Musical Borrowing or Curious Coincidence?: Testing the Evidence

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For Christopher Reynolds

Many pieces of music borrow from other pieces in some way, whether by quoting an existing piece, presenting a series of variations on a borrowed theme, paraphrasing a melody, using another piece as a model, or alluding to another work more subtly. Recent years have seen a profusion of studies of borrowing in all its manifestations by scholars in fields from chant to hip hop. In order to analyze an instance of musical borrowing or interpret its meaning or significance, we first have to establish that the creator of one piece of music has used material or ideas from another. It is not always obvious whether or how such borrowing is happening; musicians, listeners, and scholars may hear borrowings that composers did not intend. What evidence can be presented to support a claim of borrowing or to refute it? How can we know that the material is borrowed from this particular piece?

Earlier versions of this essay were presented as the Rey M. Longyear Lecture at the University of Kentucky, as a keynote address to the College Music Society Great Lakes Chapter, and at the American Musicological Society in Indianapolis in 2010, and subsequently at Florida Gulf Coast University, Youngstown State University, Louisiana State University, University of Western Australia, University of Miami, and University of Maryland. Thanks to Matthew Leone and Laura Dallman for assistance with musical examples. Thanks also for the many constructive questions and suggestions of audience members and from Christopher Reynolds, Judah Cohen, and other colleagues.

For an extensive bibliography, see J. Peter Burkholder et al., eds., Musical Borrowing and Reworking: An Annotated Bibliography (www.chmtl.indiana.edu/borrowing).
and not from another? How can we be sure that a similarity between two pieces results from borrowing and is not a coincidence, or the result of drawing on a shared fund of musical ideas?

These questions can be addressed through a systematic approach based on a typology of evidence. To construct this typology I reviewed the types of evidence scholars have used to advance or refute claims of borrowing and organized them into three main categories:

- **analytical evidence**, gleaned from examining the pieces themselves;
- **biographical and historical evidence** related to the composer’s knowledge of the alleged source or to his or her creative process; and
- evidence regarding the **purpose** of the borrowing.

Table 1 groups the principal types of evidence scholars tend to present into these categories. This typology draws on previous work, notably studies of quotation and allusion, but is intended to be applicable to all uses of existing music in the western musical tradition and to encompass any musical parameter, from a melody or harmonic progression to a structural feature or combination of timbres.²

The three overarching categories recall criteria often applied to cases of plagiarism: similarity, access, and motive.³ The comparison is apt because both “borrowing” and “plagiarism” invoke metaphors of ownership—one reason that some scholars prefer “intertextuality,” “echo,” “the uses of existing music,” or other terms that avoid such metaphors.⁴ Yet


³ Richard Taruskin invokes this triad in discussing a potential borrowing from Wagner’s Prelude to *Tristan und Isolde* in Brahms’s First Symphony. After describing the “similarity” between the passages as “easily noticed,” he comments: “Brahms certainly had ‘access,’ as one says when adjudicating charges of plagiarism. But did he have ‘motive’?” Richard Taruskin, *The Oxford History of Western Music*, vol. 3, *The Nineteenth Century* (Oxford: Oxford University Press, 2005), 695.

TABLE 1
Types of evidence used to support or refute claims of borrowing

Analytical evidence
- **Extent of similarity**
  The more extensive a given similarity between a work and its putative source, the less likely the similarity can be attributed to coincidence.
- **Exactness of match**
  A relatively exact match between piece and source reinforces a claim of borrowing, especially if the borrowed material is relatively brief.

Number of shared elements
- The more elements of an existing piece (such as melody, rhythm, harmony, counterpoint, form, instrumentation, texture, tempo, mood, and text) are present in a new one, the more convincing a claim that borrowing has occurred. Yet the lack of multiple elements does not necessarily disprove a claim of borrowing.

Distinctiveness of shared elements
- A case for borrowing is stronger when the features shared between the pieces are relatively distinctive, and strongest if they are unique to these pieces.

Biographical and historical evidence
- **Knowledge of the source**
  The case for borrowing is stronger when it can be shown that the composer knew or could have known the source. Proof that the composer did not know or is unlikely to have known the alleged source is strong evidence against borrowing.
- **Acknowledgment of the source**
  If the composer acknowledges the borrowing and names the source, the fact of the borrowing may be certain (excepting lapses of memory and deliberate deception), but the extent, purpose, and meaning of the borrowing may still need investigation. Since so many cases of borrowing are not explicitly acknowledged, the lack of such identification is not evidence against borrowing.

Sketches and compositional process
- Insight into a composer’s process of composition, through sketches or other means, may provide evidence for or against borrowing.

Typical practice in other pieces
- The typical practice in other pieces by a composer or group of composers may provide evidence to support or refute a claim of borrowing.

Purpose
- The case for borrowing is stronger when a purpose can be demonstrated, and is considerably weakened if no function for the borrowed material can be established.

Structural or thematic functions
- **Emulation** (use as a model or source for ideas)
- **Extramusical associations**
- **Humor**
most forms of musical borrowing—such as emulation of a model, allusion, paraphrase, brief and overt quotation, or any piece where the borrowed material is identified or intended to be recognized, from motets and cantus-firmus masses to variation sets, medleys, and quodlibets—either acknowledge the source or depart from it so much that they do not constitute plagiarism. Moreover, the artful remaking of existing music is worlds away from the intent to deceive and the violation of proprietary rights that the term implies. As Johann Mattheson wrote in 1739: “Borrowing is permissible; but one must return the thing borrowed with interest, i.e., one must so construct and develop imitations that they are prettier and better than the pieces from which they are derived.”

This sense of taking something old and making something new from it is well reflected by the idea of artists borrowing from each other and is one reason for the endurance of borrowing as a term.

The categories in table 1 are richer and more inclusive than the criteria for plagiarism: the category of analytical evidence specifies different kinds of similarity and goes beyond them to include distinctiveness; and biographical and historical evidence encompasses not only access and acknowledgment but also creative process and typical practice. Moreover, purpose is a more interesting and sometimes elusive factor in cases of musical borrowing than in plagiarisms; motive is rarely invoked in legal cases on musical plagiarism beyond the exception made for parodies, since judges, juries, and lawyers always assume the profit motive, whereas composers may have multiple reasons to use an existing piece, from structure to meaning.

Ideally an argument for borrowing should address all three categories and as many individual types of evidence in table 1 as are relevant. I will describe each type of evidence and present some examples,
and then use this list as a guide to consider a problematic case of long standing.

**Analytical Evidence**

In presenting *analytical evidence* drawn from examining the music, scholars try to show a similarity between two pieces that is so strong that borrowing is the best explanation—or, conversely, that the similarity is not strong enough to justify such a claim.

I. Extent of Similarity

A relatively extensive similarity with respect to one parameter, such as melodic contour, will be strong evidence that two pieces are related by borrowing because it minimizes the chance of coincidence. When Hector Berlioz quotes the first two phrases of the chant *Dies irae* in the finale of his *Symphonie fantastique*, or when Franz Liszt does the same at the beginning of his *Totentanz*, there can be no doubt about the borrowing—even if the composer did not tell us it was there—because the melodic similarity is nineteen notes long. The likelihood of generating two identical nineteen-note diatonic melodies by random processes is vanishingly small, less than 1 in 10 quadrillion. 7

A similarity of relatively few notes is more likely to be a coincidence. I have heard no one claim that the *Dies irae* is quoted in *Carol of the Bells*, although as shown in example 1a the opening four notes have the same intervallic contour. 8 This Christmas carol indeed reflects a chain of musical borrowing, but one unrelated to the *Dies irae*; Peter J. Wilhousky wrote the English words in 1936 using the tune of *Shchedryk* (1914) by Mykola Leontovych, who based his melody on a Ukrainian folk song. The chance of randomly generating two identical diatonic melodies of four notes is less than 1 in 10 quadrillion. 7

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7 Assuming octave equivalence, there are $7^{19} \times (11,398,895,185,373,143)$ possible nineteen-note successions that can be generated within any seven-note diatonic set. If one takes scale degree into account, so that (for example) a melody that alternates the tonic and second degree of a major scale is heard as different from one that alternates the fourth and fifth degrees, then there truly are more than 1 quadrillion unique melodies within any set of seven pitches. Some of these will be the same intervallically (such as the two melodies just mentioned, or the seven “melodies” that consist of a single repeated note), so the actual number of melodies that differ in melodic contour is smaller by about 708 trillion.

8 Although the similarity is almost certainly coincidental, it has not gone unobserved. The film scores for *Die Hard* (1988) by Michael Kamen and for *Home Alone* (1990) by John Williams both link the *Dies irae* motive to this familiar Christmas carol, forging an aural connection between Christmas and the threat of death that is appropriate to both movie plots. Thanks to Christopher Reynolds for bringing these examples to my attention.
notes is about 1 in 1,000. Given the thousands of diatonic melodies in the world, there should be many that coincidentally share the intervallic succession of these four notes, as do these two tunes. So the more extensive the similarity, the less likely it is coincidental, and vice versa.

Yet claims of borrowing are often made on the basis of relatively few notes. In his authoritative *Guide to the Pianist’s Repertoire*, Maurice Hinson matter-of-factly states that Johannes Brahms’s Intermezzo in E-flat Minor, op. 118/6 (ex. 1b) is “based on the ‘Dies irae.’” Only the first four notes parallel the chant. Hinson no doubt heard the intermezzo’s opening motive as the *Dies irae* because he knew of other composers who borrowed the chant melody, from Berlioz and Liszt through Camille Saint-Saëns (*Danse macabre*), Sergei Rachmaninoff (*Rhapsody on a Theme of Paganini* and *Symphonic Dances*), and Luigi Dallapiccola (*Canti di Prigionia*), and because of its prominence as the opening gesture, stated and

9 Assuming octave equivalence but not inversional equivalence, there are 1,045 unique interval successions available for a four-note melody using notes from a seven-note diatonic collection: 1 using a single note, 84 using two notes (14 possible four-note patterns using just two different notes, times the six unique diatonic intervals from half-step to tritone), 576 using three (36 permutations of three notes, times 16 unique three-note diatonic collections), and 384 using four (24 permutations of four notes, times 16 unique four-note diatonic collections). Not all 1,045 are likely to be idiomatic within any given style of music. Taking register into account (by not assuming octave equivalence) increases the number of possibilities, making this only a rough estimate.

repeated without accompaniment.\textsuperscript{11} But without other evidence that Brahms intended us to hear his melody as a reference to the \textit{Dies irae}, the extent of the similarity is too brief to prove that this is an instance of borrowing rather than coincidence. Since Brahms composed more than 750 different movements, including well over two thousand melodies, the probability is high that, unless he deliberately sought to avoid the \textit{Dies irae}, one of them would begin with the same first three intervals.

\textit{II. Exactness of Match}

Another type of analytical evidence is the exactness of match between two pieces. This is not important if the similarity is extensive. When Guillaume Du Fay paraphrases a chant melody in a polyphonic hymn setting or Johann Sebastian Bach elaborates a chorale melody in a cantata or chorale prelude, the source tune remains evident no matter how many embellishing notes are interpolated because all or nearly all its notes are retained. If the borrowed material is relatively brief, exactness matters more. When the opening notes of Richard Wagner’s \textit{Tristan und Isolde} in example 2a are quoted in passing by Alban Berg in the finale of his \textit{Lyric Suite} for string quartet and by Claude Debussy in his piano piece “Golligwogg’s Cake-Walk” from \textit{Children’s Corner}, as delineated by boxes in examples 2b and 2c, both composers state the notes they borrow at the original pitch, to make the quotation more exact and therefore more apparent. This is particularly significant in Debussy’s case, where only the first four notes of the melody are borrowed, and where the famous Tristan chord, the F–B–D♯–G♯ sonority in measure 2 of Wagner’s opera, is reconfigured in register and character. The top note G♯ becomes A♭ at the bottom of the texture in Debussy’s piano piece; other notes are at pitch or up an octave; D♭ is added; and the sonority’s character is changed from a sustained, harmonically ambivalent chord to a D♭ dominant ninth chord in a pulsing accompaniment figure. The reference might be harder to hear or to credit if it were transposed.

Consider the opening of Charles Ives’s String Quartet No. 2 (ex. 2d), which both Clayton Henderson and Wolfgang Rathert claim is a reference to the opening notes of \textit{Tristan und Isolde}.
\textsuperscript{12} There are similarities, as highlighted by the boxes in the example: the first four notes in the viola trace the same intervallic contour as the first four upper notes in \textit{Tristan und Isolde} (A–F–E in the cello and G♯ in the oboe), and the opening


chord would be a transposition of the Tristan chord if the violin II note were B♭ instead of G. But the Tristanesque chord is in the wrong place, accompanying the first note; the chord accompanying the fourth viola note, which is where the Tristan chord occurs in the opera, is a very different sonority; and there are only four melodic notes in common. The similarity is neither extensive enough nor exact enough to persuade me that Ives borrowed from or intended a reference to Wagner’s opera. If Ives had used Wagner’s exact pitches, the claim might seem more credible.

Exactness of match matters in cases where more than one source is possible, as in music based on a chant that exists in multiple versions.
Nicolas Gombert’s five-voice motet *Ave regina celorum* paraphrases the Marian antiphon in each voice in almost every phrase, but instead of the standard version of the chant, Gombert used a version found in antiphonals ordained for the use of the Dominican order after their reform of
EXAMPLE 3. Sources for Gombert’s *Ave regina celorum*

a. Cantus and altus, mm. 1–4

```plaintext
Liber usualis

Poissy

Gombert

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b. Tenor, mm. 71–73

```plaintext
Liber usualis

Poissy

Gombert

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liturgy and chant in the mid-thirteenth century.\(^{13}\) Example 3 compares phrases from the *Liber usualis* with parallel phrases from the Poissy Antiphonal, prepared for the Dominican nuns at Poissy-St. Louis around 1335–45, and from Gombert’s motet.\(^{14}\) At the beginning (ex. 3a), the Poissy version features B\(^{b}\) rather than B\(^{b}\) for the second and fourth notes;


\(^{14}\) Melbourne, State Library of Victoria, Ms. *096.1/R66A, f.396r. The manuscript is described in John Stinson, “The Poissy Antiphonal: A Major Source of Late Medieval
this accords with the Dominican reform, which included among its guiding principles avoiding \textit{B rotundum} (B♭) whenever possible.\textsuperscript{15} As a result the first interval of the chant is a descending semitone rather than a whole tone, and the descending third between the fourth and fifth notes is major rather than minor. Gombert’s motet consistently uses the Dominican version, as seen in the opening paired imitation between cantus and altus (labeled C and A in ex. 3a).

The difference between the Gregorian and Dominican versions of the chant is even more striking at “Vale” (ex. 3b). Here again Gombert follows the Dominican version in a point of imitation, led off by the tenor melody (marked T in the example) and involving all five voices and eight statements of the five-note motive from the Dominican version. In other phrases, too, the Dominican version is a closer match. The same is true of the text in every case where the two versions differ. Clearly Gombert used the Dominican version as his source, reworking into an imitative paraphrase motet a tune that had itself been reworked almost three centuries earlier. Identifying the correct source among possible variants allows a more accurate understanding of how Gombert paraphrased and varied his source material.

\textbf{III. Number of Shared Elements}

Examples 2 and 3 also illustrate another type of evidence: the number of shared elements. In Gombert’s motet, the exact interval match in the opening phrase might suffice to identify the source as the Dominican version of the chant, but the identity of text and the greater melodic similarity of several subsequent phrases reinforce that conclusion. Berg’s \textit{Lyric Suite} presents a similar situation: the melody and harmony are borrowed exactly, and the rhythm, tempo, and timbre are very similar to Wagner’s. The Debussy is less exact but still shares several dimensions with the source beyond the four-note melody and all four notes of the Tristan chord. The rhythm is similar, including the placement of the second and fourth notes on downbeats, as are the generally soft dynamic level, the crescendo, the tempo, and the mood, although Debussy’s marking “avec une grande émotion” (with great emotion) in the midst of a cakewalk is clearly meant to mock Wagner’s “Langsam und schmachtend” (slow and languishing). None of these elements—mood, tempo, dynamics, rhythm, chord, or even melody—would be recognizable as an allusion by itself, but the combination of factors makes the reference unmistakable. By contrast, in the Ives quartet, the rhythm is less similar,

\textsuperscript{15} Stinson, “The Poissy Antiphonal,” 54.
with the second and fourth notes of the melody on offbeats rather than
downbeats; the harmony is very different; there is no crescendo; the
tempo is faster; and there is no marking to suggest mood. This passage
lacks the combination of shared elements that make the allusions by
Berg and Debussy so clear.

The more elements of an older piece are present in a newer one, the
more convincing will be a claim that borrowing has occurred. Nonethe-
less, the lack of multiple elements does not necessarily disprove a claim of
borrowing; a single element may suffice if the shared feature is distinctive
enough.

IV. Distinctiveness of Shared Elements

The case for borrowing is stronger when the traits shared between an
older and a newer piece are relatively distinctive, and strongest if they are
unique to these pieces. To establish distinctiveness one must compare
the given works to a wider repertory.

The existence of numerous other melodies that begin with the same
four-note contour as Dies irae but are not derived from it makes it less
likely that Brahms alluded to the chant in his intermezzo. Besides Carol of
the Bells, such melodies include César Franck’s Prélude, Fugue, and Vari-
tion, op. 18 (1873); the second theme in the finale of Antonín Dvořák’s
Piano Trio in F Minor, op. 65 (1883); Edward MacDowell’s Polonaise, op.
46/12 (1893–94); Ives’s song Ein Ton (ca. 1899), later adapted as Night of
Frost in May; and the third theme in the first movement of Jean Sibelius’s
Symphony No. 3 in C Major, op. 52 (1907). All were written within twenty
years of the 1893 publication date for Brahms’s op. 118 and after Berlioz’s
Symphonie fantastique and Liszt’s Totentanz had made the Dies irae a promi-

16 For a similar point, see Jan LaRue, “Significant and Coincidental Resemblance
Rodin, “The L’homme armé Tradition—and the Limits of Musical Borrowing,” 77–81,
makes a parallel argument for fifteenth-century music.
What is distinctive may be anything, from melody or harmony to form or timbre. Often the most distinctive and salient resemblance is a sign of a deeper relationship. That is the case for Ives’s First Symphony, whose second movement begins with a mostly pentatonic English-horn melody over slowly changing sustained chords in the strings, a texture and combination of timbres that instantly recalls the theme of the slow movement of Dvořák’s New World Symphony. The distinctive texture and timbre signal the allusion, but further analysis uncovers a wealth of parallels: Ives’s theme itself is paraphrased from Dvořák’s; a later passage for flutes and oboes echoes the middle portion of Dvořák’s theme; the form of Ives’s movement parallels that of Dvořák’s, including where, how, and in what instruments the English-horn theme returns; at their climaxes both movements recollect themes from the symphony’s first movement in diminution, in contrapuntal combination with thematic material from the second movement; and the other three movements in Ives’s symphony also borrow procedures from the parallel movements in Dvořák’s, including the harmony, contour, and rhythm of the closing cadential passage.\textsuperscript{17} None of these other parallels is as distinctive or easily heard as the sound of a slow English-horn melody over sustained strings. Although there are many cases in which the borrowing consists of a single, obvious parallel, in this symphony Ives uses the most distinctive element to call attention to his model in the same way the tip of an iceberg indicates that more lies below the surface of the water.

The distinctiveness of shared elements is key to understanding the debate about whether Wolfgang Amadeus Mozart’s Requiem includes themes borrowed from George Frideric Handel. Maximilian Stadler first claimed in 1826 that Mozart took the opening “Requiem aeternam” theme from Handel’s Funeral Anthem for Queen Caroline and the “Kyrie” fugue subject from “a Handel oratorio,” identified by later writers as the final chorus from Joseph and His Brethren. Many scholars have embraced this view, most recently Wilhelm Gloede and Bernd Edelmann.\textsuperscript{18}

The problem is that both themes are commonplaces in the eighteenth century. Richard Maunder has called the relationship to Handel into question, pointing out passages that closely resemble the opening of

\textsuperscript{17} J. Peter Burkholder, All Made of Tunes: Charles Ives and the Uses of Musical Borrowing (New Haven: Yale University Press, 1995), 89–95.

Mozart’s “Requiem aeternam” in Requiem settings by the Viennese composer Florian Gassmann and the Salzburg composer Heinrich Biber and in Mozart’s own Misericordias Domini, K. 222, written fifteen years before his Requiem.¹⁹ The subjects of the G-sharp-minor and A-minor fugues from book 1 of Bach’s Well-Tempered Clavier also both begin with similar melodic contours. Parallels for the “Kyrie” fugue subject include not only the final chorus of Joseph and His Brethren but also the subjects for “And with his stripes are we healed” from Handel’s Messiah and the A-minor fugue from book 2 of The Well-Tempered Clavier. A strikingly similar subject appears in the fugal finale of Joseph Haydn’s String Quartet in F Minor, op. 20/5, the first movement of Carlos Ordonez’s String Quartet in C Major, op. 1/3, and the imitative passage that begins the second movement of Mozart’s own String Quartet in F Major, K. 168.²⁰ In sum, Handel is not the only possible source for either theme; indeed the frequency with which both appear suggests that they are archetypes that any composer of Mozart’s day could have known.

Gloede and Edelmann detail elements the Requiem movement shares with these Handel works that it does not share with other potential sources, including similar textures and rhythms, similar ending passages, similar treatment of shared motives, the same striking dissonances in similar locations, and other parallels of motive, counterpoint, and procedure.²¹ They argue in effect that the number of parallel elements suggests that Mozart used Handel as a model. Yet the lack of distinctiveness of the themes, which after all is the resemblance that first called scholars’ attention to the relationship, makes their conclusions less persuasive.

**Biographical and Historical Evidence**

Given the extent and exactness of match, the number of elements borrowed, and the distinctiveness of the material the two pieces share, we have conclusive evidence from analysis alone that Berg quoted Wagner’s Tristan und Isolde in his Lyric Suite, that Gombert paraphrased the Dominican version of the chant in his Ave regina celorum, and that Ives used Dvořák’s New World Symphony as a model for his First Symphony. Not every case is so clear; many arguments for borrowing therefore address biographical and historical evidence as well.

I. Knowledge of the Source

The case for borrowing is stronger when it can be shown that the composer knew the source piece. For example, the claim that Brahms used Bach’s chaconne for solo violin as one model for the chaconne finale of his Symphony No. 4 in E Minor (1885), which can be argued on the basis of numerous musical similarities, is reinforced by the observation that Brahms had transcribed Bach’s violin chaconne for piano left hand in 1877 and therefore would have been very familiar with the work. When direct knowledge cannot be proven, the case can be strengthened by showing that the source was available and in circulation, or that listeners at the time probably would have recognized it. Proof that the composer did not know or is unlikely to have known the alleged source is strong evidence against borrowing.

Let us return to Debussy and Berg for an example that illustrates how this type of evidence can clarify a situation where the analytical evidence might lead us astray. In a 1965 article Hans Heinz Stuckenschmidt pointed out the close parallel between the chord progressions in measures 20–22 of Berg’s song “Warm die Lüfte,” op. 2/4, shown under the horizontal bracket in example 4a, and in measures 29–30 of Debussy’s “Pour la danseuse aux crotales,” from Six epigraphes antiques for piano four hands, shown under the bracket in example 4b. In both chord sequences, the bass moves up by fourths, B♭–E♭–A♭–D♭–G♭, while a sonority of a fourth over a tritone moves down chromatically, the top voice moving from G to E♭. Partial circle-of-fifth progressions are common, and similar successions of dominant-seventh chords with chromatically descending tritones can be found in earlier composers. But the addition of the upper melody note to create a string of descending sonorities of a perfect fourth over a tritone is unusual; the resulting alternation of an added major sixth or added minor tenth from one chord to the next lends the progression a unique sound. The extent and exactness of the match and the distinctiveness of the harmonic progression are so striking that it is hard to imagine two composers arriving at the same idea independently.

One might conclude that Berg, who is known to have been interested in and familiar with the music of Debussy, borrowed this passage

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EXAMPLE 4. Related chord progressions in Berg and Debussy

a. Berg, “Warm die Lüfte,” op. 2/4, mm. 18–25
from him, but the chronology makes clear that this cannot have happened. The Berg song was written in 1909–10 and published in 1910, then reprinted in Der blaue Reiter early in 1912. Debussy composed Six epigraphes antiques in 1914—and while he incorporated material from incidental music he had written in 1900–1901 for Pierre Louÿs’s Chansons de Bilitis, this passage was new. Stuckenschmidt concludes that Debussy borrowed the chord progression from Berg’s song, perhaps unconsciously. Yet this seems unlikely, for Berg was little known in France at the time. Stuckenschmidt hypothesizes that Berg, who admired Debussy, might have sent him a copy of his op. 2 songs, or that Debussy perhaps saw the issue of Der blaue Reiter in which this song was reprinted. There is no evidence to support either hypothesis.

More likely is that Berg and Debussy drew independently on a source both would have known well: Maurice Ravel’s piano piece Gaspard de la nuit, written in 1908 and published in 1909. Glenn Watkins has noted the similarity of the Berg excerpt to a passage from Ravel’s second movement, “Le gibet” (The Gallows). The chords under the brackets in measures 24–25 and 25–26 of example 5 are the same as the first three and first four chords of the Berg progression, respectively, and at the same pitch level (with octave transpositions in the bass). Strengthening this link are the “tolling repetition” of low B♭ in measures 18–20 of Berg’s song, echoing the incessant repetition of B♭/A♯ throughout “Le gibet,”

EXAMPLE 4. (Continued)

b. Debussy, “Pour la danseuse aux crotales,” mm. 29–32, from Six epigraphes antiques
and the words “Der Eine stirbt” (The one dies), recalling the corpse hanging from the gallows in the poem on which Ravel’s movement is based.25 It could also be argued that the whole six-chord sequence from measure 20 to the downbeat of measure 22 in Berg’s song is adapted from the last six chords in the Ravel, transposed down a whole step, with the chord on F\$ in Ravel’s progression altered to match all the others. The repetition in both works of the final chord of the progression, along with the descending fifth in the bass at that chord’s first appearance, strengthens the connection.

The resemblance of the passage in *Six epigraphes antiques* to the Ravel is also strong, with some additional similarities not found in the Berg. Debussy’s bass line is closer to Ravel’s, moving in parallel octaves rather than as a single line, alternately rising and falling (in place of Berg’s ever-climbing fourths), and featuring a registral placement similar to Ravel’s. As in the Ravel but not the Berg, Debussy’s chord series accompanies a repeated tone in the uppermost line. Indeed the entire Debussy passage

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25 Ibid., 48–51. Example 5 reprints Watkins’s example 4.7 from p. 50.
is a variant of the last five eighth notes in Ravel’s measure 25 transposed down a whole step. Moreover, Debussy states the chord progression twice, as does Ravel, rather than only once, as Berg does.²⁶

Both the Berg and the Debussy share several features with the Ravel they do not share with each other, demonstrating that both composers borrowed from Ravel. By contrast, the element common to Berg and Debussy but not Ravel—the use of five chords of the same type in a row, at the same transposition—is outweighed by other musical features. In other words, the analytical evidence—the extent and exactness of match and the number and distinctiveness of the shared elements—reinforces historical evidence that Debussy was unlikely to have known Berg’s song. Despite the close similarity between the Berg and Debussy passages, the composers arrived at them independently by drawing on a common source. This example illustrates why accounting for a composer’s knowledge of the putative source is a crucial aspect of any claim that borrowing has occurred.

II. Acknowledgment of the Source

Demonstrating a composer’s knowledge of a source is not always this difficult. In many cases the composer acknowledges the borrowing and names the source. Variations on existing melodies typically name the original work in the title, as do most Renaissance masses on borrowed material, chorale settings, and other reworkings. In other cases, composers identify borrowed material in the score or a program note, as Berlioz does in the score and program for *Symphonie fantastique*, or in writings, letters, interviews, and private conversations. We assume that the composer’s acknowledgment of the source is authoritative.

The only caution is that any testimony from the composer must be checked against the music. When Erik Satie identifies the quotation from Fryderyk Chopin’s Funeral March in the second movement of his satirical piano piece *Embryons desséchés* (Dessicated Embryos) as “Citation de la célèbre mazurka de SCHUBERT” (quotation from the famous mazurka of Schubert), we are not supposed to believe him, but to recognize that his wayward identification is a joke in harmony with all the other jests, verbal and musical, in this piece.²⁷ Like all sophisticated jokes, this one flatters its audience, who will not only recognize the melody and know

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²⁶ Debussy’s subject, the dancing girl with finger cymbals, does not share the references to death in Ravel and Berg; instead the borrowing seems motivated by the interesting harmonization of a repeated note, which in the Debussy might represent the ringing finger cymbals.

its author but also realize that Franz Schubert did not write mazurkas and
that Chopin did.

A lapse of memory may explain the curious case of Ives’s Fourth
Violin Sonata, completed ca. 1914–16. The first movement is based on
the gospel song Old, Old Story (“Tell me the old, old story”), building up
to a complete statement of the song’s refrain and using four other mo-
tives drawn from the verse. A lapse of memory may explain the curious case of Ives’s Fourth Violin Sonata, completed ca. 1914–16. The first movement is based on the gospel song Old, Old Story (“Tell me the old, old story”), building up to a complete statement of the song’s refrain and using four other motives drawn from the verse. The material Ives borrows is marked with horizontal brackets in example 6a; with repetitions it makes up almost the entire song. Yet the only times Ives wrote about the sonata’s sources—his program note, published with the sonata in 1942, and his autobiographical Memos, written in the 1930s—he indicated that this movement was based on another hymn, Work Song (“Work, for the night is coming”). Three of the four phrases of Work Song begin with a melody, bracketed in example 6b, that differs only in its first note from the opening figure of both verse and refrain of Old, Old Story. But there is no other element of Work Song in the sonata. The analytical evidence—extent of similarity, exactness of match, and the number and distinctiveness of shared elements—points to Old, Old Story and not Work Song. Ives’s comments on the sonata date from fifteen to twenty-five years after he composed the music. Perhaps he simply misremembered and confused the two tunes.

Other composers deliberately try to deceive us. In the 1930s Igor
Stravinsky identified the bassoon melody that opens his ballet The Rite of
Spring as deriving from a tune in an anthology of Lithuanian folk tunes
published in 1900, implying that the other melodies in the ballet were
not based on borrowed material. In 1960 he claimed that this “is the only
folk melody in the work.” But in separate studies, Lawrence Morton
and Richard Taruskin have shown that several other motives and themes
are based on folk melodies from this and other sources. Morton sug-

28 See the full analysis in Burkholder, All Made of Tunes, 167, 177–81. For the date, see ibid., 455n39; and James B. Sinclair, A Descriptive Catalogue of the Music of Charles Ives (New Haven: Yale University Press, 1999), 156–57.


30 Henderson makes the same point in The Charles Ives Tunebook, 2–3.

31 Igor Stravinsky and Robert Craft, Memories and Commentaries (Garden City, N.Y.: Doubleday, 1960), 92. The identification was first made in André Schaeffner, Stravinsky (Paris: Rieder, 1931), 43n1 (see also Plate XXI and pp. 125–27), presumably based on information supplied by Stravinsky himself.

EXAMPLE 6. Melodic elements in Ives’s Fourth Violin Sonata, first movement

a. From *Old, Old Story*

Tell me the old, old story of unseen things above, Of Jesus and His glory, Of Jesus and His love:

Tell me the story simply, As to a little child, For I am weak and weary, And helpless and defiled.

Refrain

Tell me the old, old story, Tell me the old, old story.

Tell me the old, old story Of Jesus and His love.

b. From *Work Song*

Work, for the night is coming, Work thro’ the morning hours;

Work while the dew is sparkling, Work ’mid spring ing flow’rs:

Work when the day grows bright er, Work in the glowing sun;

Work, for the night is coming, When man’s work is done.
of his [themes].” Taruskin is less kind, arguing that after World War I and the Russian Revolution Stravinsky sought to remake himself, not as a Russian composer of ballets and other music with extramusical resonance, but as a neoclassical composer dedicated to purely musical ideas. As part of this effort, Taruskin says, Stravinsky "was increasingly at pains to dissociate his great ballet from any taint of folklorism" and thus tried to reinforce the impression that he had invented the themes of The Rite of Spring rather than basing them on folk tunes.

These examples show that we cannot assume that the information the composer gives us is complete or even correct; we must investigate for ourselves. It should also be noted that so many cases of borrowing are not identified by the composer that the lack of such acknowledgment cannot constitute evidence against borrowing.

III. Sketches and Compositional Process

Because they offer insight into a composer’s process of composition, sketches can be helpful in detecting instances of borrowing. Taruskin’s study of The Rite of Spring uses Stravinsky’s sketches to identify themes with folk sources. At the top of a page in his sketchbook for the ballet, Stravinsky copied out a folk melody from an 1877 collection edited by his teacher, Nikolai Rimsky-Korsakov, transposing it down a tritone. Below, on the same page, he sketched two themes from the “Spring Rounds” section of The Rite of Spring that are related to this folk melody, and on a nearby page he sketched another. Taruskin compares them in an example, reprinted here as example 7, where the vertical alignment of notes shows parallels between the melodies. The theme that appears first in the ballet (ex. 7b) follows the contour of the folk melody (ex. 7a), in the same key Stravinsky used, but incorporating changes in meter and rhythm, adding grace notes and an upper B, omitting several notes, and changing the lowest note from C to Eb. The differences are so substantial that we might not believe Stravinsky based the melody on this tune were they not juxtaposed in the sketches at the same level of transposition.

The other theme on the same page of sketches (ex. 7c) is a bit more distant from the folk melody, but follows the same general rising-and-falling stepwise contour and shares with the folk tune a short-short-long rhythm that Stravinsky did not use in his other theme. The theme in example 7d elaborates the motive of a rising fourth and whole step that

33 Morton, “Footnotes,” 16.
35 For the discussion of the following example, see ibid., 512–19; and Taruskin, Stravinsky and the Russian Traditions, 906–11 (ex. 7 is based on example 12.6 on p. 909). The earlier article did not use vertical alignment to show parallels between melodies.
EXAMPLE 7. Richard Taruskin’s example comparing the folk melody from the sketchbook and themes from *The Rite of Spring*

a. The source melody (Sketchbook, p. 8)

b. *The Rite*, 7 after [19]

c. *The Rite*, fig. [51], transposed

d. *The Rite*, 1 after [54] (Vivo), transposed

(retrograde)

(retrograde inversion)
ends both phrases of the folk song, marked with brackets I have added to Taruskin’s example. Here Stravinsky derives three quite different melodies from a single source and incorporates in each a characteristic idea that he did not use in the other themes. In each case he altered material from the source tune rather than taking it over literally. Because of these alterations, it would be difficult to identify this folk melody as the source for these themes were it not for the sketches. In this case the sketches provide the definitive evidence for borrowing. 36

IV. Typical Practice in Other Pieces

Another type of historical evidence that can be helpful is the typical practice in other pieces by a composer or group of composers. One might argue that Ives’s frequent use of borrowed material increases the chances that he was alluding to Tristan und Isolde at the opening of his Second String Quartet, but knowing his typical practice when reworking material from classical works makes such an allusion seem out of character. He must have known the Prelude to Tristan, as he borrows passages from it in his Second Symphony. Yet there the borrowed material is much more extensive, and the allusion is unmistakable. 37 Moreover, this and most other classical borrowings in the Second Symphony—of which there are more than a dozen—are from transitional sections and episodes, part of a systematic network of allusions to the complex forms and classical masterpieces of Europe. These contrast with the American popular songs, fiddle tunes, hymn tunes, and patriotic songs from which Ives paraphrased his themes. 38 The classical borrowings in the Second String Quartet are all in the second movement, part of a back-and-forth between the instruments quoting famous symphonic themes in dialogue with American patriotic tunes, all overt and set off as quotations, none as subtle as the alleged reference to Tristan at the beginning of the first movement. 39 Understanding Ives’s characteristic uses of existing music—both what he borrows and how he uses borrowed material—adds weight to the argument that the resemblance to Tristan in the first measures of the quartet is coincidental.

Familiarity with the typical practice of a composer or group of composers can lead scholars to identify previously unrecognized borrowings. Having studied how Johannes Martini (ca. 1430s–97) borrowed from all voices of the model in his masses on known polyphonic models,

36 For comparable cases in Ives’s music in which sketches confirm borrowings, see Burkholder, All Made of Tunes, 60–70, 104–7.
37 Ibid., 127.
38 Ibid., 102–36, esp. 126–34.
39 Ibid., 349.
I reverse-engineered his procedures, comparing the tenor and superius voices from all five movements of his untitled three-voice mass in Verona, Biblioteca Capitolare 759 (fols. 15v–20r) to create a hypothetical model in two voices. Howard Mayer Brown identified my model as the tenor and superius of the anonymous Lied *In feuers hitz*, giving Martini’s mass a name. Using the same procedures, I reconstructed a hypothetical model for Martini’s *Missa Io ne tengo quanto a te* but was unable to match it to any known work. Twenty years later Gianluca D’Agostino pointed out that Martini’s title matches the first line of a barzelletta text, “Io inde tengnio quanto a tte,” in an anthology of poetry from Aragonese Naples copied ca. 1468. Elizabeth Elmi has underlaid that text to my hypothetical model, showing that the music neatly fits the poetic form and is similar in style to surviving music for other Neapolitan barzellettas. Using the hypothetical mass model to reconstruct the music for this poem and the text to refine the model, she is able to revive a song that has not been heard for half a millennium. Her work confirms that Martini indeed based this mass on a polyphonic model.

**Purpose**

We have seen how analytical evidence and biographical and historical evidence can be used to buttress or refute a claim of borrowing. But proof of borrowing is incomplete until its *purpose* is clear. If it is not possible to establish a function for the borrowed material, its use remains a mystery, raising the possibility that the resemblance is coincidental after all. If it is possible to demonstrate a purpose, this strengthens the case for borrowing. There are many purposes for borrowing; table 1 lists some of the most common examples.

**I. Structural or Thematic Functions**

Borrowed material often serves structural or thematic functions. In a medieval motet, a borrowed melody is the structural foundation, the

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41 Ibid., 487–503.
43 For an in-depth discussion and analysis of “Io inde tengnio quanto a tte” in the context of this manuscript and the Neapolitan barzelletta style, see Elizabeth Elmi, “Poetry and Song in Aragonese Naples: Written Traces of an Oral Practice” (Ph.D. diss., Indiana University, forthcoming), chapters 4 and 5, respectively.
lowest voice over which the others are created in counterpoint. The borrowed material in a cantus-firmus, imitation, or paraphrase mass or motet provides the basic material and structure for the piece, as do the chant Ave regina celorum for Gombert’s motet and the songs In feuers hitz and Io ne tengo quanto a te for Martini’s masses. A borrowed theme, melody, bass line, or harmonic progression serves a similar purpose in a variation set, providing both material and structure, as does the Dies irae in Liszt’s Totentanz. Borrowed melodies can also serve as themes, such as the Russian melodies in Ludwig van Beethoven’s Razumovsky Quartets or the university student songs in Brahms’s Academic Festival Overture. A structural or thematic function may be a sufficient reason for the borrowing, although in most cases the question of why the composer chose a particular source still merits investigation.

II. Emulation

Another purpose of borrowing is emulation, the use of an existing piece as a model or as a source for ideas that can be applied in a new context. Young composers have long been taught to emulate existing compositions that are worthy of imitation, and composers trying to establish themselves often use successful works as models. For example, A. Peter Brown has shown how the seventeen-year-old Mozart modeled the string quartets he wrote in Vienna in the summer of 1773 on quartets by Carlos Ordonez and other Viennese composers. In a similar vein, Jeremy Yudkin has shown how Beethoven used Mozart’s String Quartet in A Major, K. 464, as a model for his own String Quartet in A Major, op. 18/5. In both cases the composers sought to make a name for themselves in the Viennese string-quartet tradition by emulating well-established predecessors. Both younger and older composers have mined existing music for ideas that can be adapted for use in their own music. Berg’s and Debussy’s adaptations of Ravel’s chord progression fall into this category, as do many of Handel’s borrowings.

III. Extramusical Associations

Borrowing often invokes extramusical associations. Berlioz used the Dies irae in Symphonie fantastique because it suited his program, invoking the idea of death through a chant used in the Catholic Mass for the Dead. Taruskin has pointed out that the folk song in example 7a, from which Stravinsky derived three ideas used in his “Spring Rounds,” was sung only during Semik, a Slavic spring fertility festival celebrated with circle

dances, and was thus perfectly suited for the scenario of that section of *The Rite of Spring*.45 Besides invoking a text or contributing to a program, the extramusical associations a borrowing carries can lend a general character to a piece of music, as in Liszt’s *Totentanz*, which is not programmatic.

Borrowed material often carries multiple associations, creating multiple meanings. In light of George Perle’s 1977 discovery of a secret program for Berg’s *Lyric Suite* relating to the composer’s secret infatuation with a married woman, the allusion to *Tristan und Isolde* in the finale can be understood to invoke the opera that above all others embodies this theme.46 As Joseph Straus has demonstrated, the relationship to *Tristan* extends to the twelve-tone row on which the last movement is based, including a melodic motive derived from the initials of Berg and the woman; this feature indicates that the borrowing is both pervasive and significant.47 But even before the program was discovered, another set of associations was obvious: in a piece that is alternately atonal and twelve-tone, the allusion to *Tristan* drew a historical connection to a work that in Berg’s milieu was considered to have started the trends of increasing chromaticism, constant modulation, and attenuated tonality that ultimately led to atonal and twelve-tone music.

**IV. Humor**

The incongruity of borrowed material in certain contexts can create humor. Satie’s paraphrase of Chopin’s Funeral March in *Embryons desséchés* is comical in itself, and reinforces the movement’s mocking program about crustaceans who are “very melancholy by nature”; at the point the citation begins, according to Satie’s marking, “Ils se mettent tous à pleurer” (they all start to cry).48 The appearance of *Tristan und Isolde* in *Children’s Corner* plays on the incongruity of a grandiose opera making an appearance in a piece evoking childhood, and of a famously emotional gesture in the context of a minstrel-show cakewalk. Davinia Caddy has recently demonstrated that the reference is part of a larger cluster of comic characterizations in “Golliwogg’s Cake-Walk,” associated with French attitudes toward the cakewalk as a genre and toward Wagner, as well as with the vogue for artistic representations of clowns around the turn of the twentieth century.49 As in Berg’s *Lyric Suite*, what at first seems like a passing quotation is just the most obvious hint of

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a deeper set of meanings that is the ultimate purpose of the borrowing and perhaps the entire work.

V. Other Purposes

This list does not exhaust the possible reasons for using existing music, but it encompasses the most common ones. It is worth restating the point that if no purpose can be found, this weakens the case for borrowing. There is no apparent reason for Ives to allude to Tristan und Isolde in his Second String Quartet; this makes it less likely that the reference is actually there. Yet if the purpose of the borrowing is clear, as Taruskin establishes for the folk melodies in The Rite of Spring, it can reinforce other evidence, in the same way that establishing a motive strengthens the prosecutor’s case in a criminal trial.

The issue of purpose raises a deeper question: Why do we care whether a piece of music borrows from another? What is at stake? The answer has to do in part with the purposes borrowing serves. Martini, based primarily in Ferrara, used a German Lied and a Neapolitan barzelletta as models for his masses; how did he come to know these works and what prompted him to use them? If Mozart did model his Requiem on Handel, that would suggest that he might have been trying to place himself in the Handelian choral tradition, even before Haydn did so with his late oratorios. Ives’s focus on Dvořák as a model for his First Symphony shows his deep interest in learning the European tradition from an active older contemporary and contradicts the longstanding image of Ives as naive and untouched by European influence. Such issues matter, for they have the potential to change our understanding of the music and its meanings, as well as the careers, connections, and contexts of its composers.

A Problematic and Illuminating Case

As a culminating example, let us examine a famous case that has been debated for well over a century. Mozart’s one-act Singspiel Bastien und Bastienne, composed in 1768 when he was twelve years old, begins with a brief Intrada or overture. Its opening theme (ex. 8b) reminds most listeners today of the first theme of Beethoven’s Eroica Symphony (ex. 8a), written thirty-five years later. The parallel is even stronger when Mozart recapitulates his theme halfway through the Intrada at measure 38 (ex. 8c).

The similarity struck many of those who encountered Bastien und Bastienne when it was unearthed in the nineteenth century, after the Eroica had become a staple of the orchestral repertoire. The first to mention it
seems to have been Edward Holmes in his 1845 biography of Mozart, the first to be published in English. He prints the opening seven measures of the opera and notes that the theme “reminds one of the ‘Sinfonia Eroica.’”\textsuperscript{50} Otto Jahn cited and expanded on Holmes’s observation in his example 8.

Example 8. Opening themes of Beethoven’s \textit{Eroica} Symphony and Mozart’s \textit{Bastien und Bastienne}

\textbf{a. \textit{Eroica} Symphony, first movement, mm. 1–12 (winds and brass omitted in mm. 1–2)}

\textsuperscript{50} Edward Holmes, \textit{The Life of Mozart: Including His Correspondence} (London: Chapman and Hall, 1845; repr. 1854; repr. New York: Harper & Brothers, 1868), 47. He may only have known the incipits of each number of the opera, which had been printed the year before in Leopold Edlem von Sonnleithner, “Über Mozart’s Opern aus seiner früheren Jugend,” \textit{Cäcilia} 23, no. 92 (1844): 233–56. Sonnleithner does not comment on the similarity to the \textit{Eroica} theme.
own four-volume biography of Mozart, published in 1856–59. Jahn presents the opening eight bars of the opera, and then writes:

Holmes remarks that the subject “reminds one of Beethoven’s Sinfonia Eroica,” and the correspondence becomes still greater in the course of the overture [here he prints mm. 38–45] during which, it is to be hoped, no one would seriously think of an actual reminiscence. 51

Jahn is pointing out the historical absurdity of hearing in Mozart’s opera a reminiscence of a piece Beethoven wrote thirty-five years later, just because the latter is familiar to audiences of the day and the former is not.

Holmes and Jahn were careful to draw no conclusions from this resemblance. But others sought to understand its significance. George Grove, the English musicologist best known for his *Dictionary of Music and Musicians*, came to two opposite conclusions. The brief article on “Bastien et Bastienne” in the first volume of his *Dictionary*, published in 1879, says: “The subject of the Intrada (in G) is by a curious coincidence all but identical with the principal theme of the first movement of Beethoven’s ‘Eroica’ Symphony.”\(^5^2\) He presents the version of the theme at the recapitulation, reprinting the melody line in measures 38–42.

By the time his book *Beethoven and His Nine Symphonies* was published in 1896, Grove no longer described the relationship as coincidental: “Beethoven does not seem to have scrupled to use materials wherever he found them. . . . It is difficult to believe that Beethoven had not seen Mozart’s Overture to ‘Bastien et Bastienne’ before writing the Eroica.”53 Earlier in the book he says of the first theme of the *Eroica*: “An unexpected anticipation of the phrase is found in a passage of the Overture to ‘Bastien et Bastienne,’ a youthful operetta of Mozart’s, written at Vienna in 1768”; he shows the melody at measures 38–45. He makes this observation in the midst of a discussion of later composers who modeled themes on Beethoven’s. Indeed he sees all these links as part of a “golden chain” of influence: “These are among the links which convey the great Apostolic Succession of Composers from generation to generation. . . . And thus is forged, age by age, the golden chain, which is destined never to end as long as the world lasts.”54 What was a “curious coincidence” in 1879 is now for Grove a probable instance of musical borrowing.

In the 140 years since Grove’s *Dictionary* appeared, hundreds of writers have mentioned the resemblance of these two themes. Grove’s opposing views—that the resemblance was a curious coincidence and that Beethoven must have borrowed the theme from Mozart—have framed the debate, with some writers arguing for one or the other view and others taking a middle path. The durability of this discussion is fascinating; it suggests that there are lessons to be learned from examining the debate. Evaluating Grove’s claim that Beethoven borrowed this idea from Mozart requires us to consider what evidence has been offered or can be found to support or refute it. For this we turn back to the types of evidence in table 1.

I. Analytical Evidence

The extent and exactness of the similarity are a significant part of the argument. Picking up on Otto Jahn’s observation that the correspondence is greater at the recapitulation of Mozart’s Intrada than at the beginning, Grove prints the later passage in both his *Dictionary* entry and his book on the Beethoven symphonies. Unaware of this later passage, a reviewer of volumes 1–3 singled out this article for criticism:

In the article “Bastien et Bastienne” we are told that “the subject of the Intrada is, by a curious coincidence, all but identical with the principal theme of the first movement of Beethoven’s ‘Eroica’ Symphony.” The

54 Ibid., 59–60.
passage is then quoted, but it is quoted incorrectly, the third and fourth bars being altered so as to appear much more like Beethoven’s theme than they are in the original. There is no excuse whatever for this, as not only is the score of the opera published, and the extract could have been easily verified, but the passage had been already correctly quoted both by Holmes and Jahn in their lives of Mozart.55

This reviewer clearly consulted the English translation of Jahn’s book, which omits the second example that includes the recapitulation from the Intrada.56 His reaction shows that the extent and exactness of the resemblance mattered and that he thought Grove was cheating by altering the evidence.

Grove wanted to show the theme’s reprise, where eight notes in a row parallel Beethoven’s theme, rather than the first appearance, with only five notes in common, because two eight-note melodies are much less likely to be coincidentally the same than two five-note melodies. Grove knew this intuitively, but we can back him up with simple mathematics, summarized in table 2. To make the calculations easier, we will ignore rhythm and focus only on melodic contour.

To start with a simple case: if I am constructing a melody five notes long from a pair of two pitches, there are two possibilities for the first note, two for the second, two for the third, and so on. That means the total number of different possible melodic contours I could generate is $2 \times 2 \times 2 \times 2 \times 2$, or $2^5$, which is 32. Not all 32 melodies will use both pitches; one will repeat the lower pitch five times, while another will repeat the higher pitch five times. Subtracting those two from the 32 yields 30 distinct melodic contours five notes long that can be generated using both pitches from any pair of pitches.

By similar reasoning, the total number of possible five-note melodies I could generate from the three notes of a major triad is $3^5$, which is 243. But if I want only the melodies that use all three notes of the triad, I have to subtract the melodies that use only one or two notes of the three. Three of the 243 melodies simply repeat one note (the root, third, or fifth of the triad). Ninety melodies use only two notes; we arrive at that number because there are three possible pairs of notes in the triad—the root and third, root and fifth, or third and fifth—and we already know that there are 30 possible melodies for each of those three pairs of notes. Subtracting the 90 two-note melodies and the three one-note melodies from 243 gives us 150 possible melodies five notes long that use all three notes of a triad.

55 Review of A Dictionary of Music and Musicians (1450–1880), ed. Sir George Grove, vols. 1–3, in The Athenaeum, no. 2955 (June 14, 1884): 768. Only the first three volumes had appeared by the time of this review.
56 Jahn, Life of Mozart, 1:91–92.
If we extend our melody to eight notes instead of five, the numbers are much higher. Using similar calculations, shown in table 2, there are 5,796 unique eight-note melodic contours that use all three notes of a major triad—roughly 40 times more possibilities for eight-note melodies than for five-note melodies.

These calculations for a major triad assume octave equivalency—that is, the fifth of the triad counts as the fifth no matter in what octave it appears. But both Beethoven’s and Mozart’s melodies actually use an array of four notes, with the fifth of the triad appearing both above and below the root. If we treat the high fifth and the low fifth shared by these pieces as different notes, the numbers go up, as does the difference between five- and eight-note melodies. There are $4^5 (1,024)$ possible five-note melodies that can be constructed from any set of four notes, but from that we must subtract all the melodies that do not use all four notes. There are four possible subsets of three notes, with 150 possible melodies for each; six possible subsets of two notes, with 30 possible
melodies for each; and four subsets of one note, with one possible “melody” for each, for a total of 784 melodies that must be subtracted from 1,024, yielding 240. As shown in table 2, following the same reasoning, the number of possible eight-note melodies that use all four notes of the array is 40,824. So there are roughly 170 times as many eight-note melodies as there are five-note melodies that use this array of four pitches.

Based on melodic contour alone, a similarity of five notes in a triadic theme is relatively likely to be a coincidence. Even with a similarity of eight notes, we cannot exclude the possibility of a coincidence, since there are tens of thousands of pieces that use triadic themes. But when we factor in the octave placement, meter, and exact rhythm, there seems to be a low chance for a coincidental similarity. We can therefore conclude that Grove made his case much stronger by printing the recapitulation of Mozart’s Intrada, with eight notes in common with the *Eroica* theme, rather than the opening passage, with only five.

Grove could have made his case stronger still by pointing to other elements in the music. As shown in example 8, in both *Bastien und Bastienne* and the *Eroica* Symphony, during the four measures of the theme that the two pieces have in common, the harmony is a static tonic triad, the dynamic level is *piano*, only the string instruments are playing, the accompaniment consists of pulsating eighth notes, and the bowing is similar. These shared elements strengthen the case. Yet one could object that these features are conventional: this is such an obvious way of presenting and accompanying this melody that, given the same theme, any two composers of the time might well have come up with something similar.

**II. Biographical and Historical Evidence**

The biographical and historical evidence is the great weakness in the case for borrowing. Mozart composed *Bastien und Bastienne* in 1768 in Vienna, apparently for a private performance at the home of the Viennese doctor Franz Anton Mesmer (who later became famous as the inventor of mesmerism). Mozart revised the work in Salzburg shortly thereafter, perhaps for a performance that appears not to have taken place. The next known performance was in 1890 in Berlin. The work was

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57 Compare for example the opening themes of Handel’s *Organ Concerto* in F Major, op. 4/4, the finale of Bach’s unaccompanied *Violin Sonata* No. 1 in G Minor, BWV 1001, and the Badinierie that concludes Bach’s *Orchestral Suite* in B Minor, BWV 1067, all of which start with the same 1–3–1–5–1 contour as the *Eroica* theme (the latter two in minor); and Bach’s *Two-Part Invention* in F, BWV 779, and Prelude and *Fugue* in A Minor, BWV 543, which have the same contour only with the fifth degree above rather than below the tonic (again, the latter in minor). None of these continues like the *Eroica* theme beyond the fifth or sixth note. The similarities between all of these melodies are presumably coincidental.
not published until 1879, in the first complete edition of Mozart’s works.\(^{58}\) It seems very unlikely that Beethoven could have known it, and there is no indication from Beethoven that he did.

Grove tried his best. In a footnote in his book on the Beethoven symphonies, he sketched a possible path, referring to Alexander Wheelock Thayer’s biography of Beethoven:

> It has occurred to me that Beethoven may have heard Mozart’s operetta at the Elector’s National Theatre at Bonn when a boy. The lists of pieces for 1781–3 and 1789–92, given by Mr. Thayer at i., 72, 73, and 198 of his valuable work, show that the répertoire embraced everything high and low, and it may not be quite impossible that this little work was performed at some time, as Mozart’s Entführung was in 1782, ‘89, and ‘92. Mr. Thayer, however, does not agree with me in this.\(^{59}\)

This is not evidence—just speculation designed to parry the presumption that Beethoven could not possibly have known Mozart’s Singspiel.

There the matter stood for two-thirds of a century. Some called the resemblance a coincidence, like the writer in the Musikalisches Wochenblatt who reviewed the Vienna revival of Bastien und Bastienne in December 1891, Mozart’s centenary:

> For reminiscence-hunters of the good old type, the little introduction to the opera offers an especially rich find. If one transposes the broken E-flat-major triad with which Beethoven’s “Eroica” begins into G major, one has the opening theme from “Bastien und Bastienne,” only what in Beethoven is raised to the heroic sounds completely idyllic in Mozart through accompaniment and instrumentation. It goes without saying that here nothing but chance plays a part, to be sure a very remarkable one.\(^{60}\)

\(^{58}\) Georg Nikolaus von Nissen was the first to report that the opera was performed at Mesmer’s house in his Biographie W. A. Mozarts (Leipzig: Breitkopf und Härtel, 1828), 127. Leopold Mozart listed the opera as a work composed in 1768 in Vienna in his “List of Everything that this Twelve-Year-Old Boy Has Composed Since His Seventh Year” (September 1768); see The Compleat Mozart: A Guide to the Musical Works of Wolfgang Amadeus Mozart, ed. Neal Zaslaw with William Cowdery (New York: W. W. Norton, 1990), 44. The Salzburg revisions included adding recitatives, which were never completed, suggesting that there was no performance there; see Hermann Abert, W. A. Mozart, trans. Stewart Spencer, ed. Cliff Eisen (New Haven: Yale University Press, 2007), 98. The opera was published in Wolfgang Amadeus Mozart, Wolfgang Amadeus Mozart’s Werke, ser. 5, Opern, no. 3, Bastien und Bastienne: Deutsche Operette (Leipzig: Breitkopf & Härtel, 1879), and received its public premiere at the Architektenhaus in Berlin on 2 October 1890.

\(^{59}\) Grove, Beethoven and his Nine Symphonies, note on p. 93, referred to on p. 60.

\(^{60}\) “Für Reminischenjäger von echtem Schrot und Korn bietet überdies die kleine Einleitung der Oper einen besonders ergiben Fund. Man transponiere den zerlegten Es dur-Dreiklang, mit welchem Beethoven’s ‘Eroica’ anfängt, nach G dur, und man hat das Eingangsthema von ‘Bastien und Bastienne,’ nur, dass durch Begleitung und Instrumentation bei Mozart ganz idyllisch klingt, was bei Beethoven heldenhaft erhaben. Es versteht
A few writers took it for granted that Beethoven had copied from Mozart. In 1924 R. W. S. Mendl mused in the *Musical Quarterly* about those works in which a later composer takes an earlier man’s idea, discovers in it possibilities and beauties undreamt of, perhaps, by the other, and is inspired thereby to fashion out of it an entirely new composition of his own; this is what Beethoven seems to have done with the air from Mozart’s overture to “Bastien et Bastienne” when he composed the first movement of the “Eroica.”

Other writers steered a middle course, considering the matter unsolved. In his 1901 book *The Opera, Past and Present*, William Apthorp wonders: “Was this a mere coincidence, or had Beethoven seen a score of *Bastien und Bastienne*? At all events, the Thunderer had a way of taking his own wherever he found it.” Hugh Arthur Scott, writing on “Indebtedness in Music” in the *Musical Quarterly* in 1927, comments that “here the theme in question, though Beethoven makes so much of it, is so exceedingly simple, consisting merely of the notes of the common chord, that Beethoven may well have regarded it as common property, if indeed, he knew of Mozart’s little work at all.”

The problem was that the analytical evidence and the historical evidence trended in opposite directions. The musical resemblance was quite strong, but it was unlikely that Beethoven could have known Mozart’s Singspiel; on the other hand, there was no way to prove definitively that the resemblance was coincidental. This is why the debate endured so long.

After 1960 a new line of argument emerged that used evidence about Beethoven’s creative process to prove that he did not borrow his theme from Mozart. It should be noted that the relation to *Bastien und Bastienne* was a side issue in a discussion of much more fundamental questions about the gestation of Beethoven’s *Eroica* Symphony.

In 1961 Alexander Ringer argued that Beethoven drew the principal material for the first three movements of the symphony from the theme of its finale. Beethoven had previously used the finale theme in a contredanse (WoO14, no. 7, 1800–1801), in the ballet The Creatures of Prometheus, op. 43 (1800–1801), and in the Piano Variations in E-flat Major, op. 35 (1802), so the theme preceded work on the other three movements of...
the symphony by at least two years.\footnote{Alexander L. Ringer, “Clementi and the *Eroica*,” *Musical Quarterly* 47 (October 1961): 454–68.} As shown in example 9, Ringer analyzes the symphony’s opening theme as a combination of motives from the finale’s theme: its bass line, indicated by plus signs, and its treble tune, indicated by the letter x. In a footnote he adds: “In other words, the often cited identity with the opening motif of Mozart’s youthful *Bastien und Bastienne* overture must have been a matter of pure coincidence.”\footnote{Ibid., 462.} By giving the *Eroica* theme a different derivation, Ringer shows that Beethoven’s compositional process did not depend on borrowing this theme from Mozart; this makes it much less likely that there is any relationship.

Twenty years later, Lewis Lockwood argued that indeed Beethoven derived the opening theme of the *Eroica* directly from the theme of its finale, by examining the earliest sketches for the symphony, which had become available only in 1962 with the publication of the Wielhorsky sketchbook.\footnote{Lewis Lockwood, “Beethoven’s Earliest Sketches for the *Eroica* Symphony,” *Musical Quarterly* 67 (October 1981): 457–78. The following discussion summarizes pp. 460–69.} As Lockwood shows in an example reprinted here as example 10a, the first sketch has little in common with the opening theme as we know it, but closely follows the contour of the bass line of the finale’s theme. Recall that in the finale the bass line is stated and varied before the tune itself appears; Beethoven was evidently aiming for a first-movement theme that was motivically related to the opening idea.
EXAMPLE 10. Lewis Lockwood’s examples of Beethoven’s sketches for the first theme

a. First sketch

b. Second sketch

c. Next sketch

of the finale. His second sketch for the first movement theme (ex. 10b) follows a similar contour, but is not as literal in reflecting the theme of the finale. The next extant sketch for the opening theme (ex. 10c) is the same as the final version. Lockwood points out that all three sketches share a similar shape, beginning on the tonic, introducing the other members of the tonic triad one by one, returning to the tonic after each of the other notes is introduced, and carving out a space from the fifth above to the fifth below. He concludes:

We are now in a position to claim, on verifiable evidence, that the triadic formation of the final version was not an original linear gestalt, but that it developed in visible stages from the intervallic content, the boundaries, and the linear order of the Basso del Tema, which will then itself resurface in the Finale. . . . Further, an additional dividend provided by the Wielhorsky sketches is that they should obliterate for all time any notion of a connection between the Eroica opening theme and Mozart’s Overture to Bastien und Bastienne, of 1768; even now this myth dies hard in some quarters but it can surely be laid to rest for good. 67

67 Ibid., 469.
By showing how Beethoven arrived at his theme in stages, basing it on the bass line of the finale’s theme and gradually honing it into its final form, Lockwood offers convincing evidence that Mozart’s overture was not Beethoven’s starting point.

This is not perfect evidence against borrowing, however. If we were able to establish that Beethoven knew the Mozart Singspiel, it could be the case that at this point in his sketching he realized that the solution he was seeking was this tune by Mozart, which provided the right contour and character.68 Indeed something rather like this may have happened.

In her 1984 dissertation on “The Influence of Eighteenth-Century Social Dance on the Viennese Classical Style,” Sarah Bennett Reichart reprints the dance tune in example 11a, the first Deutsche from Christoph Gottlob Breitkopf’s Terpsichore im Clavierauszuge, and points out its close resemblance to both Mozart’s overture theme and Beethoven’s symphony theme.69 Terpsichore im Clavierauszuge, published in about 1790, is

68 A parallel exists in the sketches for Ives’s Second Symphony, where accompanimental figures based on simple repeating rhythmic cells in an early sketch suddenly become the tunes “Turkey in the Straw” and “Long, Long Ago” in a later draft and in the final score. See Burkholder, All Made of Tunes, 120–23, esp. exx. 4.23–4.24.

69 Sarah Bennett Reichart, “The Influence of Eighteenth-Century Social Dance on the Viennese Classical Style” (Ph.D. diss., City University of New York, 1984), 356–57. For
a collection of dances presumably not composed by Breitkopf but collected and arranged by him for piano. Example 11b shows Reichart’s chart of characteristics for the Deutsche, including triple meter and the most typical rhythm for the dance (long-short/long-short/short-short-short/long or downbeat), exemplified in all three of these melodies.\textsuperscript{70} Deutsche (or Deutscher or Teutsche or its translations allemande and tedesca) was the name used in the late eighteenth century for the German turning dance we now know as the waltz. As Reichart points out, Beethoven used Deutsches in other works, including the \textit{Ritterballet} he composed in Bonn in 1790; several German Dances from the 1790s; the first movement of the Piano Sonata in G Major, op. 79, marked “Presto alla tedesca” (Presto in the style of a Deutsche); the first movement of the Eighth Symphony; and the “Alla danza tedesca” fourth movement of the String Quartet in B-flat Major, op. 130.\textsuperscript{71} Reichart suggests: “Possibly this tune [from Breitkopf’s collection] represents a common type of deutscher melody, one which might have been recognized by the audience for Beethoven’s Third Symphony.”\textsuperscript{72} If the tune, or some variant of it, was in circulation by the 1760s, perhaps both Mozart and Beethoven borrowed from a common source. And if neither composer knew this tune—if we have three Deutsche tunes that are so similar yet were all arrived at completely independently—then their similarities are still not coincidental, but rather result from shared expectations for the rhythm and contour of Deutsche tunes, combining a typical opening rhythm for the dance with a triadic contour that begins on the tonic and oscillates up and down around it.

\textbf{III. Purpose}

The purpose of this purported borrowing did not go unmentioned in Grove’s day. A review in the \textit{Edinburgh Review} of Grove’s book on Beethoven’s symphonies raised this question:

\begin{quote}
\textbf{The resemblance between Mozart’s little overture and the theme of the “Eroica” symphony is certainly accidental—\textbf{one of the curious coincidences in music, of which others are known. To imagine that Beethoven, in the mood he was in when composing that symphony, would have deliberately “lifted” its leading theme from a youthful and nearly forgotten opera overture of Mozart’s is preposterous.}}\textsuperscript{73}
\end{quote}

\textsuperscript{70} Reichart, “The Influence of Eighteenth-Century Social Dance,” 357.
\textsuperscript{71} Ibid., 346–51, 353–55.
\textsuperscript{72} Ibid., 357.
\textsuperscript{73} [H. Heathcote Statham], review of Sir George Grove, \textit{Beethoven and His Nine Symphonies} (London and New York, 1896), \textit{Edinburgh Review} 184 (October 1896): 467.
Why indeed would Beethoven borrow this melody from Mozart’s overture? What purpose would it serve? Grove never addressed this question beyond his general claim that “Beethoven does not seem to have scrupled to use materials wherever he found them.”

Now we can answer it. In all likelihood, Beethoven did not know Mozart’s overture. We can put that idea to rest because we have better explanations. Courtesy of Ringer and Lockwood, we know that Beethoven’s theme originated as a borrowing, not from Mozart, but from his own theme destined to appear in the symphony’s finale. Yet in its final form, Beethoven’s theme resembles Mozart’s so closely, not because of a curious coincidence, but because both drew on the same conventions. Given the close resemblance between both themes and the Deutsche melody from Breitkopf’s collection, it seems likely that both composers drew on an existing Deutsche tune or on melodic and rhythmic formulas associated with the dance.

To what purpose would Beethoven use a Deutsche topic here? Two recent studies suggest answers, pointing to the similarity between these three melodies and the associations Deutsches carried with peasants and thus with common people, nature, and the pastoral.

In his handbook on the Eroica Symphony, Thomas Sipe mentions Reichart’s suggestion of the Deutsche tune as “a common model for both themes” and comments:

Mozart would have chosen the deutsche [for the overture to Bastien und Bastienne] to convey the simple-minded, country-like character of his protagonists, for the “German” country dance was reserved almost exclusively for the peasants, though not necessarily “German” peasants.

He observes in a footnote: “Mozart makes this clear in the famous masked ball scene from Don Giovanni. The lower classes dance the deutsche while the aristocratic masked visitors dance the minuet.” Sipe reads the Eroica as an homage to Napoleon and suggests that Beethoven used the Deutsche topic and this particular theme because it “captures the naïve character of Bonaparte—his common upbringing, which Beethoven admired greatly—without compromising his military prowess.”

Stephen Rumph suggests a different reading in his book Beethoven after Napoleon, arguing that the Eroica conveys the idea of “harmony lost and regained” within a world of nature. He points out that traditional readings of the first movement as heroic from start to finish miss the point that the material itself is anything but:

No heroic reading has succeeded in explaining why Beethoven chose 3/4, the natural meter of dance, for the Allegro con brio. The first movement is permeated by the spirit of the lower dances—pastoral, siciliano, and above all, Teutsche. One need not trace the first theme to the overture of Bastien und Bastienne to recognize the same naive character (although Sarah Bennett Reichart has proposed a common source for Mozart’s and Beethoven’s themes)....

The tremendous, dissonant energies of the Eroica, especially in the first movement, do indeed evoke a heroic ethos. But unlike the mood of the Fifth Symphony or Coriolanus, this ethos arises not from the nature of the themes, but solely from the manner of their development. The Eroica is pastoral in essence, heroic in action.75

Whether we adopt Sipe’s interpretation or Rumph’s—or neither—they make us aware of the nature of Beethoven’s theme. Traditional interpretations were so focused on the heroic events of this movement that we missed that the theme itself is a German waltz, just like Mozart’s overture. Like Mozart before him, Beethoven used the reference to the dance to create a sense of the naive, the peasant, the man in nature. Both composers also chose a similar accompaniment, one that directly reinforces the same associations.

Examining the relationship between these themes demonstrates how helpful the typology of evidence in table 1 can be for the study of borrowing in music. Working our way through the three broad categories of evidence has brought us to a much better understanding of this longstanding case. The problem resisted resolution for so many generations because the analytical and historical evidence contradicted each other, and because no one could detect a purpose. Reichart’s discovery opened up a new possibility that clarified not only why the resemblance is so strong, but also what Beethoven’s purpose was. Grove was thus wrong twice: this case is neither a curious coincidence nor a musical borrowing (at least not from Mozart), but rather an instance of drawing from a common source, one that—once we recognize it—can open our eyes to new interpretations of Beethoven’s symphony.

ABSTRACT

Studies of allusion, modeling, paraphrase, quotation, and other forms of musical borrowing hinge on the claim that the composer of one piece of music has used material or ideas from another. What evidence

75 Steven C. Rumph, Beethoven after Napoleon: Political Romanticism in the Late Works (Berkeley: University of California Press, 2004), 65–78, quoting pp. 71, 74, 76.
can be presented to support or refute this claim? How can we know that the material is borrowed from this particular piece and not from another source? How can we be sure that a similarity results from borrowing and is not a coincidence or the result of drawing on a shared fund of musical ideas?

These questions can be addressed using a typology of evidence organized into three principal categories: analytical evidence gleaned from examining the pieces themselves, including extent of similarity, exactness of match, number of shared elements, and distinctiveness; biographical and historical evidence, including the composer’s knowledge of the alleged source, acknowledgment of the borrowing, sketches, compositional process, and typical practice; and evidence regarding the purpose of the borrowing, including structural or thematic functions, use as a model, extramusical associations, and humor. Ideally, an argument for borrowing should address all three categories.

Exploring instances of borrowing or alleged borrowing by composers from Johannes Martini and Gombert through Mozart, Brahms, Debussy, Ives, Stravinsky, and Berg illustrates these types of evidence. The typology makes it possible to evaluate claims and test evidence for borrowing by considering alternative explanations, including the relative probability of coincidence. A particularly illuminating case is the famous resemblance between the opening themes of Mozart’s Bastien und Bastienne and Beethoven’s Eroica Symphony, discussed by hundreds of writers for more than 150 years. Bringing together all the types of evidence writers have offered for and against borrowing shows why the debate has proven so enduring and how it can be resolved.

Keywords: allusion, borrowing, compositional process, evidence, quotation