G in bar 32, briefly tonicizing ♭VII. The repetition of the secondary theme reiterates G♮ *forte* across three octaves in bar 33, only yielding to G♯ in the final phrase.

Each marked feature of the exposition thus far involves the chromatic pitch-class G♮. We can trace the subdominant tendency of the first theme to the Quiescenza schema, with its characteristic $\flat\hat{7}$. The use of the dominant minor and ♭VII cadence in the secondary theme show the continued influence of G♮, both melodically and harmonically. Finally, the choice of I:HC for the medial caesura, a departure from the 'first-level default' of James Hepokoski and Warren Darcy's statistical survey, is determined by the sudden

17 Robert Hatten, *Musical Meaning in Beethoven: Markedness, Correlation, and Interpretation* (Bloomington: University of Indiana Press, 1994), 122.



Example 14 Beethoven, String Quartet in A major, Op. 18, No. 5/i, bars 17–43

intrusion of $\flat\hat{7}$ in bar 17, which leads to the Phrygian cadence.[18] Like a rock amid a flowing river, the fixed G♮ creates unpredictable swirls and eddies in the form.

When E major finally arrives at the end of the secondary theme, we hear another echo from K464. This is precisely the point at which Mozart's opening theme returned in the opening Allegro, interrupting the

18 Hepokoski and Darcy, *Elements of Sonata Theory*, 25–36.

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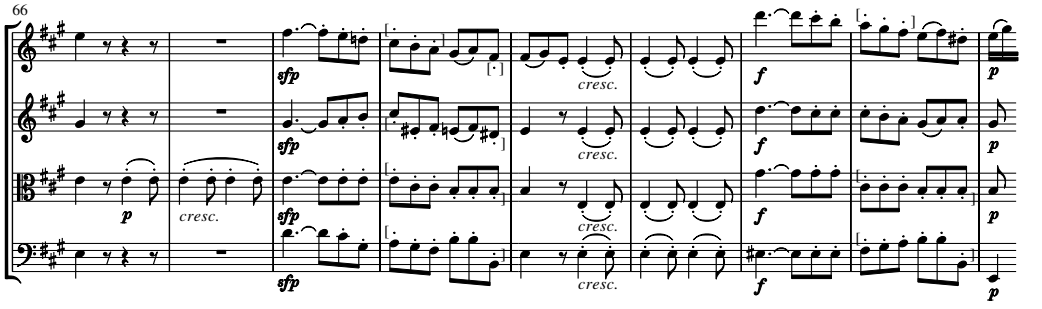

Example 15 Beethoven, String Quartet in A major, Op. 18, No. 5/i, bars 66–74

EEC. Beethoven's theme also breaks off in mid-phrase, melting away to an ethereal IV^6 chord, a subdominant move that is heightened by the second violin's D♮ (bars 36–38). Six empty beats follow this A major chord, the longest rest in the Allegro. The violin and viola tease out the subdominant for two more bars before the secondary theme finally reaches its first E major cadence. The dramatic pause after the A major detour corresponds directly to the break at the end of Mozart's secondary area, following the abrupt dip to the original tonic.

A final affinity with K464 comes in the closing section. After the cadence in bar 66 the viola begins a lonely pulsation on e^1 (see Example 15). Around this tonic pedal erupts a *sfp* chord that functions as an applied V$^4_2$ to the following IV – that is, to the original tonic, A major. This new theme traces a variant of the opening Quiescenza progression (although it lacks the tonic bass pedal). The harmonic progression, however, is not the only recollection from the primary theme. The dissonant pitch-classes that frame this startling chord, F♯ and D♮, distinctly recall the lyrical melody from bars 5–11, which began with the same major third. As in K464, the invariant pitch-classes from the primary theme perturb the new key. The cadence in bars 69–70 is weakened by the first violin's d♮^{2}, especially since the melody does not ascend back to the tonic through the leading note in accordance with the Quiescenza prototype. The vehemence of bars 70–74 betrays the lack of secure closure: the repetition of the theme blocks subdominant slippage with a *forte* diminished-seventh chord and completes the $\hat{7}$–$\hat{8}$ ascent.

Beethoven further 'corrected' the subdominant drift of this closing theme in the retransition. The retransition begins with a pulsing e in the cello, over which the first violin again enters on f♯^{2} (see Example 16). In this harmonic context, however, E functions as a dominant pedal, rather than a tonic. The canon between the cello and first violin leads again to A major, but now to a triumphant cadential $^6_4$ that heralds the recapitulation. The retransition thus 'redeems' the untransposed material from the exposition, reinterpreting the subdominant detour as a V–I resolution. Beethoven has duplicated Mozart's similar transformation in the first-movement recapitulation of K464: instead of transposing his wayward theme, he has repatriated it within A major where it no longer drags toward the subdominant.

Taken together, these harmonic resemblances to K464 suggest that Beethoven's emulation extends beyond gross similarities of form and cyclic layout. In his fifth quartet, Beethoven closely imitated Mozart's quirky play with tonal conventions, and even intensified its more disruptive effects. The invariant pitches prove more unruly in Beethoven's quartet, the subdominant undertow more forceful. His most faithful adaptation of Mozart's harmonic design, however, came a few years later in a more famous and accomplished work.

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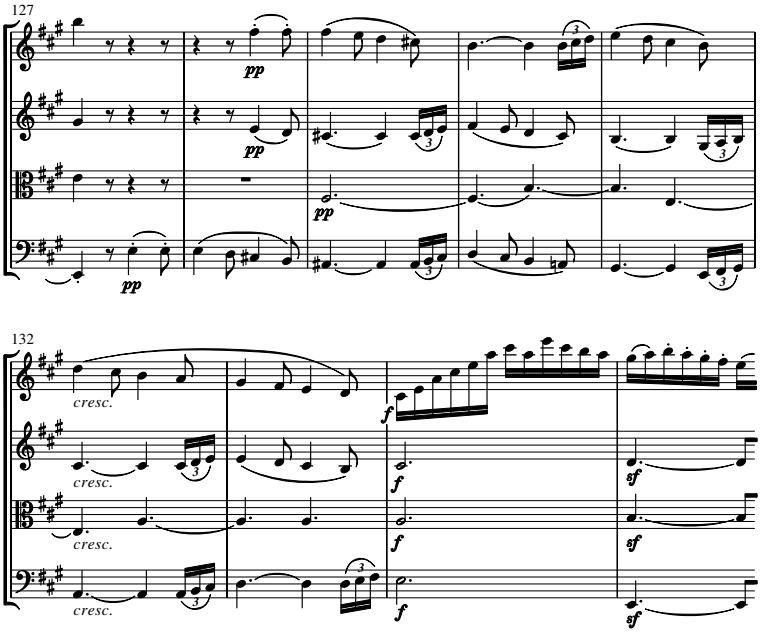


Example 16 Beethoven, String Quartet in A major, Op.18, No. 5/i, bars 127–135

OP. 47 AND THE 'NEW PATH'

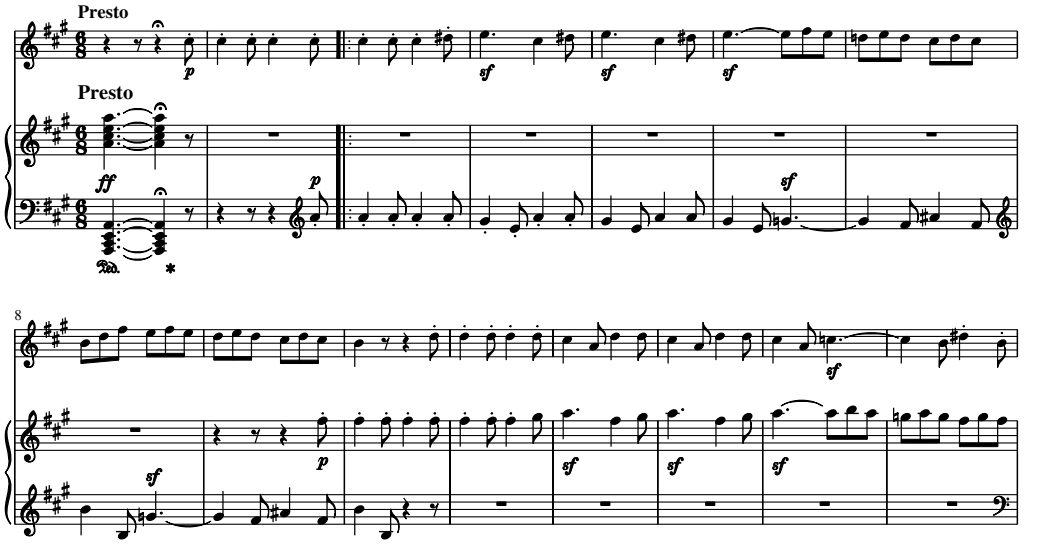
Beethoven imitated Mozart's harmonic design most literally in the popular Presto that concludes the Violin Sonata in A major Op. 47 (1803). Fittingly, this movement belongs to a genre notably cultivated by Mozart. Composed in 1802, the Presto originally served as the finale of the Violin Sonata in A major Op. 30 No. 1. It can thus open a new window onto Beethoven's 'new path' of 1802.

Like K464, the 'Kreutzer' finale begins with a prominent $d\sharp^2$, played three times by the violin in the first phrase (see Example 17). It functions as a passing note between $c\sharp^2$ and e^2. The raised fourth triggers an oscillation between I and V^6, a dominant tendency that is countered by the restoration of $d\sharp^2$ in bar 7. The first phrase of the primary theme consists almost entirely of the pitches of Mozart's chromatic line in its $\hat{5}$–$\sharp\hat{4}$–$\hat{4}$–$\hat{3}$ version.

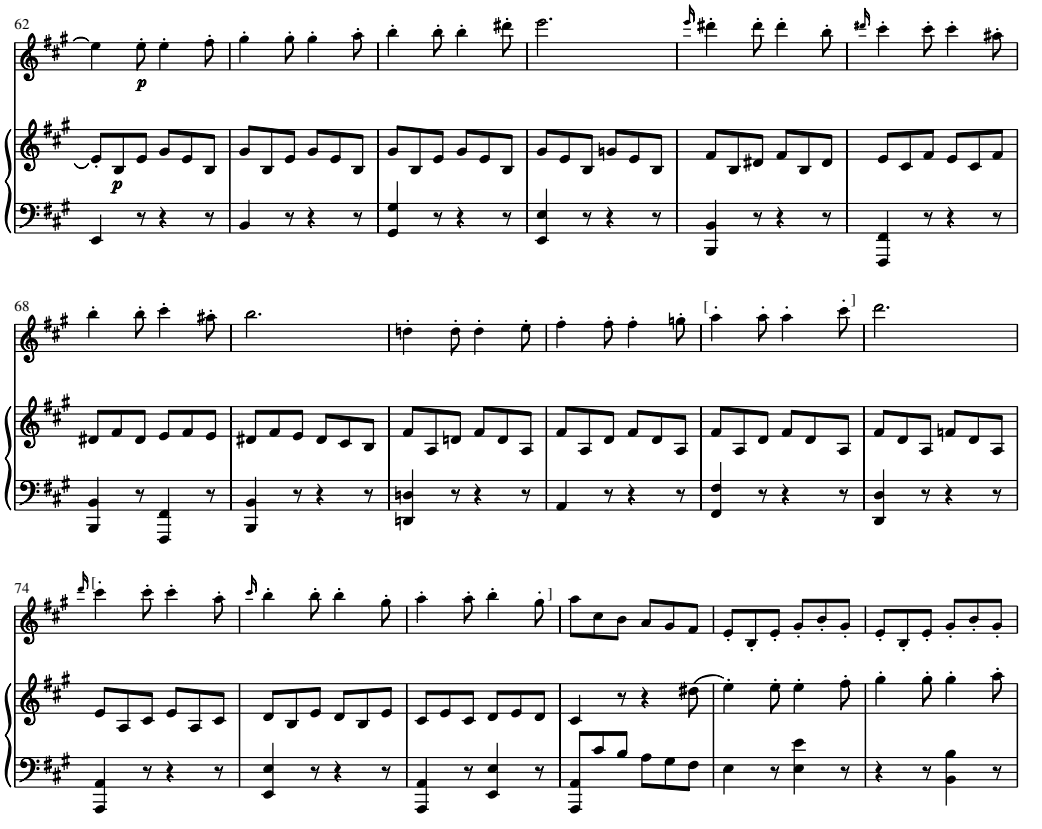
The chromatic line from K464, stated piecemeal in the primary theme, emerges as a foreground line in Beethoven's secondary theme (see Example 18). The four phrases of the melody begin respectively on e^2, $d\sharp^3$, $d\sharp^2$ and $c\sharp^3$. As in K464, the $\hat{1}$–$\hat{7}$–$\flat\hat{7}$–$\hat{6}$ version deflects the theme to the subdominant: the period begins in E, but cadences firmly on A. The peremptory return to E major in bar 78 does little to shore up the key, arriving without the benefit of a root-position dominant. After the piano repeats the theme, the A major chord is prolonged for six bars, allowing the original tonic to settle in the ear (bars 94–99).

The 'Kreutzer' finale replicates the harmonic design of K464, but it gives Mozart's chromatic cell a far more dynamic role. In the primary theme, the D♯ pulls insistently toward the dominant, implying an applied V^4_2 of V. These repeated inflections of the dominant are emphasized with *sforzando* accents. Moreover, Beethoven has weakened the opening tonic triad by omitting the fifth. (The opening dyad sounds far more ambiguous without the introductory A major chord, which Beethoven seems to have added when he transplanted the Presto to Op. 47.[19]) The recapitulation further erodes tonic stability by beginning on an

19 See Suhnne Ahn, 'Beethoven's Op. 47: Balance and Virtuosity', in *The Beethoven Violin Sonatas: History, Criticism, Performance*, ed. Lewis Lockwood and Mark Kroll (Urbana and Chicago: University of Illinois Press, 2004), 67.



Example 17 Beethoven, Violin Sonata in A major Op. 47/iii, bars 1–15 (*Beethoven Werke*, series 6, volume 3, ed. Paul Mies (Munich and Duisburg: Henle, 1962)). Used by permission



Example 18 Beethoven, Violin Sonata in A major Op. 47/iii, bars 62–100

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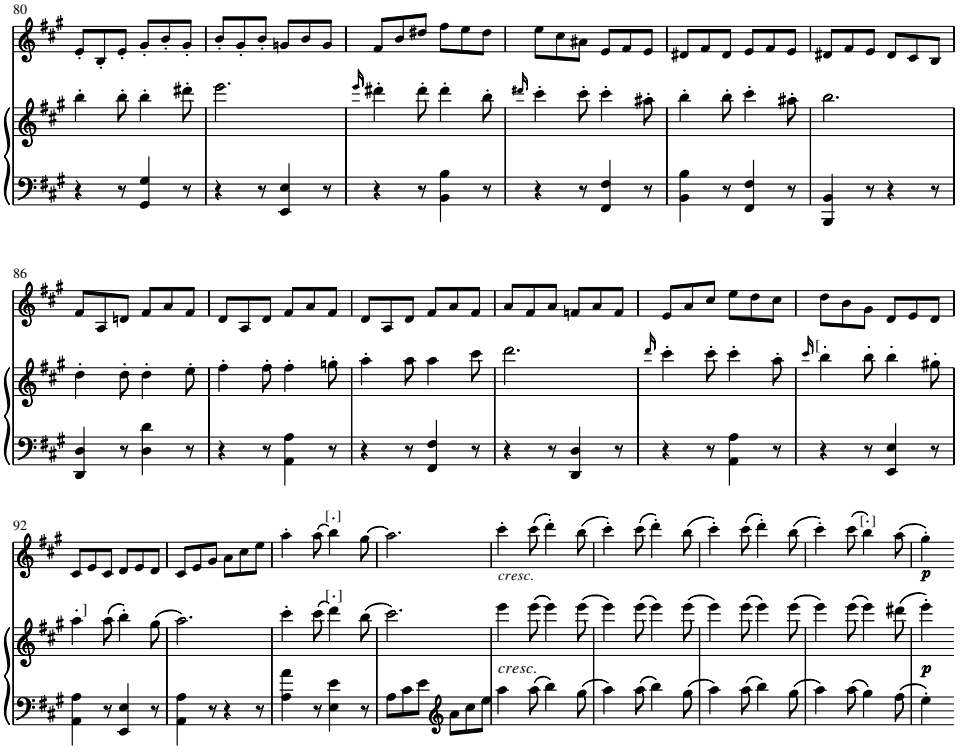

Example 18 *continued*

F sharp minor triad; moreover, the *sforzando* E major chords now return in root position. The raised fourth, a chromatic embellishment in K464, has become a dynamic agent in Beethoven's volatile theme.

The coda of the Presto neutralizes the D♯ quite economically. As a sudden Adagio checks the approach to the final cadence, the primary theme returns on F sharp minor, as in the recapitulation (see Example 19). The $c♯^2$–$d♯^2$–e^2 line repeats itself six times, painstakingly retracing the progression to V. Yet Beethoven has added an F♮ passing note to the bass line, producing an augmented-sixth chord. This pre-dominant harmony firmly defines E major as a dominant, counteracting the destabilizing tendency of the raised fourth.

The $\hat{1}$–$\hat{7}$–$\hat{♭7}$–$\hat{6}$ version of Mozart's line also proves far more disruptive in the 'Kreutzer' finale than in K464. In the string quartet, the swerve to A major was a mere subdominant detour, one which did not challenge E major. In the 'Kreutzer', though, the chromatic line creates a rupture within the harmonic structure of the secondary theme. The period begins normally, with the antecedent reaching a half cadence in E. The descent of the chromatic line derails the key, however, pulling the consequent down to D major. The resulting progression, I–V–♭VII–IV, defies the rules of functional harmony. Indeed, if we take seriously the symmetry of the phrase and cadence structure, we must hear the progression as a transposition between two keys: E: I–V|D: I–V. (It is worth noting that Mozart's 'Dissonance' Quartet, K465, begins with a similar progression (i–V^6–♭vii–IV^6), generated by the $\hat{1}$–$\hat{7}$–$\hat{♭7}$–$\hat{6}$ bass line.)

As the reader may have noticed, the secondary theme of the 'Kreutzer' finale closely resembles the primary theme of Beethoven's Piano Sonata in G major Op. 31 No. 1. The solo sonata, composed in the same year as the Presto, begins with the identical progression, I–V–♭VII–IV. The phrase and cadence structure again intensifies the slippage between I and ♭VII: the antecedent begins in G, the consequent

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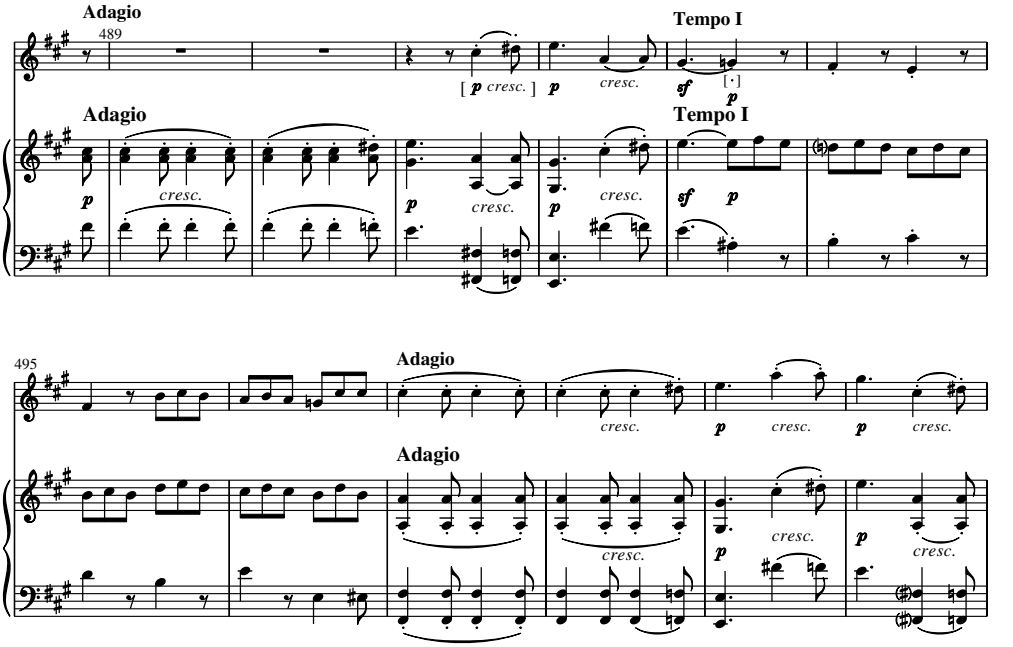

Example 19 Beethoven, Violin Sonata in A major Op. 47/iii, bars 488–500

in F♮. The 'Kreutzer' finale provides the underlying logic missing from the elliptical progression of Op. 31 No. 1: the descending $\hat{1}$–$\hat{7}$–$\flat\hat{7}$–$\hat{6}$ line, stated explicitly in the Presto, explains the abrupt transposition to ♭VII.

Beethoven almost certainly modelled the opening progression of the Sonata in G major on the secondary theme of the 'Kreutzer' finale. The (E–D♯–D♮–C♯) line, as well as the specific strategy of recalling it at pitch in the secondary key, belong to Mozart's Quartet in A, a work, as we have seen, that Beethoven had closely studied and imitated in 1799, well before he began to write Op. 31. The sketch record also supports the primacy of the 'Kreutzer' theme. Beethoven worked on both the Presto and the Op. 31 sonatas in the 'Kessler' sketchbook of 1801–1802; the sketches for the future 'Kreutzer' finale, including the entire secondary theme, occupy fols 44v–54r, while work on Op. 31 No. 1 does not appear until fols 91v–95r.[20]

In short, we can plausibly trace a direct line from K464 to the opening page of Op. 31, the opus to which Beethoven reportedly ascribed his 'new path'. The source is again Czerny's *Erinnerungen*: 'Around 1803 Beethoven told his friend Krumpholz: "I am not satisfied with what I have composed up to now. From now on I intend to tread a new path." Soon thereafter the three sonatas of Op. 29 (Op. 31, 1803) were published' ('Um 1803 sagte einmal Beethoven seinem Freunde Krumpholz: "Ich bin mit meinen bisherigen Arbeiten nicht zufrieden. Von nun an will ich einen neuen Weg betreten." Bald darauf erschienen die 3 Sonaten op. 29 (op. 31. 1803)').[21] Of the various interpretations of this remark, Carl Dahlhaus's has proved the most influential. Dahlhaus located Beethoven's 'new path' in a problematized relationship between form and theme. In his well-known analysis of the 'Tempest' Sonata, Op. 31 No. 2, Dahlhaus noted the paradoxical status of the opening arpeggio motive. In the Largo, it suggests an introduction; when it returns in the Allegro, it leads directly into a modulatory transition. The opening presentation 'is not yet a

20 Ludwig van Beethoven, *Kesslersches Skizzenbuch I: Übertragung*, ed. Sieghard Brandenburg (Bonn: Beethovenhaus, 1978), 101–119, 193–202.

21 Czerny, 'Erinnerungen', 19. My translation.

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subject, the evolutionary episode is one no longer. Nowhere, in fact, is there a "real" statement of the first subject.'[22] Dahlhaus detected a new 'processual' conception of musical form in the 'Tempest' Sonata, whose Hegelian implications have intrigued later critics:

> Nowhere is the thematic material 'given', in the sense of a text on which a development section comments; rather, it is involved in developmental process from first to last – either as anticipation of thematic working to come, or as consequence of thematic working already past .... The motion described by this movement is exclusively goal-directed, not circular.[23]

Dahlhaus's interpretation of the 'new path' illuminates Beethoven's use of Mozart's chromatic line in the 'Kreutzer' finale. Primary and secondary themes typically function as tonal markers, establishing the twin keys of the sonata exposition. The invariant chromatic collection complicates this role. In the primary theme, the D♯ ruffles the tonic by triggering a persistent oscillation with the dominant. In the secondary theme, the D♮ derails the new key with the abrupt transposition to ♭VII. As in the 'Tempest', this dissonance between theme and formal function enhances an end-directed formal process. Indeed, as we saw, the D♯ in the primary theme is not 'neutralized' until the final bars of the coda.

The harmonic design of the 'Kreutzer' finale bears even closer comparison with the 'Waldstein' Sonata, begun the year after Op. 31. Opus 53 also begins with a I–V–♭VII–IV progression, arising from the $\hat{1}$–$\hat{7}$–$\flat\hat{7}$–$\hat{6}$ line in the bass. Beethoven scholars have unfailingly traced this harmonic progression to Op. 31 No. 1.[24] Yet the 'Kreutzer' finale provides the more obvious model. Not only does the harmonic progression and $\hat{1}$–$\hat{7}$–$\flat\hat{7}$–$\hat{6}$ line replicate the construction of the secondary theme of the Presto; both movements also begin with the identical $\hat{3}$–$\sharp\hat{4}$–$\hat{5}$ melodic line and I–[V^4_2]–V^6 progression. The opening of the 'Waldstein' thus conflates the harmonic structure of both themes from the 'Kreutzer' finale.

The opening theme of the 'Waldstein', with its dramatic opposition of chromatic voice leading and functional harmony, has also invited Hegelian readings. Theodor Adorno could trace the dialectic of tonality itself in bars 1–8. According to Adorno, the transformation of the opening chord from I of C major to IV of G major (bars 1–4) represented the negation of tonality in its pre-existing, unreflective aspect. The further chromatic descent into the subdominant region (bars 5–8) negated the negation, restoring the unity of the opening tonality at a higher level: 'It is not only G IV but also F V, and only through this double negation does it become concretely that which, through its concept, it was from the first, namely C major.'[25] But the opposition of chromatic and diatonic structures that fuelled Adorno's reading traces a longer lineage than the 'Waldstein'. One probable line of influence runs back through the 'Kreutzer' to Mozart's fifth 'Haydn' quartet.

22 Carl Dahlhaus, *Ludwig van Beethoven: Approaches to His Music*, trans. Mary Whittall (Oxford: Clarendon, 1991), 170.

23 Dahlhaus, *Ludwig van Beethoven*, 170–171. Dahlhaus's interpretation and its philosophical lineage have been studied by Janet Schmalfeldt, 'Form as the Process of Becoming: The Beethoven-Hegelian Tradition and the "Tempest" Sonata', in *In the Process of Becoming: Analytical and Philiosophical Perspectives on Form in Early Nineteenth-Century Music* (New York: Oxford University Press, 2011), 23–57. See also the recent essays in *Beethoven's 'Tempest' Sonata: Perspectives of Analysis and Performance*, ed. Pieter Bergé with Jeroen D'hoe and William Caplin (Leuven: Peeters, 2009).

24 See, for example, Walter Riezler, *Beethoven*, trans. G. D. H. Pidcock (New York: Dutton, 1938), 129; Donald Francis Tovey, *Beethoven* (Oxford: Oxford University Press, 1945), 39; Kerman, *The New Grove Beethoven* (New York: Norton, 1983), 113; William Kinderman, *Beethoven* (Berkeley and Los Angeles: University of California Press, 1995), 74–75; Rosen, *Beethoven's Piano Sonatas: A Short Companion* (New Haven: Yale University Press, 2002), 180; and Lockwood, *Beethoven: The Music and the Life* (New York and London: Norton, 2003), 137.

25 Theodor Adorno, *Beethoven: The Philosophy of Music*, ed. Rolf Tiedemann, trans. Edmund Jephcott (Stanford: Stanford University Press, 1998), 55–56. See also Michael Spitzer's commentary in *Music as Philosophy: Adorno and Beethoven's Late Style* (Bloomington and Indianapolis: Indiana University Press, 2006), 51–53.

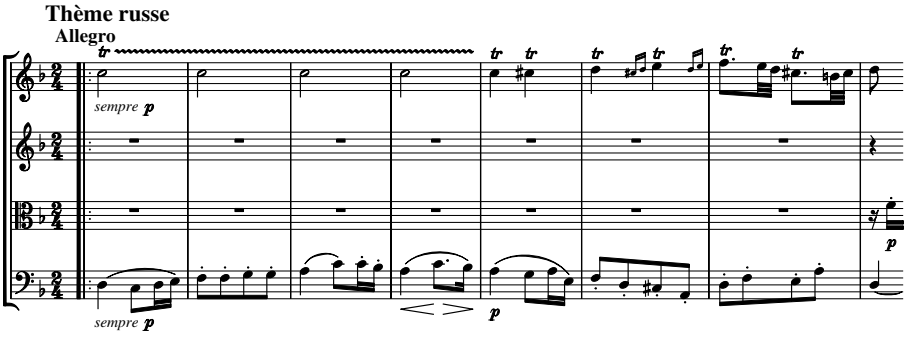
OP. 59 NO. 1

Beethoven may have emulated Mozart's quartet most ingeniously in the first string quartet of his 'new path'. Primary themes return untransposed in both the first and last movements of the Quartet in F major Op. 59 No. 1. The second movement, Allegretto vivace e sempre scherzando, also begins with another I–V–♭VII–IV progression. The periodic structure of the Allegretto theme again focuses the slippage between tonic and flat seventh, B♭ and A♭. The quirky scherzo epitomizes Dahlhaus's 'processual' form, beginning without theme or even melody, but with only a monotone rhythm that generates a fluid collage of thematic ideas.

The flat seventh foregrounded in the Allegretto becomes a central topic in the folksong finale of this first 'Razumovsky' quartet. The D Aeolian *thème russe* begins with the natural seventh C, but ends with the leading note C♯ (see Example 20). The opposition between modal and tonal sevenths is projected into the first violin's countersubject in bars 5–7, which traces the chromatic line c^2–$c\sharp^2$–d^2–e^2–f^2. Kerman also noted echoes of the modal folksong in the middle movements of the work, pointing out 'the parallel with the two F-minor themes of the "trio" and the *Adagio*, with their E♭'s'.[26] Indeed, the Adagio juxtaposes the modal and tonal sevenths, E♭ and E♮, within the first bar.

The D Aeolian folksong also creates a tension with F major that can be heard retrospectively in the opening Allegro.[27] The cello melody in bars 1–4, which anticipates the opening tetrachord of the folksong, features a prominent D–C appoggiatura. The first movement also ends with a mysterious D minor chord, inserted before the final cadence (bars 396–397). Even the cryptic Webernesque chords that conclude the second group highlight D minor (bars 85–90). The *pianissimo* chords twice trace an elliptical progression in C major: iii–VI–[ii]–V^7. The missing member of the circle of fifths, D minor, finally arrives *forte* the third time, leading to the cadence.

As Mark Ferraguto has pointed out, the countersubject of the *thème russe* returns in the secondary theme of the finale.[28] But it returns at pitch, retracing the identical c^2–$c\sharp^2$–d^2–e^2–f^2 line (see Example 21). Within the context of C major, the chromatic line now begins with $\hat{1}$–$\sharp\hat{1}$–$\hat{2}$, a melodic gambit familiar from the secondary theme of Mozart's 'Jupiter' Symphony or the primary theme of his *Don Giovanni* overture. In

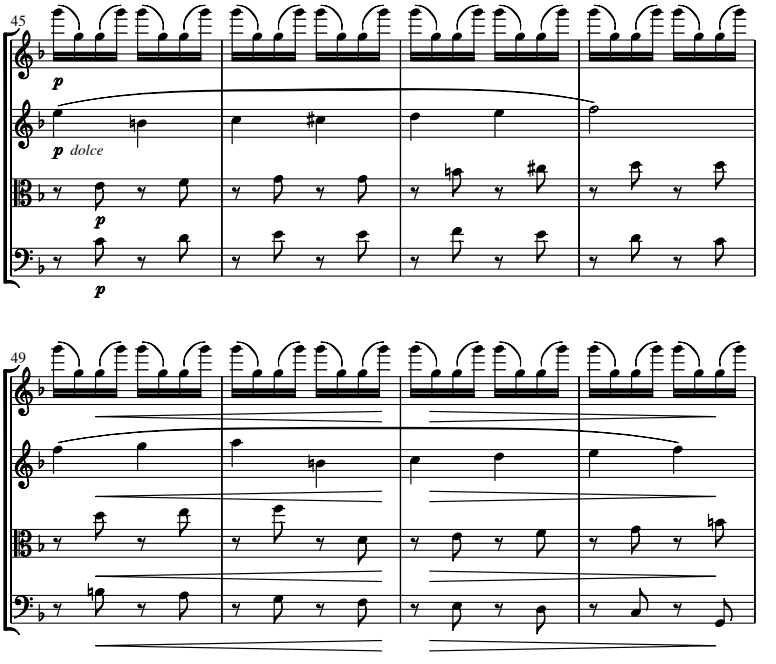


Example 20 Beethoven, String Quartet in F major Op. 59 No. 1/v, bars 1–8 (*Beethoven Werke*, series 6, volume 4, ed. Paul Mies (Munich: Henle, 1968)). Used by permission

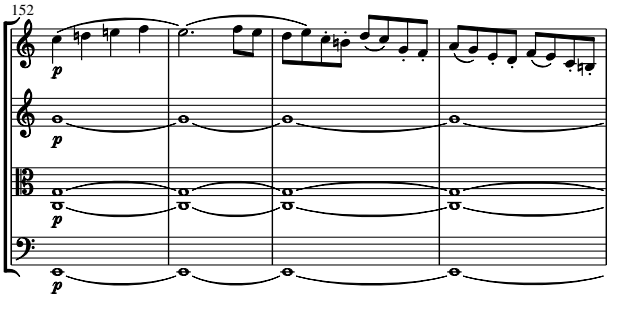
26 Kerman, *The Beethoven Quartets*, 112.

27 Lockwood concluded from his sketch studies of Op. 59 No. 1 that 'the work was generated from this finale-choice [that is, the *thème russe*], as in the *Eroica*': *Beethoven: Studies in the Creative Process* (Cambridge, MA: Harvard University Press, 1992), 199.

28 Mark Ferraguto, 'Beethoven à la moujik: Russianness and Learned Style in the "Razumovsky" String Quartets', *Journal of the American Musicological Society* 67/1 (2014), forthcoming.



Example 21 Beethoven, Quartet in F major Op. 59, No. 1/iv, bars 45–52



Example 22 Beethoven, Quartet in F major Op. 59, No. 1/i, bars 152–155

fact, this chromatic incipit reappears in another fugal countersubject in the finale to the following C major 'Razumovsky' quartet (from bar 210). The harmonic reinterpretation of the *thème russe* countersubject thus neutralizes the opposition of modal and tonal sevenths, absorbing C and C♯ within a galant formula. It also removes the tonal ambiguity between F major and D minor, domesticating the latter as a pre-dominant harmony.

The primary theme of the opening Allegro also returns untransposed within a new harmonic context, if not within a new key (see Example 22). The head motive arrives midway through the development poised above a C^6 chord, following a variation of the disjunct chords from bars 85–90. Although it functions locally as V^6 of F minor, the luminous recitative chord seems to arrest time, hovering motionless for six bars. As with the countersubject to the *thème russe*, the C major harmony 'corrects' a structural problem within the primary theme of the Allegro. The first movement began with the melody in the bass, creating an unstable I^6_4 harmony. The lack of a root-position tonic contributes to the restlessness of the opening theme, which does not cadence until bar 19. When the head motive returns in the development, it arrives

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in the highest voice over a consonant first-inversion chord; moreover, the chordal notes now fall on strong beats. For a fleeting moment, the C major harmony grounds the restless motive.

In the first 'Razumovsky' quartet, the harmonic quirks of K464 have become constructive elements in Beethoven's new approach to form. The untransposed themes no longer perturb the secondary key by veering toward the subdominant. On the contrary, when the primary themes of the outer movements return within a C major context, the new harmony resolves their ambiguous or unstable features. Yet this resolution is negated by the impermanence of C major, especially within the first-movement development. Unsettled in the stable tonic and settled in the unstable dominant, Beethoven's untransposed themes are at home nowhere. Mozart's invariant chromatic motive had already begun to detach itself from the tonal plan, like a patch tearing free of an old coat. Twenty years later Beethoven has made a clean cut, releasing his untransposed themes into an ongoing dialectic with the form.

This exploration of Beethoven's 'new path' has skirted the work that most famously pits a chromatic line against diatonic functional harmony. The 'Eroica' Symphony begins with the chromatic line E♭–D–C♯, which superficially resembles the $\hat{1}$–$\hat{7}$–♭$\hat{7}$–$\hat{6}$ line of the 'Kreutzer' and 'Waldstein' Sonatas. Vasili Byros has provocatively identified the $\hat{1}$–$\hat{7}$–♯$\hat{6}$ line in bars 6–9 as a token of the 'Le–Sol–Fi–Sol' prototype, a pre-dominant schema that would imply a resolution to G minor.[29] According to this reading, the Le–Sol–Fi–Sol schema activates a competing tonal interpretation, turning the opening E flat major harmony into VI of G minor (a shadow key that will haunt the symphony). Beethoven clearly has moved well beyond Mozart's subtle toying with invariant pitches in K464. The chromatic line of the 'Eroica' now straddles competing keys and schemata within a single theme.

The chromatic line of the 'Eroica' also assumes the $\hat{1}$–$\hat{7}$–♭$\hat{7}$–$\hat{6}$ form of the 'Kreutzer' and 'Waldstein'. This version emerges at the recapitulation, as the cello's c♯ descends to c♮ (bars 401–407). It culminates in the coda, where the primary theme plunges to D♭ then C major, ♭VII and VI (bars 557–563).[30] Critics have celebrated this 'composing-out' of the initial C♯ for its organic interrelation of part and whole. Yet the abrupt transposition to ♭VII traces a longer pedigree than bar 7 of the Allegro con brio. It fits within a line of harmonic experimentation that runs from Op. 18 No. 5 through the 'Kreutzer', Op. 31 No. 1, the 'Waldstein' and the first 'Razumovsky' quartet, and whose sources certainly include K464. Mozart's quartet may also be added to the models for Beethoven's play with invariant chromatic pitch-classes in the 'Eroica'.

In his study of the Mozartean heritage, Lewis Lockwood concluded that Beethoven revolutionized his predecessor's art 'not by attacking the legacy from an outside perspective but by growing up as its inheritor and then exploding it from within'.[31] In the case of K464, Mozart himself brought the demolition materials. Perhaps we should regard Beethoven's tributes to the fifth 'Haydn' quartet not as pious monuments or Bloomian misprisions, but rather as friendly salutes to a fellow saboteur.

29 See Vasili Byros, 'Memorizing Tonality: Beethoven's *Eroica* and the *le–sol–fi–sol* Archetype', *Society for Music Analysis Newsletter* (July 2008), 3–7, and Byros, 'Foundations of Tonality as Situated Cognition, 1730–1830: An Enquiry into the Culture and Cognition of Eighteenth-Century Tonality, with Beethoven's *Eroica* Symphony as a Case Study' (PhD dissertation, Yale University, 2009).

30 The coda of the Scherzo also reinstates the $\hat{1}$–$\hat{7}$–♭$\hat{7}$ line in inversion. See Kinderman, *Beethoven*, 94–95.

31 Lockwood, 'Beethoven before 1800: The Mozart Legacy', *Beethoven Forum* 3/1 (Lincoln: University of Nebraska Press, 1994), 52.