MUSIC BORROWING IN ORGAN LITERATURE THROUGH HISTORY:

COUPERIN, BACH, BRAHMS, IVES, ALAIN, AND CAGE

by

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DISSERTATION ABSTRACT

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Title: Music Borrowing in Organ Literature Through History: Couperin, Bach, Brahms, Ives, Alain, and Cage.

This dissertation is a study of borrowed melodies, harmonies, and formal structures in six representative works from the organ literature of the seventeenth to twentieth centuries. These works, by composers François Couperin, J. S. Bach, Johannes Brahms, Charles Ives, Jehan Alain, and John Cage, exhibit different methods of varying the borrowed material by addition of elements as well as subtraction. It focuses on how composers stayed within the normative practices of their eras by enhancing the tonal implications of their original sources, or (in the twentieth century) by obscuring or even erasing them. J. Peter Burkholder's work on borrowed material is the foundation of this study. His work is illustrated through my considerations of these six examples, and also used to step further into a discussion of how each composer either stays within the boundaries of tonality or pushes beyond them. In addition, I consider how composers either elaborate the texture of the original, or (in Cage's case) remove and fragment large parts of it timbrally to make it sound more random. My assertions about tonality and texture are supported by Schenkerian and post-tonal analyses, and in places I also consider rhythmic and metric alterations through the use of detailed tables.

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CHAPTER I

INTRODUCTION, LITERATURE REVIEW, METHODOLOGY

Introduction

Composers use borrowed material in new compositions. From Bach writing chorale preludes on centuries-old hymns for his church to John Cage eliminating notes from Supply Belcher's works in order to make his compositions new, the tradition is long and complex. It was probably begun before music was notated and continues to the present day. J. Peter Burkholder, who has written prominently on the field of music borrowing, says in "The Uses of Existing Music" that, in the eighth to the eleventh centuries, a "gloss on an authoritative musical text through addition, either linear or contrapuntal, could result in another composition such as a trope or organum." [1] My dissertation will show that the simple addition Burkholder writes about was augmented with other techniques in the centuries after these, and that in the literature for organ, the manner in which borrowed material was handled continued to develop in new ways, reflecting more general trends in musical style. I will focus on the fact that, as we progress from the eighteenth and nineteenth centuries into the twentieth, borrowing progresses from a respectful resetting of the original to using techniques, such as random or calculated subtraction of notes in John Cage, that obscure or even annihilate the original. Such a resetting may indicate an "anxiety of influence," found in writings by Harold Bloom (for poetry) and Joseph N. Strauss (for music), with these later composers.

[1] J. Peter Burkholder, "The Uses of Existing Music: Musical Borrowing as a Field," *Notes* 50/3 (Mar. 1994), 869.

I will consider this "anxiety" in the conclusion. The idea that composers may feel competitive with former composers and need to find a place for themselves in music composition, or whether they need to change any borrowed material to make it their own, is fundamental to the "anxiety of influence" and this study.

Organ music has played a large role in the tradition of composers using pre-existing material. Probably thousands of pieces have been written for the instrument on pre-existing hymns, chorale tunes, and chants. Among the earliest examples are the *Kyrie* settings of the *Codex Faenza* of the 1420s. Two more recent examples are composer Wilbur Held (1914-2015), of Columbus, Ohio, who still published many organ chorale compositions into his nineties, based on familiar church hymns; and Harold Owen (b. 1931) of Eugene, Oregon, who has many chorale preludes for organ in print.

This study examines six organ works by German, Austrian, French, and American composers in careful detail, from the Baroque period to the twentieth century, analyzing each with Schenkerian graphs, and in some cases, post-tonal, approaches. It is not intended to be an exhaustive survey of borrowing in music history, instead, it aims to create detailed analyses of a few pieces to demonstrate some of the different ways that borrowing contributes to large musical structures in compositions in the chosen musical cultures, and to show how borrowing changed over time. In the realm of tonality, composers included in this dissertation from the earlier centuries used the tonal normative styles of their eras to align their music with the prevailing modes of the times, and composers in the later nineteenth and twentieth centuries used borrowing techniques to push and pull their compositions outside the boundaries of traditional tonality, all the while basing their movements on centuries-old melodies and hymns.

The six chosen pieces are the following:

From the Seventeenth and Eighteenth Centuries

François Couperin, *Mass for the Parishes* 1690
Plein chant du premier Kyrie, en Taille
Plein-chant-- dernier Kyrie

Johann Sebastian Bach, *Clavierübung III* 1739
BWV 686 *Aus tiefer Not schrei ich zu dir*
(*Out of the depths I cry to Thee*)

From the Nineteenth Century

Johannes Brahms, *Elf Choralvorspiele*, Op. 122 1896
Es ist ein Ros' entsprungen (A Lovely Rose is Blooming)

Charles Ives
Adeste Fidelis In an Organ Prelude (O Come, All Ye Faithful) 1897

From the Twentieth Century

Jehan Alain, *L'œuvre d'Orgue, Tome III* 1930
Postlude pour l'office de complies

John Cage 1978
Some of the Harmony of Maine (Supply Belcher)

Three of these chosen pieces are analyzed in much more detail than the others. The works by Bach, Ives, and Cage receive a chapter each (Chapters 2, 3, and 4), while the others, Couperin, Alain, and Brahms, are developed less extensively and brought together into one chapter (Chapter 5) in order to broaden and fill in the picture of how borrowing in organ music developed over the centuries. And, of course, there are as many techniques as there are composers (or more), some contrasting, but all moving toward a conclusion that the challenges to tonality found in the various eras accelerated by the late 20th Century.

J. Peter Burkholder will provide a methodological starting point for my study. He advocates combining all existing studies of borrowed material on individual composers into a structured discourse on music borrowing. [2] He develops tools for this purpose and asks the following questions, with my answers for the six organ pieces of this dissertation following each:

1. What is the relationship of the existing piece to the new work that borrows from it?

In five of these organ compositions, the existing melody, or four-part chorale is built into the new work as a foundation on which the composer writes a prelude adding to, or subtracting from, the existing material. The only one that is more unclear (Alain) does include the chant tunes as melodies, but a lengthy introduction without them makes the melodies seem added to the piece, rather than foundational.

2. What element or elements of the existing piece are incorporated into or alluded to by the new work, in whole or part?

In five of the pieces included in this dissertation, only the melodies are incorporated into the new work. However, this is not true of Cage's work, which eliminates notes from all four parts of a chorale to create a new work, so only fragments of chords or melodies remain.

3. How does the borrowed material relate to the shape of the new work?

[2] Burkholder, 869.

The pieces by Bach, Couperin, and Brahms have direct relationships to their borrowed material, using the melodies once in their entireties, with added notes—with Bach there is a new contrapuntal structure surrounding the melody. Alain adopts a new formal structure and adds the borrowed material, Ives eventually writes the borrowed material into the score after presenting a contrasting melody, and Cage keeps the phrase structures of each individual piece, but eliminates notes.

4. How is the borrowed material altered in the new work?

Brahms is an example of altered borrowed material in that the borrowed melody is highly ornamented. Alain fragments and repeats motives from the chant tunes. And, as already mentioned, Cage eliminates much material.

5. What is the function of the borrowed material within the new work, in musical terms?

In five of the pieces, the function of the borrowed material in the new work is the basis from which to write a new piece. In Alain, the function is more spinning-out of the themes into a new structure. In Ives, the function is to set up a countermelody, which, when woven together with the original melody, creates new tonalities, polychords, and layered texture.

6. What is the function or meaning of the borrowed material within the new work in associative or extra-musical terms, if any?

In Alain, the associative meaning is definitely the remembrance of a mystical or contemplative experience within a church building. Bach, Couperin,

and Brahms incorporate worshipful melodies in their new pieces, so they reflect worship services. Ives' extra meanings are to the Christmas carol he writes, and also to the use of the same melody in a later symphony. Cage's music relates to other pieces he has written using the same techniques, based on early American music, that acclaim the sources, but also might obliterate them.

In addition, my goal in presenting these six analyses of borrowed material in organ works together as a group is to consider a topic not treated in the same detail by Burkholder: to show how the specific borrowing techniques in each piece are motivated by the composer's stylistic choices; unique in some ways, but characteristic of their era in others. Particularly the way each of these composers treats tonality represents the general aesthetic of their particular time period. The vast majority of the borrowed works I will consider, except for the plainchants in Alain and Couperin, originally occurred in a tonal context.

However, some of these individual stylistic choices not only stay within their historic time frames, but push ahead to reuse the borrowed material in new ways. The Bach chorale prelude (published in 1739) is very difficult to perform with each phrase of the chorale written in imitation among the many voices, and with accompanying patterns of other notes also in imitation. A voice begins, then another, until all parts are present, and the double-pedal part contains the complete phrase of the melody in the second-highest voice, played by the right foot of the organist, while hands and the other foot play the imitations of the chorale and other motives. Another chorale prelude, the work by Johannes Brahms, an ornamented melody chorale, was found after his death (1897); there

is no record of Brahms playing it. In chapter 5, I write of historical evidence that he played some of his chorale preludes for friends, although it is unknown which ones he played. This chorale prelude is played often now in churches in the United States at Advent and Christmas time. It seems simple when hearing it, and in many ways, the analysis shows this is true. Neighboring tones, between the original chorale melody notes, create a new melody that seems distant from its source, and Brahms changes many of the accompanying chords from the original chorale. It is a piece where the original voice seems hidden, surrounded by neighboring and passing tones in all voices.

The *Kyrie* movements of Couperin were written for worship services, and are part of a large group of French organ masses from the same era (1690). The *cantus firmi* are definitely heard, in the pedals of the organ, the first sounding in the tenor voice, the second in the bass. In fact, the second of these movements was included in this study due to its bass melody—so many chorale preludes throughout history have been composed with the melody in the lowest voice. The harmony of both preludes is tonal, but more archaic than Bach's in the sense that both major and minor versions of the primary triads are exchanged freely. These pieces are discussed in Chapter 5 which contains graphs and source material for these movements, as well as for the twentieth-century piece (1930) by Jehan Alain. Alain's piece is not intended for worship, but is an atmospheric work, evoking a worship or meditative space, or a remembrance of one. Several chant fragments are quoted, however, they seem detached from their accompaniment. The web of sound seems more like improvisation by the organist's hands as the notes move by small intervals, one or two notes at a time, while many other notes are held over long spans of time. The pitch materials present several four-note and five-note sonorities that

are repeated, not tonal in traditional ways, but frequently using intervals of major and minor seconds and thirds. Throughout the piece, the chant melodies are fixed upon a slowly-moving background, which (even though it is not harmonized in the conventional way) does eventually descend by step to the tonic note, G. As the piece progresses, the background and the melodies are intertwined, the melodies moving from one area of the keyboard to another. This slow piece seems motionless at times, especially in its pitch material, but it does begin and end with similar tonal structures.

The examples from the United States are quite different with the two composers exhibiting styles that are individualistic, especially in the way they treat tonality. The piece by Charles Ives (1897), based on a familiar Christmas carol, uses the technique of strictly inverting the melody from the original. If a note in the original moves down by a perfect-fourth interval, in Ives' new melody it moves up by the same distance. First the inverted melody is played with only sustained pedal points accompanying it, then it is combined with the original melody, in normal position, creating some memorable dissonances between notes, and obscuring the tonality through addition. Chapter 3 discusses this piece as well as reporting how it was received in a worship service in Ives' time.

However, it is the collection by John Cage that is the most unusual, most non-traditional, of this study. Written in 1978, Cage takes the four-part choral music of a previous American composer, Supply Belcher, from 1794, and eliminates notes, supposedly through a chance method learned from the *I Ching*. He ends up with some of the notes, voices, and rhythms of the original. When played on a single stop on an organ, the music simply sounds like parts are missing. Cage also used chance methods to

determine changes of stops, which occur frequently in an undetermined fabric of sound due to Cage's use of numbers for the stops, and in addition he instructs the performer to decide which stops correspond to each number. The resulting music is different for each performance, and the original melody plus accompaniment is overshadowed by single-note, or few-note, loud or soft sounds. Some of the pieces in the collection do end in a traditional way, much as the original composer intended, but many have enough notes subtracted to appear unfinished. Between the absence of much of the harmony and the addition of unusual organ sounds, the music eliminates much from the original source. It seems almost as if certain subtractions were made intentionally, to obscure or negate the tonality of the original. I will demonstrate this negation through Schenkerian analyses of the original music with brackets surrounding the notes Cage left out. Then, the question of whether this music was, in fact, truly random, or whether intentional choices were made by the composer, will be addressed.

These last two pieces, from the rebellious Americans, plus the French piece of Alain, reflect how the approach to tonality has changed in the twentieth century from that of earlier eras. Whereas seventeenth- and eighteenth-century composers worked within the tonal system given to them—even Bach changed modality to tonality, but within the newer tonal style of his time, Cage, Ives, and Alain bent or obliterated tonality to achieve other goals. Cage underscores the lack of the need for harmony, Ives develops new formal structures and investigates polytonality, and Alain creates voice leadings evocative of extra-musical spaces. All these pieces illustrate each composer's use of tonality at their times, and, with Cage, the negation of it.

Literature Review

This literature review is split into several categories with consideration of individual composers although not all the sources are included here. Each chapter adds several new sources, which are particularly pertinent to my analyses. This literature review begins with more general sources and moves through the composers in the order that they appear in this dissertation.

General

J. Peter Burkholder advocates combining all existing studies of borrowed material on individual composers into a structured discourse on music borrowing.[3] He develops two tools for this purpose: (1) a typology of music borrowing, and (2) a tentative chronology of the uses of existing music. The first category's questions were included in my introduction above.

His chronology section is a list of the methods that composers in each century used to set borrowed material. In his article, Burkholder says that "most categories are not musically exclusive." He explains further his categories:

1. The process of composition, when using a piece of the same tradition, genre, medium, style and texture as a source for a new piece . . .is distinct from the process of using a piece that differs in these ways from the new composition . . .

[3] Burkholder, 869. Burkholder is a musicologist who focuses his work on musical borrowing in the music of Charles Ives and has written four books and numerous articles. The most useful for my study is *All Made of Tunes: Charles Ives and the Uses of Musical Borrowing* (New Haven: Yale University Press, 1995).

2. The significance of borrowed material depends in part on who or what is borrowed from: that may be the composer himself . . . music of a distant place . . . or music of an earlier time . . .

   Listeners respond differently and attribute different meanings to music that borrows the full texture of another piece . . . a melodic line . . . a texture . . . or an instrumental colour (sic) . . .
3. The process of composition and structure of the resulting piece are vastly different if a borrowed tune forms the basis of a new melodic line with interpolated music . . . if it creates a structural line to which other parts are joined contrapuntally. . . if it is treated as a theme . . . or if it appears once in passing . . .
4. The recognizability, character and effect of the borrowed material vary according to how it is adapted in the new piece . . .
5. The relative importance of a borrowed element in musical terms is greater if it plays a structural role . . . than if it is a passing gesture . . .
6. Finally, the extra-musical associations aroused by borrowed material may vary greatly in kind, from suggesting a performance of the borrowed piece . . . to lending a certain character to a passage . . .

And he further explains (with my responses in italics):

1. The case for borrowing is stronger when it can be proved that the composer knew or had access to the existing piece.
   In all the works in this dissertation, the composers had access to, or knew the borrowed material.
2. What and how much is borrowed is an important factor in proving a relationship between the two pieces.
   In all these works, significant parts of the original material are borrowed.
3. Evidence for borrowing will be evaluated differently, depending on what kind of relationship is being asserted.
   The relationships of the borrowed material to the new pieces in four of the works, Alain, Bach, Brahms, and Couperin, seems to be to retain the original melodies and create works around them. For Ives, the Adeste Fidelis *helps usher in his later styles of writing, and for Cage, his elimination of notes allows what is left to be evaluated as single notes.*
4. The extent and exactness of the similarities between the new and older pieces affect judgments of whether borrowing has occurred.
   The only piece where the question of whether borrowing has occurred is in the Cage work, and that is only in the performance of the work, for in the score, the notes borrowed are clear.
5. Proof of borrowing is incomplete until a purpose can be demonstrated.
   The purpose of each piece will be discussed below.

Burkholder often writes about borrowing in the music of Charles Ives, but the techniques he lists for Ives' compositions may be applied to the music of other composers: (1) modeling a work on an existing one, assuming its structure, incorporating a small portion of its melodic material, or depending upon it as a model in some other way; (2) paraphrasing an existing tune to form a new melody, theme, countertheme, or principal motive. . . (3) cumulative setting, a complex form virtually unique to Ives, which develops motives from the tune or present important countermelodies before the theme itself. . . (4) quoting familiar music as a kind of oratorical gesture. . . and (5) quodlibet, taking as the basis of a piece or section the vertical or horizontal combination of two or more familiar tunes . . .[4]

My dissertation will find that the "modeling on an existing work" characterizes pieces by Bach, Brahms, Couperin, Alain, and Cage; "paraphrasing an existing tune" is present in the chorale prelude of Brahms; the "cumulative setting" is indeed unique to Ives, "quoting familiar music" is done by Ives, but also by Bach and Couperin; and the "quodlibet" is similar to the music of Alain where portions of chant tunes are quoted one after another, and vertically.

In addition to Burkholder's works, other writers offer additional general information on topics discussed in this dissertation. Edward Higginbottom, in "Organ Music and the Liturgy," explores the use of *alternatim* practice in the Roman Catholic

[4] J. Peter Burkholder, "'Quotation' and Emulation: Charles Ives's Uses of His Models," *The Musical Quarterly* 71, no. 1 (1985): 2-3.

Church from as early as the fourteenth century, [5] and the Lutheran chorale preludes after the Reformation.[6]

On the *cantus firmus* techniques of chorale preludes, Kent Kennan has also put chorale preludes into categories. First, he lists three elements that may be found in chorale preludes:

1. The *cantus firmus*, which was originally written in long note values, often retains this characteristic in chorale preludes.
2. Motivic material, derived from the *cantus firmus*, is added, but often in shorter time values and greater rhythmic interest.
3. Other material not derived from the *cantus firmus*, which accompanies either of the above.[7]

Then he lists seven types of chorale preludes:

1. Embellished harmonization—including passing tones, suspensions, and other non-harmonic tones, where the chorale tune receives less embellishment than the other voices.
2. Ornamented *cantus firmus*. One of his examples, which he also says has elements of the first point, is *Es ist das Ros' entsprungen*, of Johannes Brahms, analyzed in my study.
3. Motivic accompaniment of *cantus firmus*—where the other voices accompany the *cantus firmus* with motivic phrases.
4. Canon in either the *cantus firmus* or the accompanying voices.
5. Only motivic material from the *cantus firms* is used.
6. Imitation in successive entrances, based on motivic material derived from the cantus firmus. These can have the same motive used in the accompanimental voices throughout (number 6a.), or a different motive (number 6b). In my study, Bach's *Aus tiefer Not* is an example of the latter.
7. Ritornello principles—initial material returns periodically between phrases of the cantus firmus.[8]

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[5] Edward Higginbottom, "Organ Music and the Liturgy," *The Cambridge Companion to the Organ*, ed. Nicholas Thistlethwaite and Geoffrey Webber (Cambridge: Cambridge University Press, 1998), 131.

[6] Higginbottom, 143.

[7] Kent Kennan, *Counterpoint, Based on Eighteenth Century Practice* (Englewood Cliffs: Prentice-Hall, Inc., 1959), 123.

Kennan then continues with descriptions of the chorale melody in various voices, chorale variations, chorale fantasia, and chorale fugues and fughettas.[9]

Although much about the music of Bach is included in her dissertation, Carol Delane Curie Britt writes of the development of the chorale prelude, and her discussion is placed within the context of the function of the organ in churches, organ-building traditions, and the various treatments of the catechism chorales by northern European composers, culminating in the work of J. S. Bach.[10] Thus, it is a valuable resource on the history of religious chorale preludes, which most of those studied in my dissertation are.

Aesook Lim has written about the accompanying parts of the long chorale preludes of J. S. Bach. The chorales are divided into categories based on whether or not the accompanying parts are related to the original chorales. [11] In my study, most of them are, although questions arise in the music of Alain and Cage. Alain's musical backgrounds contain canvasses of quasi-ostinatos, on which the plainchant is freely painted. Cage moves toward individual sounds in each vertical and horizontal situation.

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[8] Kennan, 124-31.

[9] Kennan, 131-4.

[10] Carol Delane Currie Britt, "The Chorale Prelude: The Development of the Chorale Prelude and the Use of the Chorales of Martin Luther's Catechism by Various European Composers from the Reformation to Johann Sebastian Bach," PhD diss., University of Alabama, 1999.

[11] Aesook Lim, "The Long Chorale Preludes of J. S. Bach (1685-1750): Study of Accompaniments Together with Three Recitals of Selected Works by Dietrich Buxtehude (1637-1797), J. S. Bach, Louis Vierne (1870-1937), and Others," PhD diss., University of North Texas, 2006.

Ann Bond also discusses *cantus firmus* technique throughout history, focusing on the changes from one composer to another.[12] In this article, she reminds the reader of the use of Latin plainsong in German history. She leads up to, and includes, works of Bach. She informs us, in this way, that the categories of *cantus firmus* technique are not always clearly drawn.

Darlene Bergen Franz writes of the chorale prelude's history, in "Brahms's Eleven Chorale Preludes Op. 122 for Organ and Oboe: A New Perspective on His Enigmatic Final Work,"[13] and also of chorales within the Bach-Brahms relationship: "Chorales, and their association with Bach, are infused with religious, cultural, and historical significance, in addition to whatever personal meaning they may have had for the composer, . . ." In my study, all the pieces are infused with either religious, cultural, or historic significance. Obviously, plainchant and chorales relate to earlier material when used in later compositions. And even Cage's demolition of chords into individual sounds in *Some of the 'Harmony of Maine'* refers to earlier material.

Another writer, Charles Rosen in "Influence: Plagiarism and Inspiration," [14] looks at several works, mostly of the Romantic era, that resemble each other in various aspects. It is his opening general remark that is important to my study, when he says that

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[12] Ann Bond, "Plainsong in the Lutheran Church 2: Organ Music 1600-1750--I," *The Musical Times* 114, no. 1568 (October,1973): 993.

[13] Darlene Bergen Franz, "Brahms's Eleven Chorale Preludes Op. 122 for Organ and Oboe: A New Perspective on His Enigmatic Final Work," DMA diss., University of Washington, 2009, 79.

[14] Charles Rosen, "Influence: Plagiarism and Inspiration," *19th-Century Music* 4, no. 2 (Autumn, 1980): 87-100.

"the influence of one artist upon another can take a wide variety of forms, from plagiarism, borrowing, and quotation all the way to imitation and eventually to the profound but almost invisible form we have seen with Plato and La Fontaine." [15] Plagiarism, and invisibility, have no place in my study—all of the borrowed material in this dissertation is acknowledged, visible and from centuries ago, whereas borrowing and quotation are the subject of my work. Burkholder's works have been examined for the subject of borrowing, and he has also written about quotation. In the *Oxford Music Online* article, [16] he says that quotation is a relatively brief segment of existing music in another work, presented exactly or nearly so as the original, but is not the main substance of a work, such as a *cantus firmus*, refrain, fugue subject, or a *contrafactum* would be.[17] In two of the works in my study, the question of quotation is relevant: (1) the work by Bach does use the entire melody of a previous chorale, so it is not brief nor a quotation, but the melody is part of a different structure, put into a chorale motet form, to form a new substance and thus, has aspects of a quotation; and (2) the work by Alain is similar, the melodies are not short, they are put into a structure of an ostinato, and thus fulfill this aspect of the definition of quotation.

Returning to Rosen's ideas, in a discussion of plagiarism, there is a brief mention of transformation which is essential to my study. He calls it a simple solution "when the

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[15] Rosen, 88. Scholars question how much the reading of Plato influenced La Fontaine.

[16] J. Peter Burkholder, "Quotation," *Grove Music Online, Oxford Music Online*, at https://www-oxfordmusiconline-com.libproxy.uoregon.edu/grovemusic/view/10.1093/gmo/9781561592630.001.0001/omo-9781561592630-e-0000052854?rskey=TPK04P (accessed 06/06/2020).

[17] Burkholder, Quotation.

composer transforms the borrowed material into something more his own." [18] This is indeed the essence of my study—all the borrowed material in the hands of the later composers is transformed into the music of the later compositions (though, of course, still built upon the older material).

Articles exist about borrowing in other domains of music than the classical. One of these has definitions of borrowing, however, that may be considered in this dissertation. Franco Degrassi in "Some Reflections of Borrowing in Acousmatic Music," [19] begins discussing material sampling which is the process of taking an object or part of an object to repurpose it in a new context.[20] One type of sampling is appropriation in which he discusses a work of John Cage, one of the composers in my dissertation. *Imaginary Landscape* no. 5 (1952) was made from 42 recordings of jazz music that were mixed via a timeline, created by applications of the *I Ching*. Although the source of his work in my study is different, Cage does take music and change it by using the I Ching in *Some of 'The Harmony of Maine*."[21]

Degrassi also discusses recognizability of the borrowed material, particularly in relationship to national anthems and Stockhausen's *Hymnen*.[22] In my study, Charles Ives chose to set the very recognizable melody of *Adeste Fidelis*. Degrassi also discusses

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[18] Rosen, 88.

[19] Franco Degrassi, "Some Reflections of Borrowing in Acousmatic Music," *Organized Sound: An International Journal of Music Technology* 24, no. 2 (August 2019): 195-204.

[20] Degrassi, 195.

[21] Degrassi, 197.

[22] Degrassi, 197-8.

cultural citations and cites Gregorian chant and current music as being in a circle from Gregorian chant to modern techniques.[23] My study includes more of reaching back to older melodies, not so much as a circle, but with a high regard for the older materials and bringing them into later times for appreciation and for practical usage.

In the same journal, *Organised Sound: An International Journal of Music Technology*, is an editorial by Manuella Blackburn, where the subject of originality is discussed. A slogan is mentioned, "Does originality actually exist or do we all simply build from what we have seen and heard?"[24] She asks then, if composition is a communal activity did compositions not have a singular authorship? The works in my study are seen as having a single composer, based on pre-existing material. It is her statement of borrowing that is important for my study: "When we borrow, we continue, develop and evolve existing materials, traditions and influence into new shapes and forms."[25] The pieces I examine later in the dissertation are in new shapes and forms, evolving existing materials, but still those materials remain audible (mostly), essentially present.

The discussion of originality is also taken up by Sean Russell Hallowell in "Towards A Phenomenology of Musical Borrowing," [26] also in the same journal,

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[23] Degrassi, 198.

[24] Manuella Blackburn, "Editorial: Borrowing, Quotation, Sampling and Plundering," *Organised Sound: An International Journal of Music Technology* 24, no. 2 (August 2019): 116.

[25] Blackburn, 116.

Organised Sound: An International Journal of Music Technology. He raises questions of originality in Renaissance music, where models were more freely used,[27] and in *musique concrète*. He again discusses the communal quality of borrowing, whether borrowing is from something someone has or whether the borrowed material belongs to everyone,[28] and he quotes Burkholder concerning various types of borrowing:

> If we see all kinds of borrowing as interrelated, and pay attention to all the uses of existing music in any particular work, we can only enhance our understanding of each borrowing procedure, each composer or era, and each piece.[29]

This is exactly the aim of this dissertation.

Bach

The following authors have written about Bach's chorale preludes. Lori Burns writes about Phrygian and Mixolydian cadences and scale degrees in *cantus firmi* in *Bach's Modal Chorales*.[30] She includes many examples showing how Bach either changes the modal qualities of a cadence, or a melody, or does not. Ted Gibboney, in "Cryptic Eloquence: Elements of Form and Expression in the Large Cantus Firmus Settings of J. S. Bach's *Clavierübung* III" provides information on chorales and motives.

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[26] Sean Russell Hallowell, "Towards a Phenomenology of Musical Borrowing," *Organised Sound: An International Journal of Music Technology* 24, no. 2 (August 2019): 174-183.

[27] Such as in examples by Power and Binchois. Hallowell, 179.

[28] Hallowell, 182

[29] Hallowell, 182, and Burkholder, J. Peter, "The Uses of Existing Music: Musical Borrowing as a Field," *Notes* 50, no. 3 (Mar., 1994): 859.

[30] Lori Burns, *Bach's Modal Chorales, Harmonologia Studies in Music Theory,* No. 9, ed. Joel Lester. Stuyvesant: Pendragon Press, 1995.

He includes analyses and correspondences with other Bach chorale settings.[31] Horst Reidenback, in *'Jesus Christus, unser Heiland, der von uns den Gotteszorn wandt' auf dem Dritten Teil der Klavierübung von J. S. Bach, grosse Bearbeitung*" discusses this chorale from the third part of the *Clavierübung* in detail, with motivic analysis.[32] William Renwick, in "Modality, Imitation and Structural Levels: Bach's *manualiter Kyries* from *Clavierübung III*," shows the tonal changes in the writing of Bach's modal *cantus firmi* in Bach's *manualiter Kyries* from the *Clavierübung,* but it is his general comments on modal *cantus fermi* that amplify my study:[33]

> Given the preeminence of the tonal system in Bach's compositional practice, his treatment of modal *cantus fermi* becomes an object of special study. In fact, Bach shows a remarkably flexible approach to handling modal *cantus fermi*. Sometimes he emphasizes the modal aspects through a modal setting. But in any case, it is the individual characteristics of the given *cantus* that determine the possibilities and limits for tonal or modal harmonization.[34]

The historical sources of all the chorales are included by Stainton de B. Taylor in *The Chorale Preludes of J. S. Bach*.[35] Robert Tusler, in *The Style of J. S. Bach's Chorale Preludes*, categorizes Bach's preludes into distinct groups including motivic

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[31] Ted A. Gibbony, "Cryptic Eloquence: Elements of Form and Expression in the Large Cantus Firmus Settings of J. B. Bach's Clavierübung III," PhD. diss., Indiana University, 1985. Gibbony's dissertation will be quoted further in my chapter on Bach.

[32] Horst Reidernback, "*'Jesus Christus, unser Heiland, der von uns den Gotteszorn wandt' auf dem Dritten Teil der Klavierübung von J. S. Bach, grosse Bearbeitung*," *Musik und Kirche* 38, no. 5 (1968), 238-240.

[33] William Renwick, "Modality, Imitation and Structural Levels: Bach's manualiter Kyries from Clavierübung III," *Music Analysis* 11, no. 1 (March 1992): 55-74.

[34] Renwick, 55.

analysis.[36] He separates the preludes into two large categories: "bound" and "unbound." "Bound" preludes employ the chorale tune in its entirety.[37] These include the *cantus firmus* chorale, the chorale

motet, the chorale canon, the melody chorale, and the ornamental chorale. "Unbound" chorales, which use only a portion of the tune, include the chorale fugue and the chorale fantasia (this latter is much "freer" than the bound categories).[38] The chorale prelude in this study is a chorale motet, and comments on its characteristics will be presented in the Bach chapter.

Peter Williams in *The Organ Music of J. S. Bach*, presents each chorale's pre-existing music, writes about surface features in each prelude, and frequently transcribes the motives derived from them.[39] However, the most intriguing article on the topic of borrowing in Bach is one by this same writer, Peter Williams, "Is there an Anxiety of Influence discernible for J. S. Bach's *Clavierübung* I?" After describing anxiety of influence, he says that the music of J. S. Bach seems to show the opposite of anxiety when he explores, at length, the achievements of distinguished predecessors (Palestrina, Buxtehude, Corelli, Vivaldi), of relatively minor composers (Kuhnau, Reincken, Fischer,

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[35] Stainton de B. Taylor, *The Chorale Preludes of J. S. Bach* (New York: Oxford University Press, 1942).

[36] Robert L Tusler, *The Style of J. S. Bach's Chorale Preludes* (Oakland: *Music Series* Vol. 1, No. 1. The University of California Press, 1956, repr., New York: Da Capo Press, 1968).

[37] Tusler, 25.

[38] Tusler, 25.

[39] Peter Williams, *The Organ Music of J. S. Bach*, 2nd ed., (Cambridge: Cambridge University Press, 1980).

Raison), and of distinctly minor ones (Walther, Buttstedt, Hurlebusch, Kauffman). [40] Williams says that Bach was anxious in the sense of being enthusiastic and energetic in order to show what could be done, but hardly anxious in the sense of being disturbed or worried, wanting to put right what Fischer and Raison had done. However, later, Williams does say that Bach may have "misread" some of the earlier compositions in order to rewrite them.[41] Misreading is a concept that will be discussed in Chapter 6.

Of course, Laurence Dreyfus in *Bach and the Patterns of Invention*[42] has also characterized Bach as composing in a different manner and aesthetic from others at his time. He focuses on the core musical subject and shows the ways Bach changed it over the course of a piece.

Ives

J. Peter Burkholder not only created the general framework for studies of pre-existing material, he also wrote about Ives as a composer. Ives was an organist who was strongly influenced by his knowledge of the organ and by repertory he performed, according to "The Organist in Ives."[43] Ives published only two works for the organ out

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[40] Peter Williams, "Is there an Anxiety of Influence discernible for J. S. Bach's Clavierübung I?" in *The Keyboard in Baroque Europe*, ed. Christopher Hogwood (Cambridge: Cambridge University Press, 2004), 140.

[41] Williams, 141.

[42] Laurence Dreyfus, *Bach and the Patterns of Invention* (Boston: Harvard University Press, 2004).

[43] J. Peter Burkholder, "The Organist in Ives," *Journal of the American Musicological Society* 55, no.2 (Summer 2002): 255-310.

of five surviving completed works, and only the *Variations on 'America'* is well known. *Adeste Fideles* is not. According to Burkholder, aspects of organ performance that influenced Ives' music include: improvising in church services, the virtuosity of his organ technique, the alternation of keyboards with different timbres or dynamic levels, and the use of mutation stops and mixtures which led to dissonant chords, superimposed in loud and soft musical streams.[44] The webpage from the Library of Congress on Ives contains relevant information:

> Conforming to his wish to define the totality of experience in his compositions, Ives often employed 'layers' of several independent lines or voices, distinct from each other in terms of rhythm and harmony . . . This procedure gave rise to several compositional methods—now referred to as polytonality, polyrhythms, atonality, microtones and tone clusters. . ." [45]

This is true in his earlier compositions as well as later ones.

Adeste Fideles is also discussed in *Orgelmuziek van Charles Ives* by Klaas Hoek; [46] and by Jeffrey Wasson in *The Organ Works of Charles Ives: A Research Summary*.[47] Along with information about the organ pieces in the later publication is a thematic catalog. Terry Milligan, in "Charles Ives: Musical Activity at Yale (1894-98),"[48] writes

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[44] Burkholder, 301.

[45] Library of Congress, "Charles Ives, 1874-1954," *Biographies*, at https://www.loc.gov/item/ihas.200035714/ (accessed 05/26/2018).

[46] Klaas Hoek, *Orgelmuziek van Charles Ives* (Netherlands, 1990).

[47] Jeffrey Wasson, *The Organ Works of Charles Ives: A Research Summary,* in *Collected Work* (Minnesota: Student Musicologists at Minnesota, 1975).

[48] Terry G. Milligan, "Charles Ives: Musical Activity at Yale (1894-98)," *Journal of Band Research* 19, no. 2 (Spring, 1984), 39-50.

that Ives was encouraged to compose for organ by Dr. John Cornelius Griggs, music director of New Haven's Center Church. One of the pieces encouraged by Dr. Griggs was the piece, "Postlude for a Thanksgiving Service," which was written in 1897 for the church. This postlude is discussed in Henry and Sidney Cowell's biography, *Charles Ives and His Music*.[49] One reason this book is important is that the authors consulted with Mr. and Mrs. Ives in writing the text. The authors say that Ives' Yale teacher, "Horatio Parker made funny cracks about the Thanksgiving piece, but Dr. Griggs said it had something of the Puritan character, an out-doors strength, and something of the pioneering feeling."[50] This is important, also, for the piece in my study, *Adeste Fideles*, can be seen as perhaps, strange, funny, or confusing. However, if seen, as having "something" of the Puritan character, the experiments of this piece and other music by Ives become part of the lineage of American ideals, similar to Brahms using a different approach to a historical form--each becoming a descendent of his heritage. If Ives wrote his music in the "pioneering spirit," then, his experiments in polytonality, or almost polytonality, in *Adeste Fidelis*, become both part of the later composers' techniques in this study, and uniquely American, leading to the music of John Cage. In my study, the compositional methods of Ives in *Adeste Fideles*, will be explored in Chapter 3.

[49] Henry and Sidney Cowell, *Charles Ives and His Music* (New York: Oxford University Press, 1955), 14.

[50] Cowell, 14.

Cage

There are a large number of sources on John Cage and his music, and while there are not many references to his organ music, Rob Haskins has written an internet blog about it, "John Cage's Organ Music."[51] He says that titles of each of the thirteen pieces in the original source are retained by Cage in *Some of the Harmony of Maine* and refers to the metrical structures of the words of the songs, whether in long or short syllabic meter. There is even one in an irregular "Cagean" meter, "P. M. (peculiar meter)." [52] In general, Cage does preserve the phrase boundaries of his source. Haskins explains that Cage employed chance operations in the music "to make a complex series of registration changes." In a different source, *John Cage*,[53] Haskins writes more about Cage's chance procedures, and claims that James Pritchett, in *The Music of John Cage*, [54] has solved the sequences of many of them. Pritchett also discusses Cage's interest in Eastern philosophy and religion, Marshall McLuhan, and anarchism. David Bernstein has reviewed the Pritchett work favorably in *Music Theory Spectrum*.[55] William Brooks in *The Cambridge Companion to John Cage*, adds to the discussion on Cage's techniques when he discusses "subtraction."[56] This method was first used in *Apartment House*, *1776* where Cage chose

[51] Rob Haskins, "John Cage's Organ Music (Mode 253-54, 2013)." *Blog-Latest News* (March 15, 2015)
at http://www.robhaskins.net/john-cages-organ-music-mode-253-54-2013/.

[52] Haskins, blog.

[53] Rob Haskins, *John Cage* (London: Reaktion Books, 2012.

[54] James Pritchett, *The Music of John Cage (Music in the Twentieth Century),* (Cambridge: Cambridge University Press, 1996).

[55] David W. Bernstein, "Reviewed Work: The Music of John Cage by James Pritchett," *Music Theory Spectrum* 18, no. 2 (Autumn, 1996): 265-273.

certain pitches from each of the vocal lines and extended them through an arbitrary number of succeeding notes, with the sustained notes replacing the original pitches. After these pitches, a silence followed through an arbitrary number of succeeding notes. He continues in Cage's words that the objective was to "do something with early American music that would let it keep its flavor at the same time that it would lose what was so obnoxious to me [Cage], its harmonic tonality."[57]

Brahms

Without a doubt, Barbara Owen's *The Organ Music of Johannes Brahms*[58] is the most thorough study of the background, methods, and artistic development of Brahms the composer, and the place of the chorale preludes in his compositional output. The book looks at the chorales of each prelude and discusses the counterpoint found in them as well as the melodic lines, intervals, chord inversions, polyrhythms, symbolism, text sensitivity and other aspects. She writes of the organ of the early 19th century in another publication, "Brahms's 'Eleven': Classical Organ Works in a Romantic Age," and says the instrument may have influenced the writing of the chorales.[59] Still, there are important sources by

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[56] William Brooks, "Music II: From the late 1960s," *The Cambridge Companion to John Cage*, ed. David Nicholls, *Cambridge Companions to Music* (Cambridge: Cambridge University Press, 2002), 128-147.

[57] Brooks 137.

[58] Barbara Owen, *The Organ Music of Johannes Brahms* (Oxford: Oxford University Press, 2007).

[59] Barbara Owen, "Brahms's 'Eleven': Classical Organ Works in a Romantic Age," *Journal of Church Music* 25, no. 9.

different authors: Frances Heusinkveld, in "Brahms Chorale Preludes," writes of the relationship of Brahms and earlier composers, as well as the economy in Brahms' musical compositions, and his reach into the past for older melodies for his sources.[60] For instance, the melody for *O Welt, ich muss dich lassen* was a secular tune by Heinrich Isaac written in 1495.[61] Raymond Eric Landis, in "Developing Variation in the Chorale Preludes for Organ, Opus 122," asks whether the Brahms chorale preludes are variations, or something else.[62] The "something else" comes from Schoenberg's notion that a motive can develop into something new through variation of its basic features. A chorale prelude incorporates particular challenges with motivic development due to the use of pre-existing material, but motive forms are active in the chorale settings. A motive may have been foreseen in the pre-existing tune, and the developing variation format can occur at several structural levels of the work.[63] Landis also explains *Es ist ein Ros'entsprungen*, the chorale prelude included in my study, in terms of neighbor-motion, which takes on motivic significance. He says that combinations of seconds and thirds create motive forms which feature incomplete neighbor-note motion. When these are accented, and combined with chromaticism, they make a special feature of the setting. [64]

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[60] Frances Heusinkveld, "Brahms Chorale Preludes*," American Music Teacher* 2, no. 6 (June-July,1972): 26-7, 29.

[61] Heusinkveld, 27.

[62] Raymond Eric Landis, "Developing Variation in the Chorale Preludes for Organ, Opus 122, by Johannes Brahms," PhD diss., University of Cincinnati, 2001.

[63] Landis, 79.

[64] Landis, 79-80.

Renate Spenger includes one analysis of a chorale and writes of the deep spiritual conviction found in these works in "The Organ Works of Johannes Brahms." [65] Ann Bond lists motives in some of the chorales in "Brahms Chorale Preludes, op. 122."[66] Sources focusing on analysis include Jack Douthett's "Filtered Point-Symmetry and Dynamical Voice-Leading," in which he discusses the parsimonious triadic circles frequently employed by composers of the Romantic period, and the sequences of triads found in the works of Brahms.[67] Michael Baker's "Transformation vs. Prolongation in Brahms *'In der Fremde*,'"[68] which, while not based on the *Eleven Chorale Preludes*, gives information about Neo-Riemannian theory (not used in my study), prolongational approaches, and Schenkerian theory—all critical to analysis of the chorales; and Antoinette Baker's "The Eleven Choral Preludes of Johannes Brahms: An Analytical Survey," also discusses the chorale prelude form.[69] Robert Fertita discusses the phrase structure of a different chorale prelude of Brahms, *Schmücke dich, o liebe Seele*, in

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[65] Renate Spenger, "The Organ Works of Johannes Brahms," *Singende Kirche* 44, no. 2 (1997): 96-105.

[66] Bond, 993.

[67] Jack Douthett, "Filtered Point-Symmetry and Dynamical Voice-Leading," *Music Theory and Mathematics: Chords, Collections, and Transformations*, in *Eastman Studies in Music*, No. 50 (Rochester: University of Rochester, 2008): 72-106.

[68] Michael Baker, "Transformation vs. Prolongation in Brahms's *In der Fremde*," *College Music Symposium* 48 (2008), 69-82.

[69] Antoinette Baker, "The Eleven Choral Preludes of Johannes Brahms: An Analytical Survey," MA thesis, National University of Ireland, 1993.

"Phrase Structure and Its Effect on Performance." [70] Discussions of the phrases in one chorale prelude led me to look at the phrase structure in *Es ist ein Ros' entsprungen*.

According to Virginia Hancock, Brahms studied the music of earlier eras. He had copies of David Kellner's 1743 treatise *Treulicher Unterricht im General-Bass* and Mattheson's *Die Kunst, das Clavier zu spielen* in his personal library, as well as many manuscript copies of early music.[71] The first copies are taken from a collection entitled *Musica Sacra*, published by Schlesinger of Berlin (c. 1852), and the pieces copied are by Durante, Lotti, Corsi, and Palestrina.[72] In 1854, Brahms made copies from Robert Schumann's library of music by Ingegneri, Palistrina, and of German folk songs, sacred continuo lieder, and German chorale tunes, these copied from Winterfeld 's *Der evangelische Kirchen gesang* of 1847 and from Tucher's *Schatz des evangelischen Kirchengesangs* of 1848. In 1865, Clara Schumann gave him the first volume of the Bach *Werke*.[73] In later years, when he conducted choirs, he presented Bach and Renaissance works, such as Bach's Cantatas 4 and 21, and sections of the *Christmas Oratorio*, Schütz's *Saul, Saul was verfolgst du mich*, music by Gabrielli, Rovetta's *Salve Regina*, and Isaac's *Innsbruck, ich muss dich lassen*, along with music of Beethoven and

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[70] Robert Fertita, "Phrase Structure and Its Effects on Performance," *The American Organist* 34-1, 103.

[71] Virginia L. Hancock, "The Growth of Brahms's Interest in Early Choral Music, and its Effect on his own Choral Compositions," *Brahms: Biographical, Documentary and Analytical Studies*, ed. Robert Pascall (Cambridge: Cambridge University Press, 1963), 27.

[72] Hancock, 27.

[73] Hancock, 28.

Mendelssohn.[74] In Brahms' later years, he added the complete edition of the works of Heinrich Schütz to his library, which consisted of seven volumes at this time.[75] The fact that Brahms was so well acquainted with earlier music makes the writing of his last chorales, on *cantus firmi* of earlier times, understandable. Ann Bond, in "The Organist's Repertory: Brahms Chorale Preludes, Op. 122," suggests Brahms' use of the *cantus firmus* technique might indicate that he was reviving a historic form often used earlier in history.[76] This can be seen in my study, it is also possible that Brahms wanted to become part of the history of writers of this form, not just reviving it, but situating himself together with these earlier composers known to him.[77]

Alain

In "The Organ Music of Jehan Alain—1," Gwilym Beechey notes that much of Alain's

organ music was written for the house organ that his father, Albert Alain, had installed.[78] This organ's pedalboard was split, the lower half operated at 16' and 8' registers, but the top half as a solo register of flute and cornet stops. He claims that Alain's style and

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[74] Hancock, 29-35.

[75] Hancock, 37.

[76] Ann Bond, "The Organist's Repertory: Brahms Chorale Preludes, Op. 122," *The Musical Times* 112, No. 1543 (Sept., 1971), 899.

[77] Bond, 899, discusses whether Brahms may have wanted to become part of this borrowing technique in order to pattern himself after Bach.

[78] Gwilym Beechey, "The Organists' Repertory. 16: The Organ Music of Jehan Alain—1*," The Musical Times* 115, no. 1575 (May,1974), 422-23.

technique were founded, among other elements, on a "discipline of improvisation and meandering polyphony." Corliss Arnold says that Alain did not like to be restricted to prescribed forms: "In his mind he heard irregular divisions of beats, but found it impossible to transcribe to paper what he heard." [79] In a more theoretical source, Dieter Mack has written, in "Additive *Rhythmik und Polymetrik im Orgelwerk von* Jehan Alain," that Alain developed his own rhythmic language that has its roots in the music of Ravel, which uses polymetric layers.[80] In "*Die Orrelwerke* van Jehan Alain (1911-1940)," Colin Archibald Campbell says that B. Gavoty divided Alain's music into two types, those that are rhythmical and those that are melodic.[81] In part two of this article, the author says that Alain was influenced by the Greek modes, the works of French composer Maurice Emmanuel (1862-1938), music of the Eastern cultures, a mystical approach, and the tetrachord of the ancient Greeks.[82] The comprehensive work by Helga Schauerte, *Jehan Alain (1911-1940): Eine monographische Studie* discusses the *Postlude* in detail, with particular emphasis on the chants written into the fabric of the piece.[83] She includes

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[79] Corliss Richard Arnold, *Organ Literature: A Comprehensive Survey* (Metuchen: The Scarecrow Press, 1973), 219.

[80] Dieter Mack, "Additive *Rhythmik und Polymetrik im Orgelwerk von* Jehan Alain," *Musica---scientia et ars: Eine Festgabe für Peter Förtig zum 60. Geburtstag* (Frankfurt am Main: Peter Lang, 1995).

[81] Colin Archibald Campbell, "*Die Orrelwerke van* Jehan Alain (1911-1940): *'n Algemene bespreking*. I," *Vir die Musiekeier* 22, no.15, p. 44-45.

[82] Campbell, 44-45.

[83] Helga Schauerte, *Jehan Alain (1911-1940): Ein monographische Studie* (Regensburg: Gustav Bosse Verlag, 1983).

musical examples of the two elements she says are in the work, the accompanimental patterns and the chants, and she discusses Alain's reason for composing this piece, which is explored in Chapter 5 of my dissertation.

More writers for each composer are discussed in the chapters assigned to each. The citations in the chapters are particularly important to my analyses.

Couperin

There are two articles on dance characteristics in the mass movements of François Couperin. One is by Sarah Mahler Hughes, "Seventeenth-century Dance Characteristics in the Organ Masses of François Couperin 1668-1733)," [84] and one by James Stephens Godowns, "The Contribution of French Court Dance to Performance of the Couperin Organ Masses." [85] The *Kyrie* movements in my study do not seem to be influenced by dance characteristics in their composition, but, if performing these movements, stronger rhythm and meter can be achieved by emphasizing rhythmic patterns than what seems, at first glance, just to be a swirl of notes above a *cantus firmus*. What is quite clear are the contrapuntal lines in the movements. Even with noticing the counterpoint, and possible rhythmic patterns, the intended use of Couperin's mass music is unclear, as discussed in "*Historisch Unscharf und liturgisch strittig: Über Orgelmessen von François Couperin bis heute*" by Gustav A. Krieg.[86] General

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[84] Sarah Mahler Hughes, "Seventeenth-century Dance Characteristics in the Organ Masses of François Couperin (1668-1733)," DMA diss., University of Kansas, 1985.

[85] James Stephens Godowns, "The Contribution of French Court Dance to Performance of the Couperin Organ Masses," DMA diss., Indiana University, 1983.

information about the plainchant *Cunctipotens genitor cantus firmus* settings in the *Mass for the Parishes* is found in Benjamin van Wye*, "Ritual Use of the Organ in France,"* from *The Journal of the American Musicological Society*.[87] And if the intended use is unclear, it is also worthy to note that the composer of the masses was in doubt for some time. Wilfrid Mellers in *François Couperin and the French Classical Tradition* writes that about this controversy and the outcome that Couperin is indeed the composer.[88] Couperin's music is in Chapter 5 of my study. The two *Kyries* are included to show two different methods of writing above, and below, a *cantus firmus*. The first movement presents the *cantus firmus* in the tenor voice, and the last movement of the *Kyrie* includes the *cantus firmus* in the bass voice. Thus, in one piece, Couperin writes in the oldest technique of tenor melody, and the later style of bass melody.

Methodology

The language and tools of modern music theory can illustrate the elements and processes of each piece. Chorales with melodies in elaborated upper voices (Brahms), *cantus firmus* techniques (the chorale or chant in long notes in bass voice, Bach, or in the tenor voice, Couperin), chant fragments (Alain), contrapuntal techniques, such as

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[86] Gustav A. Krieg, "Historically Unclear and Liturgically Controversial: On Organ Masses by François Couperin Up to the Present," *Musik und Kirche* 83, no. 2 (March-April, 2013): 118-123.

[87] Benjamin van Wye, "Ritual Use of the Organ in France," *Journal of the American Musicological Society* 33 no. 2 (Summer, 1980): 322.

[88] Wilfrid Mellers, "Appendix A: The Authorship of the Organ Masses," *François Couperin and the French Classical Tradition* (London: Denis DobsonLtd., 1950, repr., New York: Dover Publications, Inc., 1968), 343-5.

imitation between voices or fugal openings (Ives, Couperin, Bach), twentieth-century techniques (Cage, Ives), imitation before a tune begins (Bach, Brahms), cadences (endings) of different sorts, and the use of distinct pitch choices can be explained by modern music-theoretical analysis, whether in simple Roman numeral, or complex Schenkerian, graphs. These tools simply explain what is present already in the music in such a way that musicians can discuss the similarities and differences among pieces and composers. I have been helped in this dissertation by using these tools. In the analysis of Bach, I will show that his piece is tonal, not modal, although it rests on other age-old techniques. In the analysis of Couperin, I will show that tonality and modality are more intertwined than in Bach's piece—it is an earlier piece in history, as well as in style. In the music of Brahms, I will show that his is a conservative approach in tonality only, simply ornamenting his borrowed material in all organ lines, however, other elements of his music are not at all conservative. Alain uses extended harmonies as he pushes against traditional tonality, but ends his piece with a major- seventh chord. Ives and Cage push even harder to create a tonal space for themselves.

One modern tool used in my study is the graphing technique invented by Heinrich Schenker (1868-1935). Many of the components of these compositions can be brought to light by using Schenker's ideas. Cadwallader and Gagné say that Schenker's principles and ways of thinking have become an integral part of musical discourse.[89] His work encompassed ideas about the general nature of tonality and his approach revealed the details of many compositions. Schenkerian analysis works well for the study of all the

[89] Allen Cadwallader and David Gagné, *Analysis of Tonal Music: A Schenkerian Approach* (New York: Oxford University Press, 1998), 3.

pieces in my dissertation for most of the works are tonal, or at least, have some altered version of tonality. Ives tries to break into polytonality, but returns to F major at the end of the work, and encloses the dissonant intervals earlier in the work within the key of F major by use of a consonant bass line. Cage's music does not seem particularly tonal although he starts with eighteenth-century chorales that are. Alain's music is more centered on the descent of the note G over several octaves, but the music still ends on a G-major seventh chord. I use Schenkerian analysis throughout the dissertation to highlight and underscore the tonal aspects of the works, and also those aspects that diverge from tonality. Schenkerian analysis has been called "an empirical theory of tonality," in the sense that to be a theory it must be a predictor of musical phenomena. [90] The authors, Matthew Brown, Douglas Dempster and Dave Headlam, in an article from *Music Theory Spectrum*, test the limits of Schenkerian theory when applied to Romantic and early twentieth-century music.[91] In my dissertation, Schenkerian theory plays an important role in every analysis, even those of twentieth-century music, for it is not only a predictor of events, it is an observer of them and of their absence in some of the pieces. In the analyses of Ives, Alain, and Cage later in the dissertation, the Schenkerian graphs faithfully separate the underlying tonal structure from the elements that are added, or in Cage's case, subtracted, to obscure it.

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[90] Matthew Brown, Douglas Dempster and Dave Headlam, "The #IA (bV) Hypothesis: Testing the Limits of Schenker's Theory of Tonality," *Music Theory Spectrum* 19, no. 2 (Autumn, 1997): 157.

[91] Brown, 177.

Felix Salzer also wrote about tonality in *Structural Hearing: Tonal Coherence in Music*. He says that "Tonality may thus be defined as prolonged motion within the framework of a single key-determining progression, constituting the ultimate structural framework of the whole piece."[92] All of the pieces in my dissertation benefit from determining the progression and key of the entire piece. However, it is the unusual prolongations, structures, and motions of the music of this dissertation that stretch Schenkerian analysis out of its normal projections. In the work of Ives, an *Urlinie* was found that moves upward. In the work of Cage, fundamental lines are absent--the graphs of Supply Belcher's original works tell us which of the missing notes would have been important structural elements. In the work of Alain, the traditional aspects of Schenkerian analysis are most challenged, but the initiating note does return at the end of the piece and can be treated as a primary tone. Even in the older works I consider, Schenkerian analysis shows how Bach changed modality to tonality in his work, how Couperin reflected modality in his tonal structure of the works, and how Brahms adhered closely to the given tenets of his borrowed material with some additions. Schenkerian analysis helped me bring all of these ideas into clearer focus.

While Schenkerian analysis is the major vehicle of analysis in this study, post-tonal set theory is also used to study the Alain and Cage pieces. In the Cage composition, post-tonal set theory can be used to name the types of sonorities, usually trichords, that Cage derives by subtraction from his model chorales (usually four-voiced chords). There are different classification systems of these sets, but the most widely-used one was devised

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[92] Felix Salzer, *Structural Hearing: Tonal Coherence in Music*, Vol. 1 (London: Charles Boni, 1952, Reprint, New York: Dover Publications, Inc., 1962), 217.

by Allen Forte (1926-2014) in *The Structure of Atonal Music* in 1973.[93] It is this system that is used in this dissertation.

My study uses these methods of analysis to determine each composer's use of background material to create the new works. It is, of course, not a new idea, or the idea of only these composers, to base their compositions on older material or ideas. Instead, these musical works in this dissertation have individual, unique features which need to be highlighted through analysis. At the same time, the specific borrowing techniques reflect quite well the more general changes of musical style that form a context for these individual pieces.

[93] Allen Forte, *The Structure of Atonal Music* (New Haven: Yale University Press, 1973).

CHAPTER II

J. S. BACH, *AUS TIEFER NOT SCHREI ICH ZU DIR*, BWV 686

J. S. Bach used borrowed material to show his skill at changing a piece based on an ages-old technique—of polyphonic writing upon a *cantus firmus* (*stile antico*)--into his more-modern style. After it considers the historical position and the role in worship of this piece, this chapter will illustrate how *stile antico* and modern style intersect in Bach's piece, while exploring its competing tonic notes. Bach's use of borrowed material is within the style of his time, but tonally pushes against the historical features of the melody.

The title page of *Clavierübung III* reads:

Third Part
of the
KEYBOARD PRACTICE
composed
of
several preludes
on the
Catechism and other hymns
for the organ
for music lovers
and especially for connoisseurs
of such work
composed by
JOHANN SEBASTIAN BACH
Royal Polish and Electoral Saxon
Court Composer, Capellmeister and
Director *Chori Musici* in Leipzig
Published by the author[94]

[94] This translation in Corliss Richard Arnold, *Organ Literature: A Comprehensive Survey* (Metuchen: The Scarecrow Press, Inc., 1973), 108-9.

Johann Sebastian Bach probably published *Clavier-Übung*, Part III, around the time of Michaelmas (September 29) in 1739.[95] On September 28, Johann Elias Bach, acting as secretary to J. S. Bach, informed Johann Wilhelm Koch of Ronneburg, "that the work of my cousin engraved in copper is now ready and a copy may be had from him for three reichsthaler."[96] Earlier, the secretary had written that the pieces included "are principally intended for organists and are exceedingly well-composed."[97] That Bach was concerned with writing a compendium of organ pieces, which may be seen as a German organ mass, is possibly from his study of the organ works of others. He owned a copy of de Grigny's *Premier Livre d'orgue* (1699*),* which he had copied, and, which as David Schulenberg points out, contains both *manualiter* and *pedaliter* pieces.[98] Bach also knew about the music of Louis Marchand (1669-1732), even if he did not meet him in Dresden for a competition.[99] There is a six-voiced *Plein Jeu* with double pedal by Marchand in *Pièces chosies* (after 1732*)*.[100] Johann Abraham Brinbaum, linked to Bach by defending

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[95] 1739 was also the bicentennial celebration of the Augsburg Confession in Leipzig. Robert L. Marshall, "Bach and Luther," *The Worlds of Johann Sebastian Bach: An Aston Magna Academy Book,* ed. Raymond Erickson (New York: Amadeus Press, 2009), 231.

[96] Christoph Wolff, *Bach: Essays on His Life and Music* (Cambridge: Harvard University Press, 1991), 205, from *Bach-Dokumente*, ed. Bach-Archiv Leipzig, Vol II: *Fremdischerliche und gedruckte Dokumente zur Lebensgeschiche Johann Sebastian Bach 1685-1750*, ed. Werner Neumann and Hans-Joachim Schulze (Leipzig and Kassel, 1969), no. 455.

[97] Wolff, 205, says *Bach-Dokumente*, no. 434.

[98] David Schulenberg, *The Keyboard Music of J S. Bach*, 2nd ed. (New York: Routledge, 2010), 367.

[99] Willi Apel, *The History of Keyboard Music to 1700*, trans. Hans Tischler (Bloomington: Indiana University Press, 1972), 719.

him in *Unpartheyische Ammerkungen* (1738), wrote about the organ masses of de Grigny and Pierre Du Mage, as well as music of Palestrina and Lotti.[101] Christoph Wolff observes that this indicates that Johann Sebastian was interested in organ masses at this time.[102] Bach also knew of the work of Frescobaldi, as he copied *Fiori musicali*, published in Venice in 1635, in 1714.[103] *Fiori musicali* contains three organ masses with secular capriccios.

The *Clavierübung* does include parts of a German worship service. Certainly, the three-part *Kyrie* and the Lutheran *Gloria* (*Allein Gott in der Höh sei Ehr*) are present, as well as chorale preludes on the Ten Commandments, the Creed, the Lord's Prayer, Baptism, Repentance, and the Eucharist. The pieces are included in the collection between a large prelude and fugue, and the collection includes four *duetti.* Table 1 shows both the larger and smaller (manuals only, and much shorter than the ones with pedal) settings of the preludes.

The links to Luther's large and small catechisms are obvious,[104] just by the size, of larger and smaller settings. Some of the catechisms have five sections of sacraments,

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[100] Apel, 743. (BWV 686 has double pedal).

[101] Wolff, 207.

[102] Wolff, 207.

[103] Richard D. P. Jones, "The Keyboard Works: Bach as Teacher and Virtuoso," *The Cambridge Companion to Bach*, edited by John Butt (Cambridge: Cambridge University Press, 1997), 139.

[104] The larger and smaller settings are "often (and probably correctly) taken to refer to Luther's Greater and Lesser Catechisms." Malcolm Boyd*, Bach* (Oxford: Oxford University Press, 2000), 195.

some six, and the section left out of the ones with five is the one on Confession (for which BWV 686 was written). Even those catechisms nearer our time reflect this

Table 1. Pieces from *Clavierübung III* (*cantus firmus* is c.f. below).[105]

BWV	Title	Christian Thought/Worship	Description
552/1	Praeludium		pro organo pleno
669	Kyrie, Gott Vater	Kyrie	c.f. in soprano
670	Christe, aller Welt Trost	Kyrie	c.f. in tenor
671	Kyrie, Gott Vater	Kyrie	c.f. in pedal
672	Kyrie, Gott Vater	Kyrie	manualiter
673	Christe, aller Welt Trost	Kyrie	manualiter
674	Kyrie, Gott heliger Geist	Kyrie	manualiter
675	Allein Gott in der Höh'	Gloria	trio, manualiter
676	Allein Gott in der Höh'	Gloria	trio, pedaliter
677	Allein Gott in der Höh'	Gloria	trio, manualiter
678	Dies sind die heil'gen zehn Gebot'	Ten Commandments	c.f. in canon
679	Dies sind die heil'gen zehn Gebot'	Ten Commandments	manualiter
680	Wir glauben all an einen Gott	Creed	in organo pleno
681	Wir glauben all an einen Gott	Creed	manualiter
682	Vater unser im Himmelreich	Lord's Prayer	c.f. in canon
683	Vater unser im Himmelreich	Lord's Prayer	manualiter
684	Christ unser Herr zum Jordan kam	Baptism	c.f. in pedal
685	Christ unser Herr zum Jordan kam	Baptism	manualiter
686	Aus tiefer Noth schrei ich zu dir	Confession	in organo pleno
687	Aus tiefer Noth schrei ich zu dir	Confession	manualiter
688	Jesus Christus, unser Heiland	Eucharist	c.f. in pedal
689	Jesus Christus, unser Heiland	Eucharist	manualiter
802	Duetto I		
803	Duetto II		
804	Duetto III		
805	Duetto IV		
552/2	Fuga		pro organo pleno

[105] From Peter Williams, *The Organ Music of J. S. Bach, Vol. II: Works based on Chorales (BWV 599-711 etc*), Cambridge: Cambridge University Press, 1980), 179-80.

difference.[106] And, before and during Bach's time, five- and six-sectioned catechisms were in use. Agricola and Jonas' Layman's Bible used five, however, the "Table Catechism" of 1529 had six.[107] Philipp Spitta refers to the five main sections when he writes about Bach's *Clavierübung*.[108] Avenarius *Evangelical Song Catechism* of 1714 had six.[109] This linking of catechism and chorale also linked Avenarius to the world of Bach. The dedication of Avenarius's book was to Johann Christoph Oleatius of Arnstadt, who was the superior of Johann Sebastian during Bach's Arnstadt years. Oleatius published several books about worship and music; it is not known if Bach knew these works (according to Christoph Trautmann in Bach's *Clavierübung III*, who says that "such acquaintance cannot be dismissed")[110], and Bach did live in a period when the Lutheran chorale "attained preeminent historical standing."[111]

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[106] *Luther's Large Catechism, with Study Questions by Martin Luther* (St. Louis: Concordia Publishing House, 1991) has five sacraments, but does discuss confession. *Luther's Small Catechism* (St. Louis: Concordia Publishing House, 1986) has six sections.

[107] Christoph Trautmann and Alfred Mann, "Bach's 'Clavierübung III,'" *Bach* 15, no. 3 (July, 1984): 3.

[108] Trautmann, 3.

[109] Trautmann, 3, gives the title of Johann Avenarius: *Evangelical Song Catechism, representing the Christian dogma according to the six principal sections of the Catechism in edifying songs, as had been done in an erstwhile regular year circle of sermons*, Erfurt, 1714.

[110] Trautmann, 4.

[111] Trautmann, 4.

David Humphreys even includes the links between the headings in the Catechism and the chorales, presented in Table 2, from his book *The Esoteric Structure of Bach's Clavierübung III*.[112]

Table 2. The Headings of Luther's Lesser Catechism and the opening lines of the Catechism Chorales.

Catechism	**Chorale**
Die zehn Gebote, wie sie ein Hausvater seinem Gesinde einfältiglich vorhalten solll	Dies sind die heil'gen zehn Gebot
Der Glaube, wie ein Hausvater denselbigen seinem Gesinde aufs einfältigste vorhalten soll	Wir glauben all' an einen Gott
Dier Vaterunser, wie dasselbige ein Hausvater seinem Gesinde aufs Einfältigste vorhalten soll	Vater unser im Himmelreich
Das Sakrament der heilgen Taufe, wie dasselbige ein Hausvater seinem Gesinde soll einfältig vorhalten	Christ unser Herr zum Jordan kam
Wie man die Einfältigen soll lehren bechten	Aus tiefer Not schrei' ich zu dir
Das Sakrament des Altars, wie ein Hausvater dasselbige einfältiglich vorhalten soll[113]	Jesus Christus unser Heiland

[112] David Humphreys, *The Esoteric Structure of Bach's Clavierübung III* (Cardiff: University College of Cardiff Press, 1983), 4.

[113] Humphreys, 4.

Christoph Trautmann, however, has found a small book of 1624 by Andreas Reyber, which reports that young students should begin Catechism study in their fifth year, devoting six weekdays to the six principal sections, with the aid of appropriate songs.[114] This book remained in use into the eighteenth century.[115] Table 3 shows the book's series of chorales for morning and evening assemblies of the school week.

Table 3. Reyber's Chorales for Each Day of the Week.

Day	**Chorale**
Monday	These are the Ten Holy Commandments
Tuesday	We believe in One God or God the Father be with Us
Wednesday	God our Father in Heaven
Thursday	Christ our Lord Came to the River Jordan
Friday	Have Mercy or Lord My God
Saturday	Jesus Christ our Saviour or Thank the Lord with all my heart[116]

These are identical to the titles of the chorales which Bach used in the preludes of the *Clavierübung*, with the exception of the chorale for Friday. The reason is not known for Bach's difference from this list, but this book shows one possible reason for Bach's selections of chorales. Trautmann does theorize that the same chorale would be sung at the beginning and end of the weekday services and may be the reason for Bach's writing of two versions of each chorale in his *Clavierübung.*[117]

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[114] Trautmann, 6. Andreas Reyber, *A Special Report on how next to Divine Inspiration the Youths of Villages and the Youngest Students in the Towns of the Duchy of Gotha May Properly and Usefully be Instructed.* Compiled by Gracious Princely order and Printed by Peter Schmieden in Gotha in the year 1624.

[115] Trautmann, 5.

[116] Trautmann, 6

Authors have been writing about the faith of Bach for some time, so it is no wonder that his music is seen as a reflection of his beliefs, whether from childhood or adulthood. Robin Leaver is one who has written about Bach's faith. One of his articles is "J. S. Bach's Faith and Christian Commitment."[118] He first states that "the Christian character of a composer is not to be demonstrated in the frequency of his compositions for the church, but rather by the quality, content and nature those compositions have."[119] He also writes of Bach's faith through the margin notes that Bach wrote in his personal Bible—some of these focused on Christian music. Of 1 Chronicles 25, with King David's 299 musicians for the worship of the covenant, Bach wrote, "This chapter is the true foundation of all God-pleasing church music." In 1 Chronicles 28, David tells Solomon to use "every willing man who has skill for any kind of service, Bach wrote, "Splendid proof that, besides other arrangements of the service of worship, music too was instituted by the Spirit of God through David." For Exodus 15, a psalm of redemption sung by Moses and Miriam, Bach wrote, "First prelude, for 2 choirs to be performed for the glory of God." And in 2 Chronicles 5, where the Bible says it was the duty of the trumpeters and singers to make themselves heard in unison in praise and thanksgiving to the Lord, Bach has written, "Where there is devotional music, God with his grace is always present.[120]

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[117] Trautmann, 6.

[118] Robin A. Leaver, "J. S. Bach's Faith and Christian Commitment," *Expository Times* 96, no. 6 (1985): 168-173.

[119] Leaver, 170.

[120] Leaver, 171-172.

Of course, there are other reasons mentioned in the literature for the writing of two versions of each chorale (three for *Allein Gott*). Corliss Richard Arnold and Christoph Wolff both mention economic matters, for example, the smaller settings might sell to keyboardists other than organists.[121]

The plan of the chorale preludes, and, therefore, the reason for the publication, has been discussed by many writers. It may have been Bach's intent to exhibit several styles of composition. Writers discuss the grouping of several pieces including the three *Kyrie* pieces (*pedaliter*) together. Wolff sees the large settings as determining the arrangement of the volume. Starting with BWV 678, he groups this one as the first of three, the outer preludes using *cantus firmus* canon enclosing one setting for *organo pleno*. The last three *pedaliter* preludes use pedal *cantus firmi* to frame a setting for full organ.[122] Arnold sees the three *Allein Gott* preludes (manualiter and pedaliter) as "perhaps written in honor of the three persons of the Trinity."[123] David Yearsley in "The Organ Music of J. S. Bach" writes of the synthesis of styles in the volume. He says that the preludes are a synthesis of several national styles. The history of organ music is shown in the archaic polyphony of the *Kyrie* BWV 669-71, the double-pedal setting of *Aus tiefer Not* BWV 686, moving forward to the modern Italianate trio on *Allein Gott in der Höh* BWV 676, and the chromaticism with *galant* touches in *Vater unser im Himmelreich* BWV 682.[124] Richard D. P. Jones in "The Keyboard Works: Bach as

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[121] Arnold, 109; Wolff, 208.

[122] Wolff, 208.

[123] Arnold, 109.

Teacher and Virtuoso," compares these different styles with the polyphonic style of the *stile antico* of the E major fugue, and the binary-sonata preludes as well as the more progressive style of *The Well-Tempered Clavier Book II*.[125] He says the progressive style of the day was full of natural grace, elegance and simplicity.[126] Wolff also says that the volume may have movements linked together to be performed in a concert.[127] However, he, as mentioned in David Schulenberg, in *The Keyboard Music of J. S. Bach*, thinks it is unlikely that the whole collection was performed at once.[128]

Schulenberg also mentions that although Bach wrote many elements of the fashionable *galant* style into these chorales, the *Clavierübung III* can be considered the first installment in a series of works that constituted Bach's systematic contribution to the tradition of speculative counterpoint, which, extended back to the Renaissance with the music of Frescobaldi and others.[129] The collection may have been written to prove that Bach could write in all the styles represented in it. Lorenz Mizler, described *Clavierübung III* in the *Musikalisch Bibliothek* of October 1740 as "a powerful refutation

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[124] David Yearsley, "The Organ Music of J. S. Bach," *The Cambridge Companion to the Organ*, ed. Nicholas Thistlethwaite and Geoffrey Webber (Cambridge: Cambridge University Press, 1998), 248.

[125] Richard D. P. Jones, "The Keyboard Works: Bach as Teacher and Virtuoso," *The Cambridge Companion to Bach*, ed. John Butt (Cambridge: Cambridge University Press), 148.

[126] Jones, 148.

[127] Wolff, 208.

[128] Schulenberg, 366.

[129] Schulenberg, 366.

of someone [Johann Adolph] (Scheibe) who has ventured to criticize the composition of the *Hof Compositeur*."[130] Malcolm Boyd, in *Bach*, adds that it is unknown if some of the pieces were written before the publication date, and so may precede Scheibe's criticism.[131]

Peter Williams, also, in *The Organ Music of Bach*, presents his thoughts on the organization and purpose of the *Clavierübung III*. First, he does not agree that the larger and smaller chorales reflect the different catechisms.[132] Instead, he says that Catechism thought is relevant in that the early Lutheran reformers believed that they were offering congregations three gifts: the Bible, the hymn book and the Catechism. Williams says that Bach wrote biblical settings in his Passions and Oratorios, and collaborated on a hymnbook in 1736. The *Clavierübung III* is the Catechism.[133] He particularly does not agree that the smaller settings are references to the smaller catechism; he sees them as examples of fugal form and fugal technique, for each presents a different aspect of this type of composition.[134]

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[130] Boyd, 196.

[131] Boyd, 196. Scheibe thought Bach's music "bombastic," artificial and confusing," notated with too many ornaments, with not enough distinction between melody and accompaniment—voices all equal. See *Bach-cantatas website*, Johann Adolph Scheibe (Composer, Music Critic, Bach's Pupil) , ed. Malcolm Boyd, 1999, updated by Aryeh Oron (2014) and Thomas Braatz (2011) at http://www.bach-cantatas.com/Lib/Scheibe-Johann-Adolph.htm (accessed 03/23/2019).

[132] Williams, 179.

[133] Williams, 179.

[134] Williams, 179.

Williams also writes of the number symbolism in the work: the three settings of the Trinity hymns in three keys, F-G-A, forming a major third interval; the three themes of the prelude, the three sections of the fugue, the three flats of the prelude and fugue, the number of Mass chorale (3 x 3), the number of pieces as a whole (3 x 3 x 3).[135] But he does comment on the collection as containing pieces in various styles, including five pieces in *stile antico*, of which BWV 686, of which I focus in this study, is one. He mentions that Bach acquired a copy of *Gradus ad Parnassum* by Fux after it was published in 1725.[136] However, he sees Bach's setting of BWV 686, and the other *stile antico* pieces, as outside of "a Palestrinian mode," due to the eighteenth-century working out of the techniques.

Perhaps there are smaller settings of each chorale because the larger ones are very difficult. George Andreas Sorge addresses this point in his preface to his 1750 collection of chorale preludes: "The preludes on the Catechism Chorales by Capellmeister Bach in Leipzig. . . .deserve the great renown they enjoy" but "are so difficult as to be all but unusable by young beginners and others who may lack the considerable proficiency they require."[137] Michael Radulescu, in a recent article, "J. S. Bach's Organ Music and Lutheran Theology," says that the larger and smaller settings "allude to the double form

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[135] Williams, 180.

[136] Williams, 183.

[137] Christoph Wolff, *Johann Sebastian Bach: The Learned Musician* (New York: W. W. Norton & Co., 2000), 377.

of liturgy: as the great official one "in churches," versus the "small," intimate, personal form "at home," within each Christian family."[138]

Wolff, however, may have the last thought on the placement of the *manualiter* chorales after the *pedaliter* chorales: "There exists the possibility, at least, that Bach, after preparing the *Stichvorlage*, was annoyed by several half-empty and some only partly used pages and subsequently decided to insert the small settings as 'stopgaps.'"[139] He continues that the pages of the publication have an exact "precise fit."[140]

The Modal Chorales, Counterpoint, and Reaching Back to the Past

Schulenberg points out the modal character of several of Bach's chorale preludes, including the six settings of the *Kyrie* and *Christe*, which are "based on archaic melodies whose modal character is reflected in Bach's harmony, which is neither conventionally tonal nor genuinely modal."[141] He continues that these chorales often avoid sequences, full cadences and other types of formal articulation normal in eighteenth-century music, while ending with a "modal" cadence that surprises the listener and causes them to realize that these works were not self-contained works of art, but parts of a liturgical service.[142] He does not discuss *Aus tiefer Not,* the subject of my study.

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[138] Michael Radulescu, "J.S. Bach's Organ Music and Lutheran Theology: The *Clavier-Übung* Third Part," *The Diapason* (July, 2019): 16.

[139] Wolff, *Essays*, 208.

[140] Wolff, *Essays*, 208.

[141] Schulenberg, 366.

Bach certainly was reaching back to the past to set this chorale. The text, written by Martin Luther, reflects the words of Psalm 130:

Psalm 130

1. Out of the depths have I cried unto thee, O Lord.
2. Lord, hear my voice: let thine ears be attentive to the voice of my supplication.
3. If thou, Lord, shouldest mark iniquities, O Lord, who shall stand?
4. But there is forgiveness with thee, that thou mayest be feared.
5. I wait for the Lord, my soul doth wait, and in his word do I hope.
6. My soul waiteth for the Lord more than they that watch for the morning: I say, more than they that watch for the morning.
7. Let Israel hope in the Lord: for with the Lord there is mercy, and with him is plenteous redemption.
8. And he shall redeem Israel from all his iniquities.[143]

Luther set this text, along with publishing the melody in 1524. He considered it one of the "Pauline Psalms," along with Pss. 32, 51, and 143, because they deal with "the sense of sin" like the Apostle Paul, who quoted them, and who wrote of many of the same topics.[144] This hymn was sung at Luther's funeral in 1546.

Bach, in cantata 38, set the first and last verses. The hymn and translation[145]:

1.	**Aus tiefer Not schrei' ich zu dir,** **Herr Gott, erhoer' mein Rufen,** **Dein gnädig' Ohren kehr zu mir,** **Und meiner Bitt' sie öffnen!**	*From deep affliction I cry out to you,* *Lord God, hear my call;* *incline your merciful ear here to me* *and be open to my prayer!*

[142] Schulenberg, 366.

[143] *The Bible*, King James Version, *Bible Gateway*, Public Domain at https://www.biblegateway.com/passage/?search=Psalm+130&version=KJV (accessed 3/3/2019).

[144] Jaroslav Pelikan, *Bach Among the Theologians* (Eugene: Wipf & Stock Publishers, 1986), 21.

[145] Bach Cantatas Website, "*Aus tiefer Not schrei ich zu dir* (Psalm 130): Text and Translation of Chorale," trans. Francis Browne (2006), at http://bach-cantatas.com/Texts/Chorale085-Eng3.htm., (accessed 03/02/2019).

	Denn so du willst das sehen an, **Was Sünd' und Unrecht ist getan,** **Wer kann, Herr, vor dir bleiben?**	*For if you want to look at this,* *what sin and injustice is done,* *who can, Lord, remain before you?*
2.	Bei dir gilt nichts denn Gnad' und Guist Die Sünde zu vergeben; Es ist doch unser Tun umsonst, Auch in dem besten Leben. Vor dir Niemand sich rühmen kann, Des muß dich fürchten jedermann Und deiner Gnade leben.	*With you nothing but your grace and favour counts* *in the forgiveness of sins;* *our deeds are therefore useless,* *even in the best life.* *Before you nobody can boast,* *but everyone must fear you* *and live by your grace.*
3.	Darum auf Gott will hoffen ich, Auf mein Verdienst nicht bauen; Auf ihn mein Herz soll laßen sich, Und seiner Güte trauen, Die mir zusagt sein wertes Wort, Das ist mein Trost und treuer Hort, Des will ich allzeit harren.	*Therefore I shall hope in God,* *not build on my own merit;* *on him my heart will rely* *and trust in his goodness,* *which his precious word promised me,* *this is my consolation and faithful refuge,* *for this I shall always wait.*
4.	Und ob es währt bis in die Nacht Und wieder an den Morgen, Doch soll mein Herz an Gottes Macht Verzweifeln nicht noch sorgen, So thu' Israel rechter Art, Der aus dem Geist erzeuget ward, Und seines Gott's erharre.	*And even if it delays through the night* *and again in the morning,* *yet in God's might my heart will* *not doubt nor be anxious,* *act in this way, true race of Israel,* *that is produced from the spirit* *and wait on God.*
5.	**Ob bei uns ist der Sünden viel,** **Bei Gott ist viel mehr Gnade;** **Sein' Hand zu helfen hat kein Ziel,** **Wie groß auch sei der Schade.** **Er ist allein der gute Hirt,** **Der Israel erlösen wird** **Aus seinen Sünden allen.**	*Although there is much sin among us,* *with God there is much more mercy;* *his helping hand has no limit* *however great the harm may be.* *He is alone the good shepherd* *who can free Israel* *from all his sins.*

The Melody of *Aus tiefer Not schrei ich zu dir*

In addition to the text, the melody is attributed to Martin Luther. At times, composers helped Martin Luther with his compositions (Johann Walter was a chief collaborator), so it unknown if he wrote this complete melody.[146] It was first published in *Geystiche Gesangk Buchleyn*, edited by Johann Walter, in Wittenberg, 1524. Example 1 is a version from 1682, and 2 is Bach's version from his cantata by the same name.

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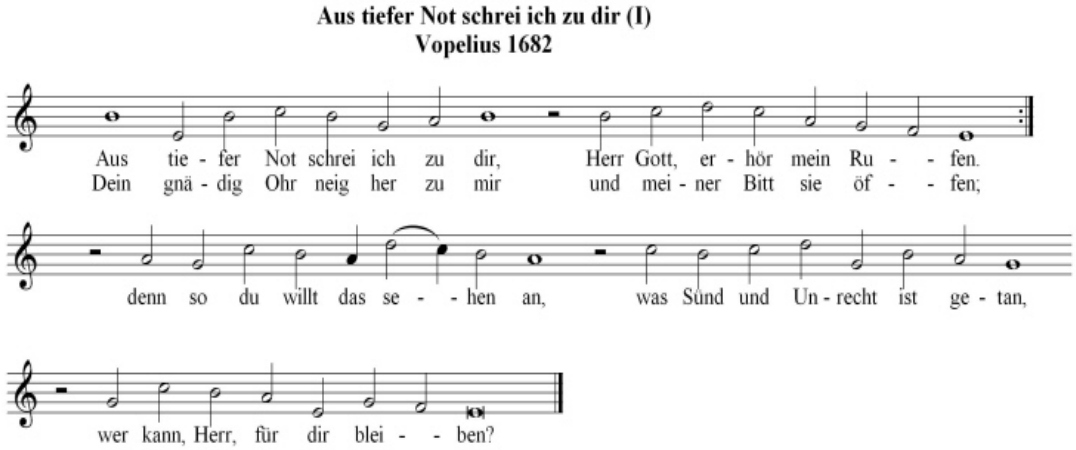
[146] Bach Cantatas Website, "Melody 1: *Aus tiefer Not schrei ich zu dir*," "Chorale Melodies used in Bach's Vocal Works, Sorted by Title," at http://www.bach-cantatas.com/CM/Aus-tiefer-Not.htm (accessed 3/12/2019).

Example 3 shows the organ setting uses the same filled-in major-third intervals as in measure 5 of the cantata melody. *Aus tiefer Not*, BWV 38, is a cantata in six movements (the last is the chorale). It was performed on the 21st Sunday after Trinity, October 29, in 1724.[147] Lori Burns, in *Bach's Modal Chorales*, has extensively analyzed both the chorale and the cantata.[148] She discusses the "opposition" of tonicity of notes A

Example 1. 1682 version of *Aus tiefer Not schrei ich zu dir*.[149]



and E in the *cantus firmus*, in the chorale, and in the cantata. The chorale ends the cantata, and ends on an E chord. Supporting E as tonic in these pieces, Burns notes the opening-fifth interval of the *cantus firmus* as well as the end of the first phrase on notes G-A-B, a third-span reaching up to the dominant (the fifth note of a scale) of E. In the

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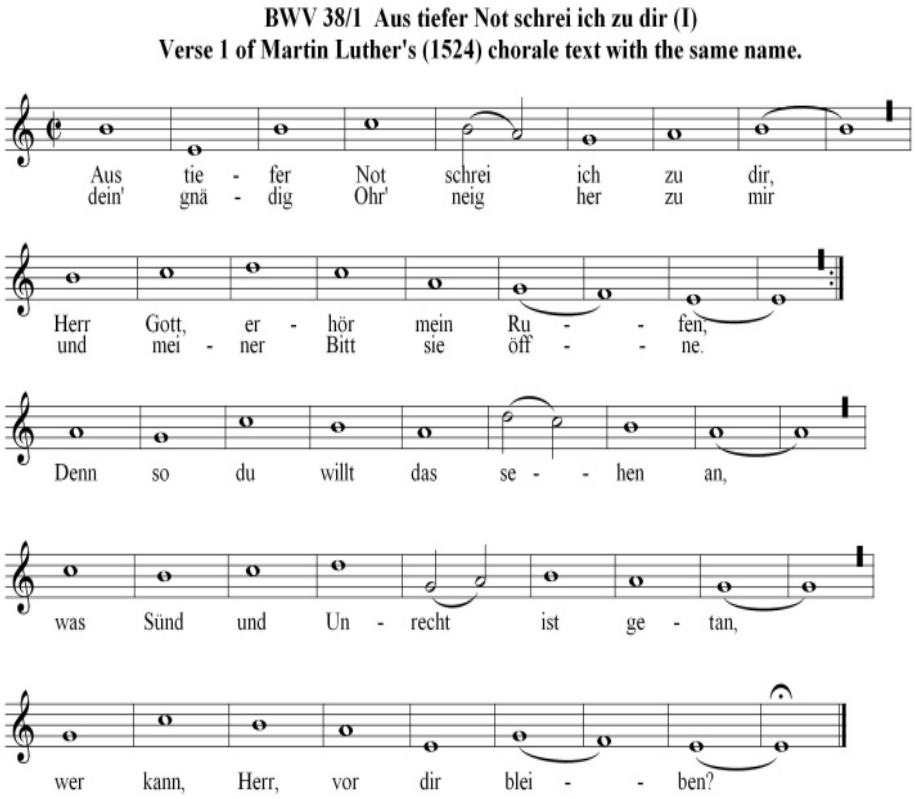
147 Wolff, *Learned,* 276.

148 Lori Burns, *Bach's Modal Chorales*, *Harmonologia Series*, No. 9 (Stuyvesant: Prendragon Press, 1995).

149 Bach Cantatas Website, Melody 1.

second phrase of the chorale, the bass includes the notes C-D-E at the end, and the *cantus firmus* uses G-F-E, a Phrygian cadence ending on the tonic of E. The third phrase does project A minor, and the fourth phrase modulates to G major, but the last phrase returns to E Phrygian, and the third span at the end of phrase 4, the B-A-G span is the beginning of the five-note span which completes itself at the end of the piece. In this reading, E is clearly the tonic. Example 4 is the chorale from the cantata, showing these spans and modulations. The cantata, itself, is also a mixture of E Phrygian and A Aeolian. Burns

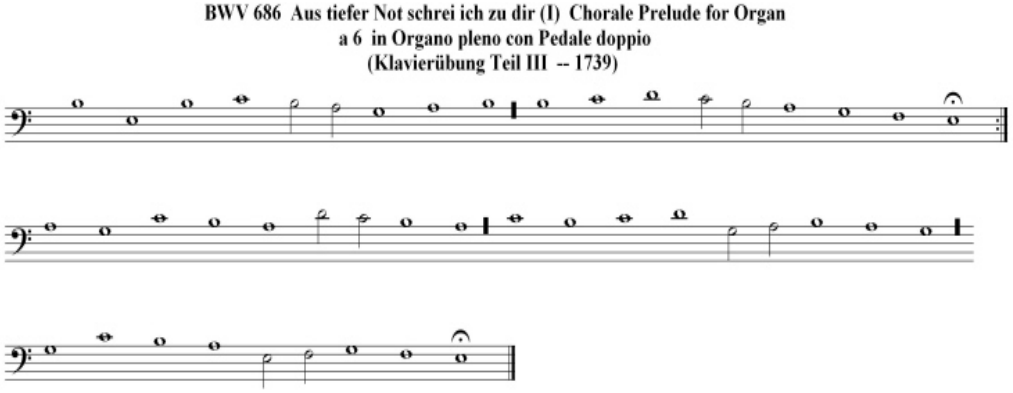
Example 2. Bach's version of *Aus tiefer Not schrei ich zu dir* for the setting of the cantata, BWV 38.[150]



[150] Bach Cantatas Website.

describes its tonal plan in Table 4. She says that movements 1 and 6 are harmonically-closed E-Phrygian structures. In this cantata, Burns sees E Phrygian as representing a cry of distress, a request to God for forgiveness despite humankind's sins; A minor of the second movement as more positive; the keys of D and G as expressions of frailness and despair; the key of A as equaling hope; and the resolution to E at the end, the resolution to God which is full of hope.[151]

Example 3. *Aus tiefer Not schrei ich zu dir* melody from BWV 686.[152]



It is not known which verse Bach had in mind when he composed the organ prelude, BWV 686, although he continued the opposition of E Phrygian and A minor; this time, however, in it he created stronger motions to A. Although it is uncertain exactly when Bach wrote the chorale prelude, he published it in 1739, fifteen years later than the performance of the cantata. He published the chorale prelude in a collection of pieces, some of which show his knowledge of the old techniques (motet style, modality, canon),

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[151] Burns, 83-4.

[152] Bach Cantatas Website.

blended with more modern idioms.[153] And, although writers say that BWV 686 is in *stile antico*, exhibiting an earlier style, it is that, but much more. In the organ setting of *Aus tiefer Not*, Bach turns much more often to the A minor tonality than the ancient E Phrygian. In this harmonic motion from E Phrygian to A minor, Bach was also following in the steps of some of his predecessors, who were beginning to include many A cadences in pieces in E Phrygian. Among the examples of this are two chorales by Samuel Scheidt (1587-1654), from *Das Görlitzer Tabulaturbuch,* that harmonize E-Phrygian melodies with a few A major chords. "*Da Jesus an dem Kreuze stund"* includes an internal A major cadence.[154] "*Christus, der uns selig macht*" has both internal cadences and a final one on A major.[155] The *Preludium* of *Te Deum laudamus* by Dietrich Buxtehude (1637-1707) contains both A minor and E major cadences with a pedal part that emphasizes the minor-second interval above E in the Phrygian mode.[156]

The *cantus firmus* of BWV 686 is definitely in E Phrygian. That is shown in Example 5, the Schenkerian graph of the *cantus* alone which points out the *Urlinie*

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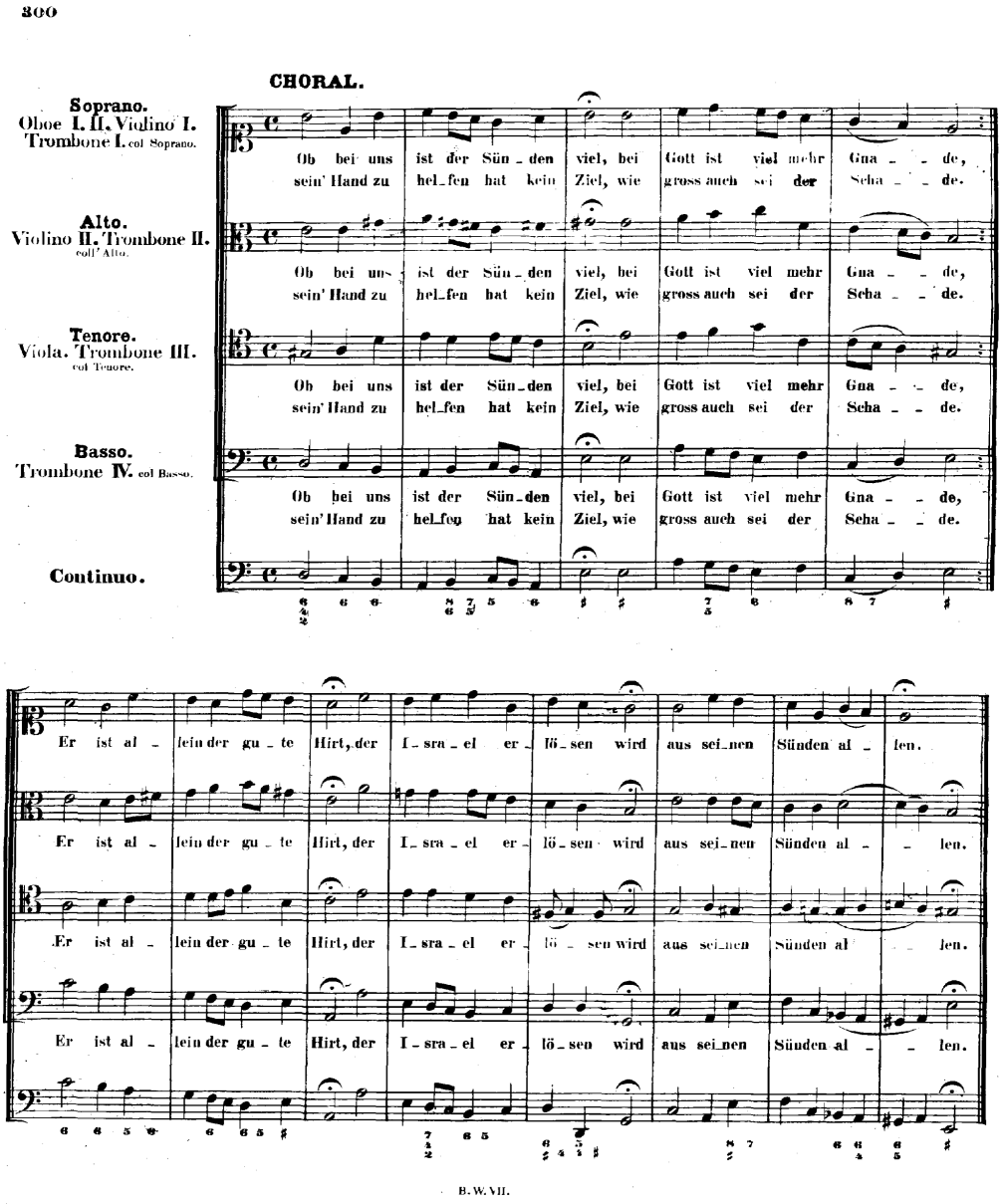
[153] Wolff, *Bach: Essays,* 207.

[154] Samuel Scheidt, "13. *Da Jesus an dem Kreuze stund*," *Das Görlitzer Tabulaturbuch*, SSWV 441-540, 20, at http://conquest.imslp.info/files/imglnks/usimg/5/5d/IMSLP304888-PMLP493083-Scheidt_Das_Görlitzer_Tabulaturbuch_Score.pdf (accessed 7/21/2020).

[155] Samuel Scheidt, "15. *Christus, der uns selig macht," Das Görlitzer Tabulaturbuch*, SSWV 441-540, 22, at http://conquest.imslp.info/files/imglnks/usimg/5/5d/IMSLP304888-PMLP493083-Scheidt_Das_Görlitzer_Tabulaturbuch_Score.pdf (accessed 7/21/2020).

[156] Dietrich Buxtehude, *"Praeludium," Te Deum laudamus*, BuxWV 218 at https://imslp.simssa.ca/files/imglnks/usimg/0/04/IMSLP483776-PMLP756141-20_IMSLP04610-Buxtehude-Chorales_3.pdf (accessed 7/21/2020).

Example 4. Chorale from Cantata BWV 38 of J. S. Bach.[157]



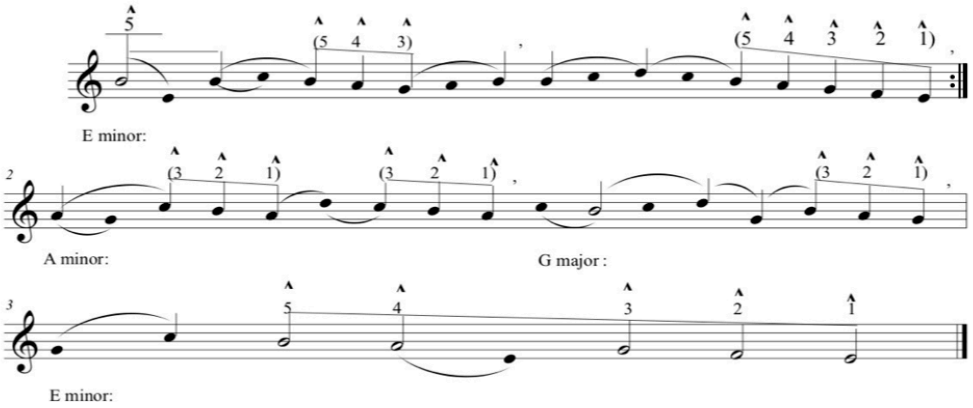
[157] J. S. Bach, *Aus tiefer Noth schrei ich zu dir*, first edition, *Bach-Gesellschaft Ausgabe*, Band 7, 283-300 (Leipzig: Breitkopf und Härtel, 1857), 300, at http://imslp.simssa.ca/files/imglnks/usimg/4/4d/IMSLP00927-BWV0038.pdf (accessed 09/12/2019).

Table 4: Tonal Plan of Cantata *Aus tiefer Not schrei ich zu dir*, BWV 38.[158]

Movement	Tonality
1	E Phrygian
2	Ends on E
3	A
4	Ends on D
5	D
6	E Phrygian

descent from the dominant to the tonic at the end. The A Aeolian section cadences on the fourth scalar note of E Phrygian, acknowledging the importance even in the *cantus firmus* of the note A. But the G cadence at the end of the fourth phrase is on the third of the tonic chord of E Phrygian, and points to the ending descent.

Example 5. Schenkerian graph of the melody of *Aus tiefer Not schrei ich zu dir*.



The phrases are in the serial barform[159] of II: ab :II cde (the repeated line is the top line in

[158] Burns, 66.

[159] Johannes Riedel, *The Lutheran Chorale, Its Basic Traditions* (Minneapolis: Augsburg Publishing House, 1987), 41.

the above graph), the first phrase and its repetition known as the *Stollen*, and the concluding section, the *Absegang*. This phrase combination came from the German Meistersingers; the simple structure is AAB, and the barform of the Meistersingers was applied to a minimum of seven verse lines. [160] The serial barform is so named when no phrases repeat in the *Absegang*.

Luther, author and composer of *Aus tiefer Not*, was compared with members of the Meistersingers Guild, flourishing all over Germany in the 16th-and 17th centuries. The barform was one of their techniques.[161] In fact, Luther was considered to be one of the great poet-composers of his day. Cyriakus Spangenberg wrote in the preface to *Cithara Lutheri* of 1569:

> Since the time of the Apostles, among all mastersingers Lutherus has been the best and most ingenious one: in his texts and tunes one does not find any unnecessary word. Everything flows and moves in a most lovely and smooth fashion full of spirit and doctrine; each word is a sermon of its own and reproduces its own reminiscence.[162]

The *stile antico* is present in Bach's chorale prelude BWV 686 and is noted by scholars. One is David Humphreys.[163] He likens the style of the piece back to Scheidt's *Tabulatura nova* 1624, and prints an example by Resinarius of the same melody in polyphonic style from 1544.[164] Christoph Wolff says of the writing that it uses older

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[160] Riedel, 38.

[161] Riedel, 41

[162] Riedel, 38.

[163] David Humphreys, 68.

techniques of motet style, and he notes the ancient church modality of this chorale.[165] Williams says the piece is in E [166] and calls it the "grand climax" [167] of the so-called organ motet: BWV 686 is the composer's strictest motet chorale, just aa the other settings in *Clavierübung* are models of other techniques. As such, Williams says:

> It has more parts, its polyphony is more continuous, there are more countersubjects, the expositions are less stereotyped and the final section more keyboard-like than the choral motets it resembles . . . [168]

The derivation from vocal chorale motets is noted by Ernest May in *J. S. Bach as Organist*. He says, "in its strict form, the chorale motet presents each line of the chorale in imitation, producing a series of fugal entries on the successive lines of the chorale tune."[169] He continues that *Aus tiefer Not* is a strict realization of this plan.[170]

For each of the five phrases of this motet, Williams writes of motives and countersubjects. He notes the dactyl figures at the end of the piece as being motifs in the *contra-punctus floridus* style, and these move the listener to the hear the note of penitence as moving towards a positive outcome.[171] He also writes about the various

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[164] Humphreys 58-9.

[165] Wolff, *Learned*, 377.

[166] Williams, Organ, 219.

[167] Williams, Organ, 422.

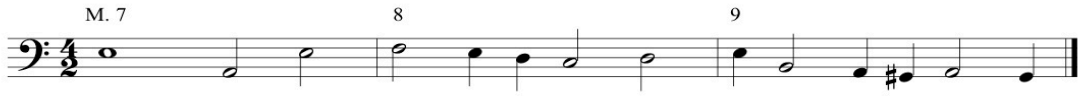
[168] Williams, Organ, 423.

[169] Ernest May, "The Types, Uses and Historical Position of Bach's Organ Chorales," *J. S. Bach as Organist: His Instruments, Music, and Performance Practices*, ed. George Stauffer and Ernest May (Bloomington: Indiana University Press, 1986), 87.

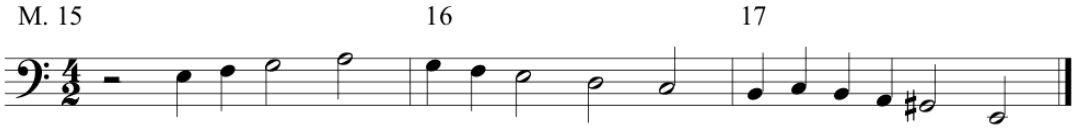
[170] May, 87.

countersubjects. The first is a syncopated quarter-, half-, quarter-note figure [172] (as seen twice in Example 6, in m. 9 of the lowest bass part, after the answer entry). The second is a descending stepwise figure (as seen in Example 7, mm. 15-17 of the lowest bass part, in phrase 2—the inversion is ascending).[173]

Example 6. M. 9, bass, of BWV 686.



Example 7. Mm. 15-17 of BWV 686.



Williams says that the countersubjects are systematically presented after each lower pedal entry, but I have found it to be not so clear. My examples (above) show the bass entries of phrases 1 and 2, where the first phrase shows the rhythm, of quarter-, half-, quarter

[171] Williams, Organ, 219.

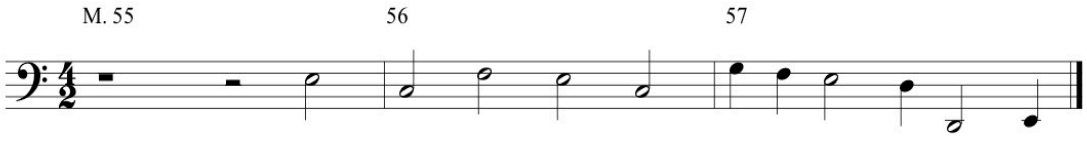
[172] Williams, Organ, 219.

[173] Williams, Organ, 219.

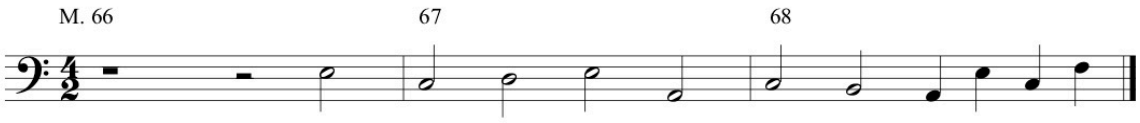
note, clearly in the music, although phrase 2 does not. The third phrase's (Example 8) lowest bass part does include Williams' first motive in m. 57, but phrase 4 (Example 9) does not. And, phrase 5 (Example 10) includes the rhythm in the beginning of the entry, which mirrors the entries in the manuals.

The first countersubject is woven into the texture throughout the piece. It is first present in the manual bass part in m. 3. Williams second countersubject, a descending stepwise figure is often present, both in descending and ascending forms. It is definitely

Example 8. Mm. 55-57 of BWV 686.



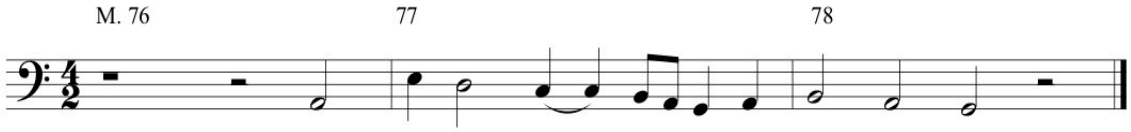
Example 9. Mm. 66-68 of BWV 686.



present in phrase 2 and elsewhere. But, these countersubjects are not as organized as Williams makes them sound.

Williams continues to discuss the countersubjects and their changes, and he writes

Example 10. Mm. 76-78 of BWV 686.



of their variations and eventually calls them "motifs."[174] Indeed they are, and the use of these countersubjects and their variations is not so systematic as it is free, as shown in Example 11, as if Bach simply had these ideas in mind, and wrote them to fill space in the lines of music. Williams seems to agree:

> The lines [of music] are so constantly allusive that a sample bar (bar 14) will contain a motet subject derived from the cantus, the same answered, and a crotchet countersubject line like the cantus in diminution.[175]

These subjects and countersubjects are part of the chorale motet form which Bach may have written to combine this older style with the newer tonality of A minor, not choosing to compose totally in the older modal style as well as in older motet form. The tonality is discussed in the next sections of this paper. The older style has been acknowledged by Radulescu, who notes that this chorale setting may have been inspiredby settings of other chorales by Mathias Weckmann.[176] The *Primus Versus* of *O lux beata trinitas* is in five parts with double pedal parts. The top pedal line, the chorale

[174] Williams, Organ, 219.

[175] Williams, Organ, 424.

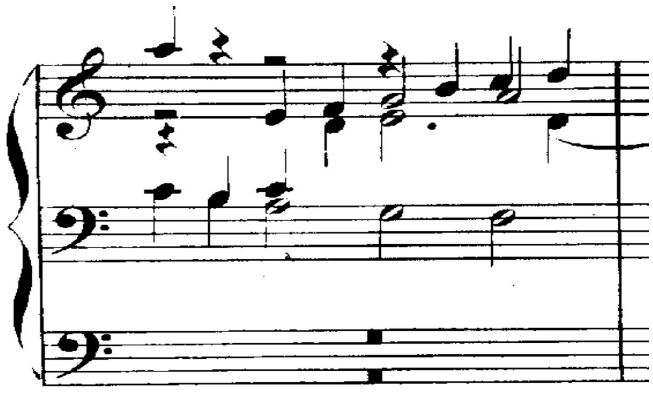
[176] Radulescu, 20.

melody, is doubled in the lowest part of the left hand. However, the *Septimus et Ultimus Versus* of

of *Es ist das Heil uns kommen her* is in a true six-part setting, four parts in the manuals, and two in the pedal with the topmost voice bearing the chorale melody.[177]

All of the above-mentioned writings on the *stile antico* and double pedal are truthful, but much more is involved in BWV 686, for not only is it an example of *stile antico* and chorale motet, Bach also weaves into the structure a surprising modern

Example 11. Measure 14 of BWV 686, example of Williams second motive.[178]



[177] See *Matthias Weckmann, Choralbearbeitungen für Orgel*, edited by Werner Breig (London: Bärenreiter Kassel, 1977), BA 6211, 33-35.

[178] From *Aus tiefer Not schrei ich zu dir*, BWV 686, Carl Ferdinand Becker, ed., Bach-Gesellschaft Ausgabe, Band 3 (Leipzig: Breitkopf und Härtel, 1853), plate B.W. III. https://imslp.simssa.ca/files/imglnks/usimg/a/a9/IMSLP00814-BWV0686.pdf (accessed 3/12/2019).

element: the tonality of A minor. Of course, the reason is unknown that Bach chose A minor over E Phrygian. However, he did push away the old for the new, even though staying within the bounds of Baroque style and practice.

Motives and Entries

The piece has been separated in the following examples into five phrases of six lines of music for easier analysis. Example 12 is of phrase 1, which includes entries in E Phrygian and A Aeolian (minor), along with motives x and y. Motive x is the short, long, short motive mentioned above, and motive y is the step-wise fourth interval, often varied (marked var.) from Williams. In this score arrangement, the top four voices are played by the organist on the manuals of the organ, and the bottom two bass lines are played on the pedalboard. Since the melody of the chorale tune is in the second bass part, played on the upper notes of the pedalboard, it is not distinctly heard as a solo line, surrounded by all the other musical lines. Even made up of long-sounding notes, it is another part of the dense texture. The second bass line is similar to a tenor line in that it is the second-lowest line in the score. Along with its position and the longer notes, the melody's compositional placement is in a direct link from motets in the Renaissance and earlier Baroque history. The placement of the melody in the second line from the bottom is reminiscent of the *Tenorlied* of Resinarius' *Aus tiefer Not* of 1544 mentioned earlier.[179]

Phrase 1

The entries for the opening phrase are present in mm. 1-9--all parts are added.

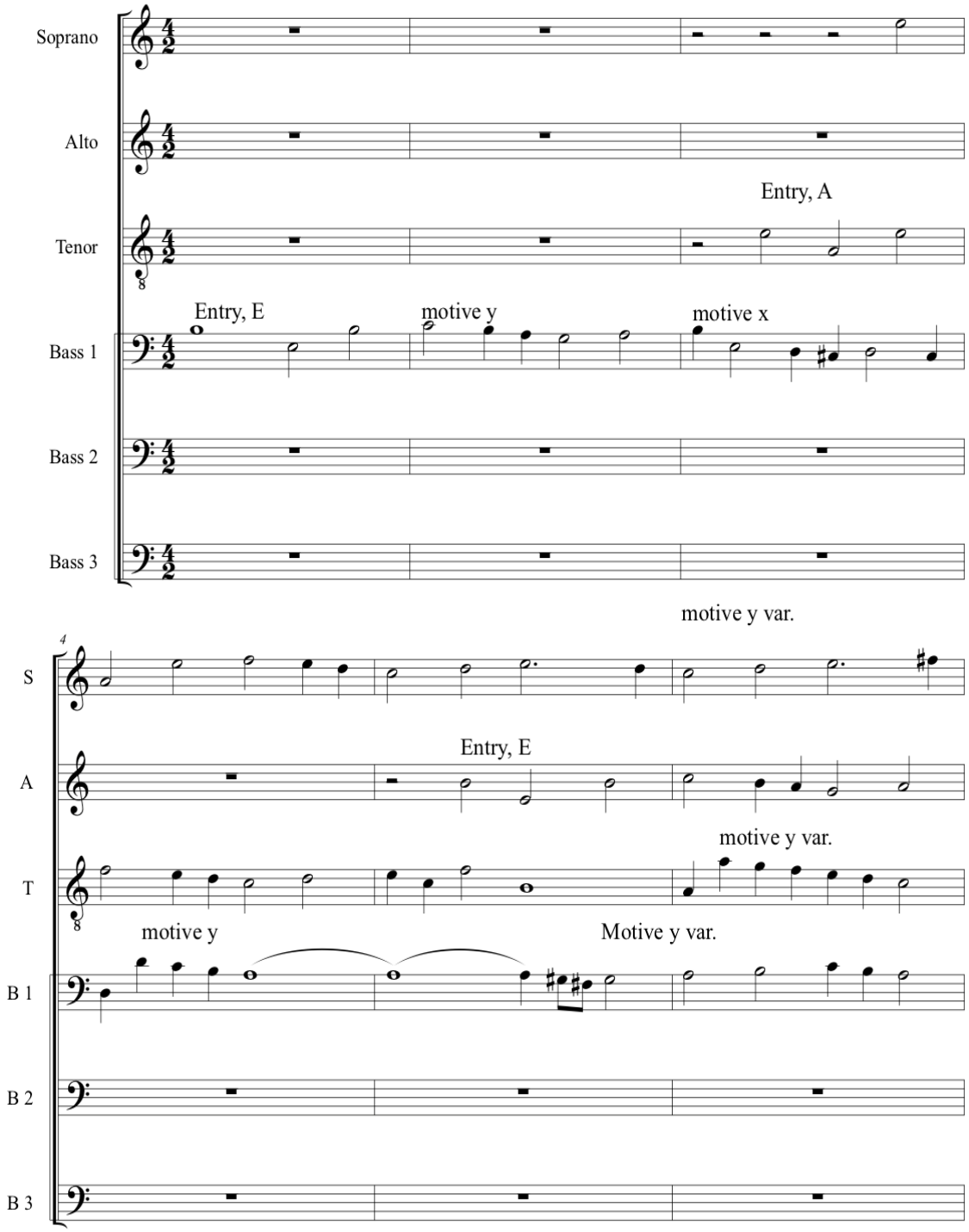
[179] Humphreys, 59.

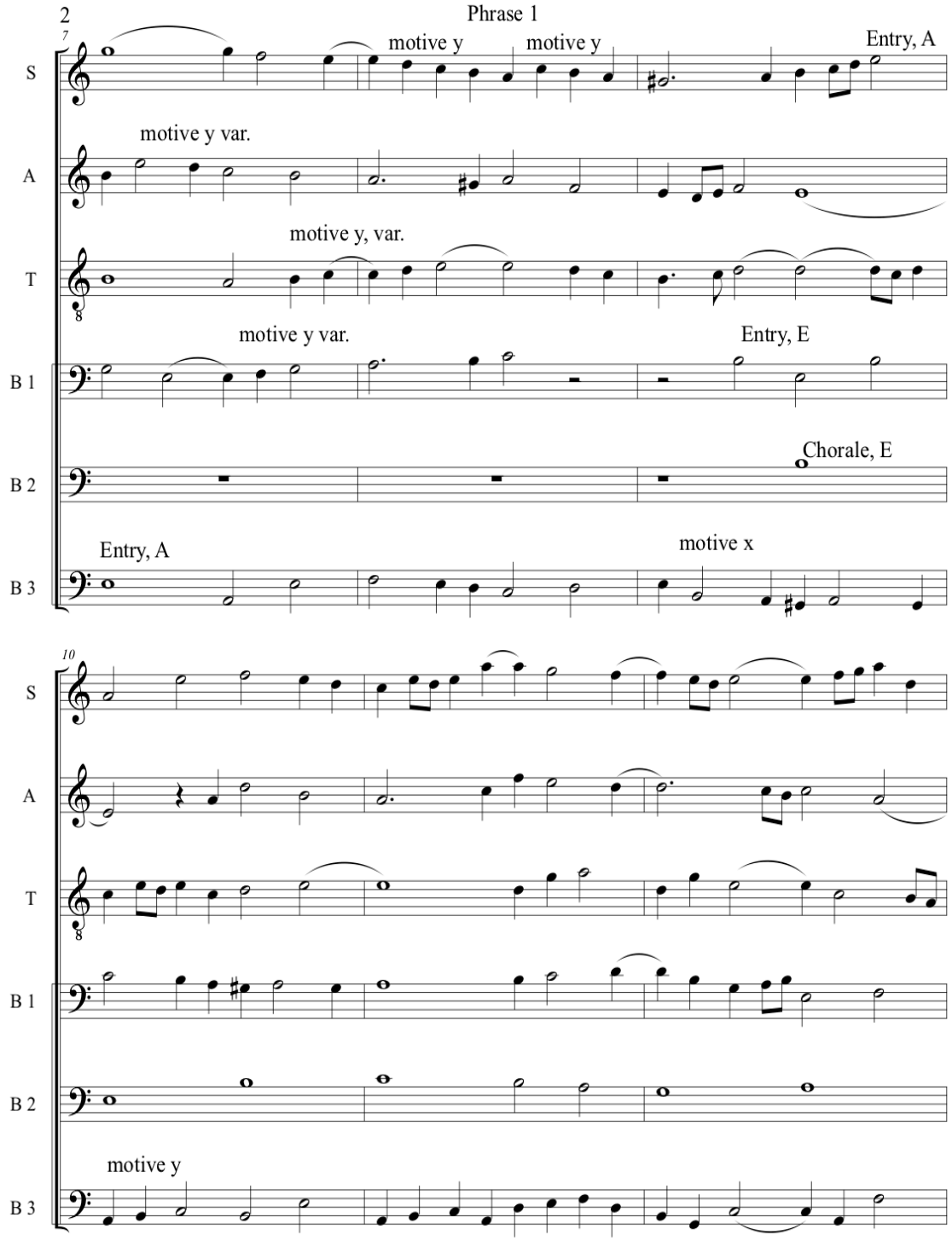
The first entry is in E Phrygian, the second in A minor, the third also in A minor, the fourth in E Phrygian, the fifth in A minor, and the last, consisting of the *cantus firmus* itself in E Phrygian. The entries in A and E are equal in number. The opening single line emphasizes both E Phrygian, by the perfect-fifth leaps in m. 1, and A by the arrival on C, the third of the chord, in m. 2. The first inter-phrase cadence to a in m. 6 sets up A minor as the tonic key. The cadence comes after tonic, predominant, and dominant sonorities in m. 5. The pattern is repeated, ending on the downbeat of m. 10. After a repeated dominant-tonic in m. 10-11, the phrase is extended to end on A minor in m. 13 on beat 3. The use of E major, as dominant-functioning chords, especially the seventh chord in mm. 9, 10, and 13 before the A minor chords supports the tonality of A. The following Example 13 shows the repetitions of the original motive in E minor in the first phrase in the three voices where it appears—including the chorale melody in the bass 2 voice. While the above entries are occurring, example 14 shows the imitations of the real answers to the original motives in the music. The lowest line is the lowest bass part.

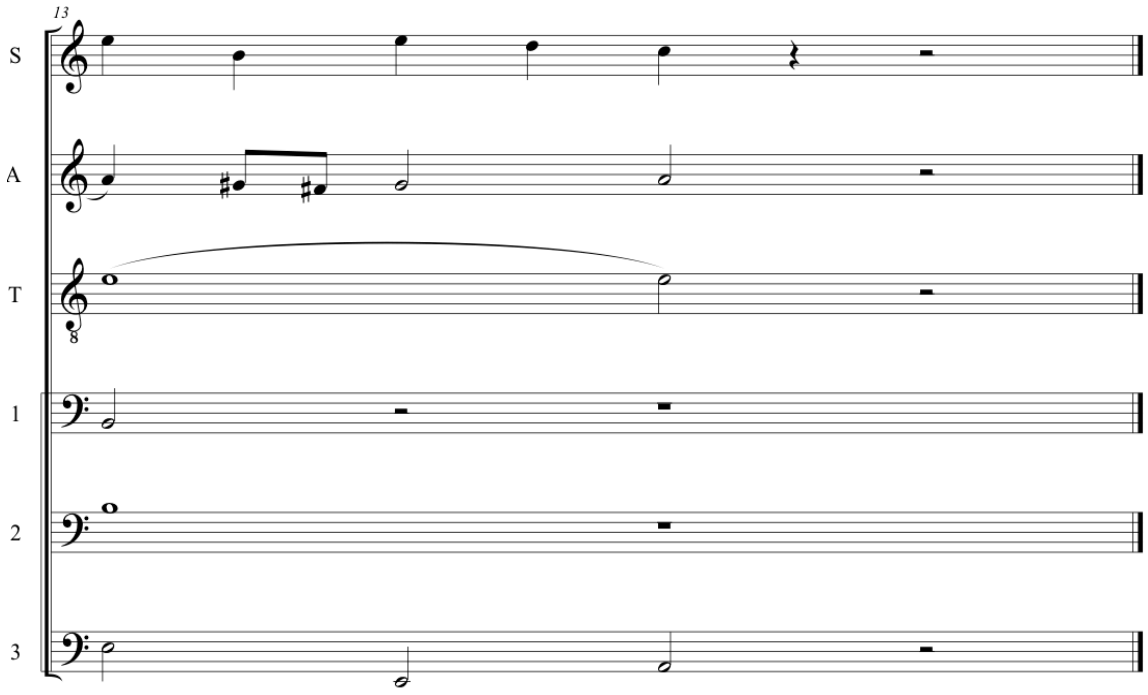
Phrase 2

Example 15 shows phrase 2's entries which emphasize E, A, E, E, A, and E, respectively, with more of them starting on B, and moving to E than starting on E and moving to A. For instance, tenor notes B-C-D begin the section, overlapping with phrase 1. The E does not appear in the tenor line until the B-C-D line is repeated a measure later in quicker notes. The melody is clearly E Phrygian. The first inter-phrase cadence in m. 18 is A minor, as well as the one in the middle of m. 19, and the cadence at the end of the first section, m. 22, is a dominant E major. This chord leads back to the opening E and A

Example 12. Phrase 1 of BWV 686.




2
7
Phrase 1
motive y
motive y
Entry, A
S
motive y var.
A
motive y, var.
T
motive y var.
Entry, E
B 1
Chorale, E
B 2
Entry, A
motive x
B 3
10
S
A
T
B 1
B 2
motive y
B 3



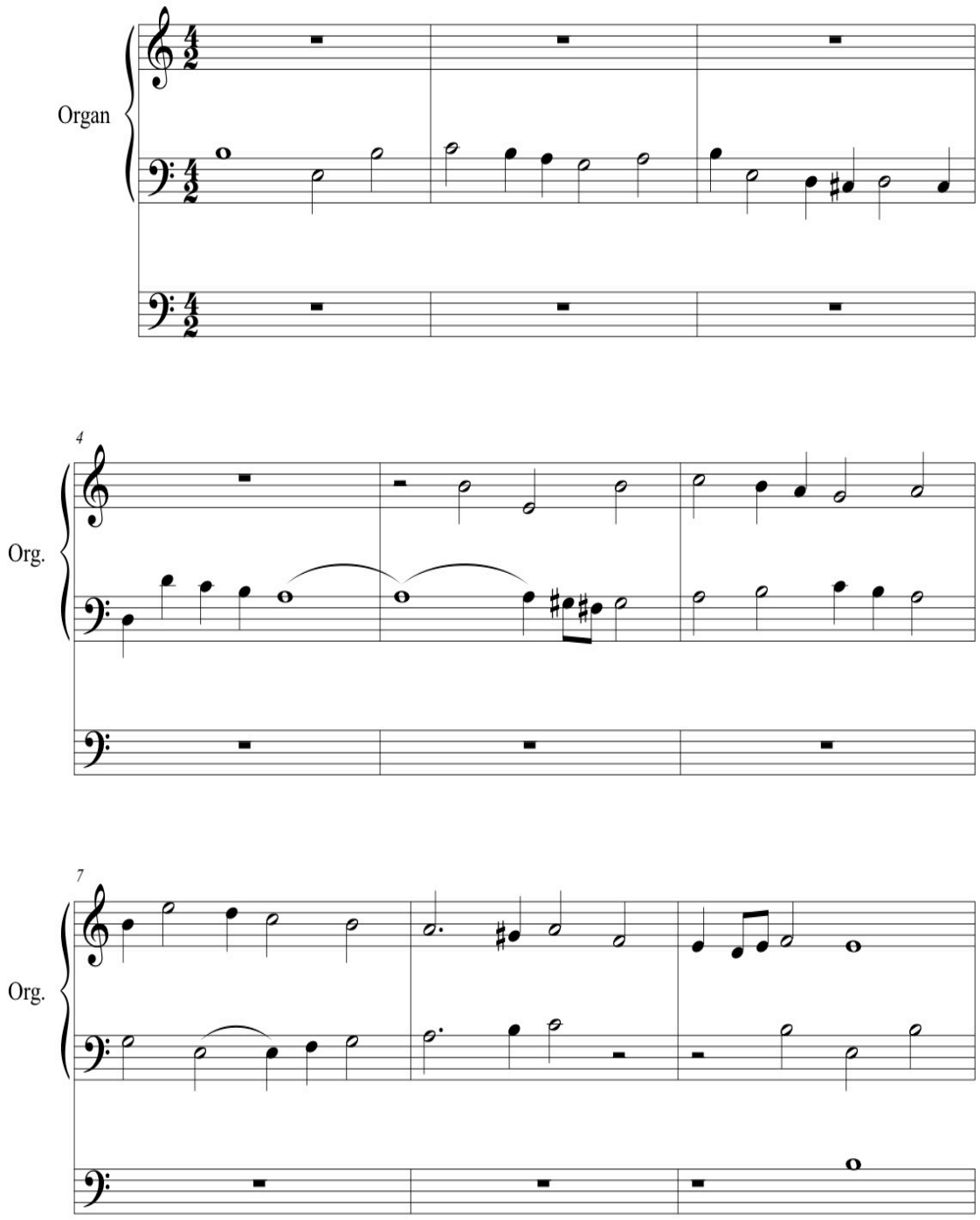
of mm. 1-2. I have marked another motive as motive z. It is two eighth notes followed by a quarter. In phrase 5, this motive will grow to be present everywhere in the music.

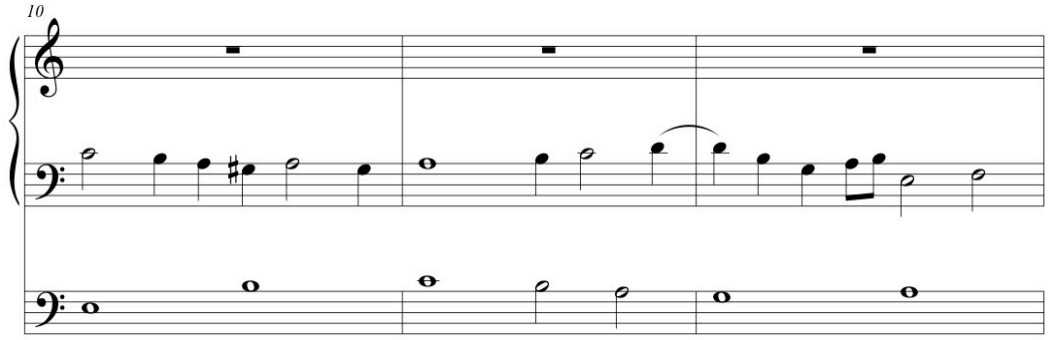
Bach's primary method of borrowing in these phrases is to write a dense framework of counterpoint and harmony around the original melody, always in the *Tenorlied* position and always in long notes. He may have chosen this archaic style to connect with music in history, but he also is using this piece to display a characteristic of his own time, that of using the writing in the tonality of A minor. While it is true phrase 2 has more entries in E Phrygian, instead of A minor, by the end of the piece, the newer tonality will shine through, helped by the push of motive z.

Phrase 3

Example 16 shows phrase 3, which begins in C major, the submediant of A

Example 13. The Original Motive of Phrase 1 of BWV 686 in Three Voices of the Six-Voice Texture.



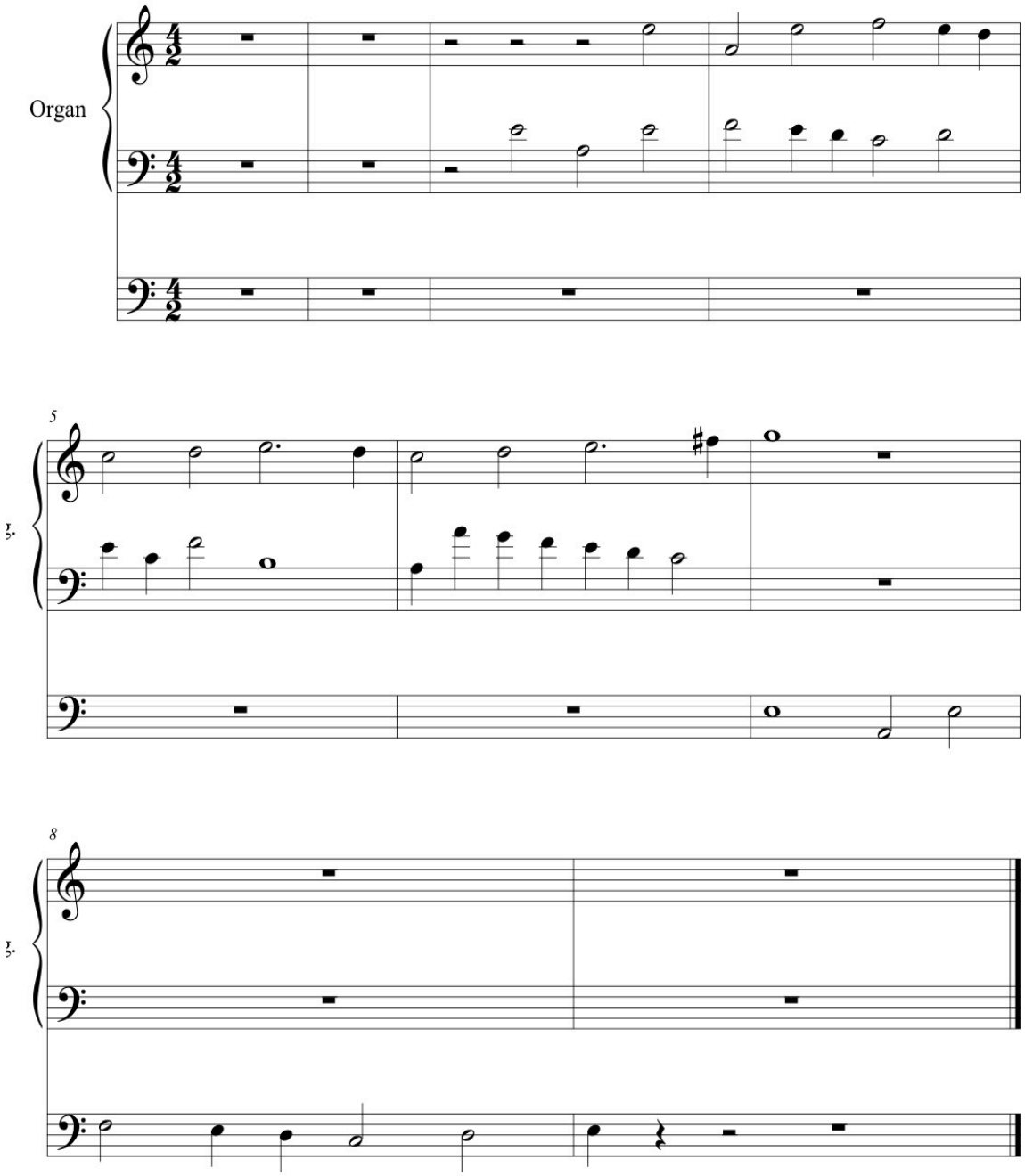


minor, but ends with a cadence on A minor. The first cadence in m. 25 is to a first-inversion A minor chord. The key of D minor is present in m. 26, followed by a return to C major in m. 28. D minor reappears in m. 31, which turns into a G# diminished chord before the A minor cadence. This phrase is in A minor, and foreshadows the A minor of the ending phrase. The D minor of this phrase is the sub-dominant of A minor, a plagal motion that strengthens A minor.

Phrase 4

Example 17 shows that phrase 4 also begins in C major, like phrase 3, and it is followed by several keys, until cadencing on A minor in m. 37 on beat 3. There is a clear tonic-predominant-dominant with- return-to-tonic progression in m. 37-38, in A minor. But the phrase does not stay in A minor, it cadences on a G major chord. The G is the VII of the natural A minor scale, the III of E Phrygian, and the V of the C major that has been used in this phrase--a parallel with the preceding phrase, which used D minor (with a passing G# diminished) to A minor. In phrase 4, a major chord with a passing F#-diminished chord to the G cadence is present. The highest note of the piece, C7, is present in m. 35, and this C falls an octave to C6 in m. 37, before proceeding by neighbor tone F to the E pitch of the *Urlinie* in m. 38. Obviously, the G major sonority

Example 14. Imitative answers to the Original Motives in Phrase 1 of BWV 686.



comes from the *cantus firmus*, which firmly stated E Phrygian as its tonality, and G major here reminds the listener of this fact. However, it is only a short moment until A minor reappears.

Obvious parallels exist in the cadences of phrases 3 and 4: plagal sounds, and a falling smaller *Urlinie* to the third of the closing chords. This cadence, however, is much more of a half cadence than that in phrase 3. There the minor sound was a return to A minor (Bach could have written A major if he preferred a half cadence). In phrase 4, the ending chord is major, a temporary move from the preceding C major in mm. 40-1. Questions of half and plagal cadences in these phrases are related to the question of E Phrygian or A minor as the key for overall piece. A new motive has been marked, w, for its large leaps—these may signify the "sin and injustice" of the text.

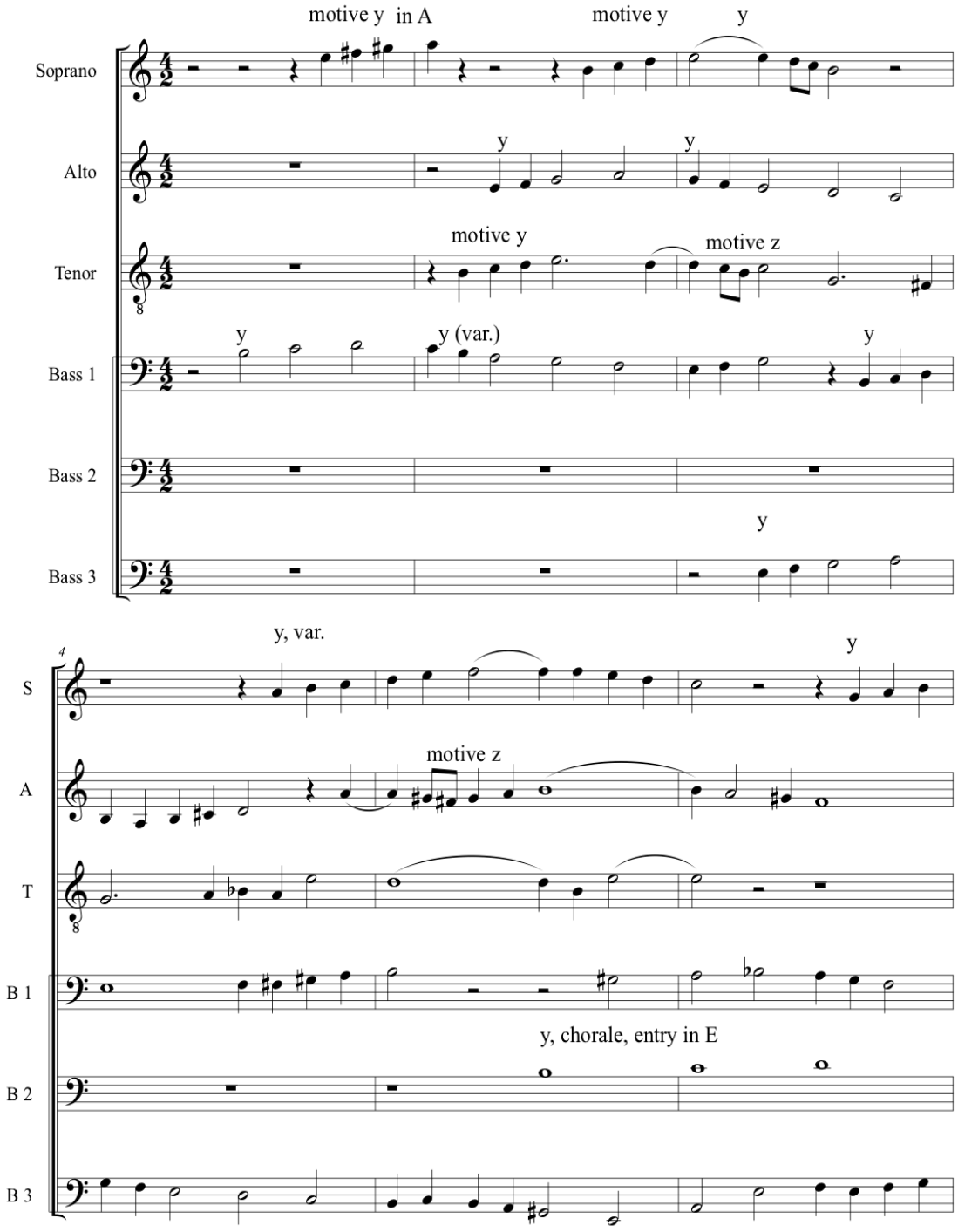
Phrase 5

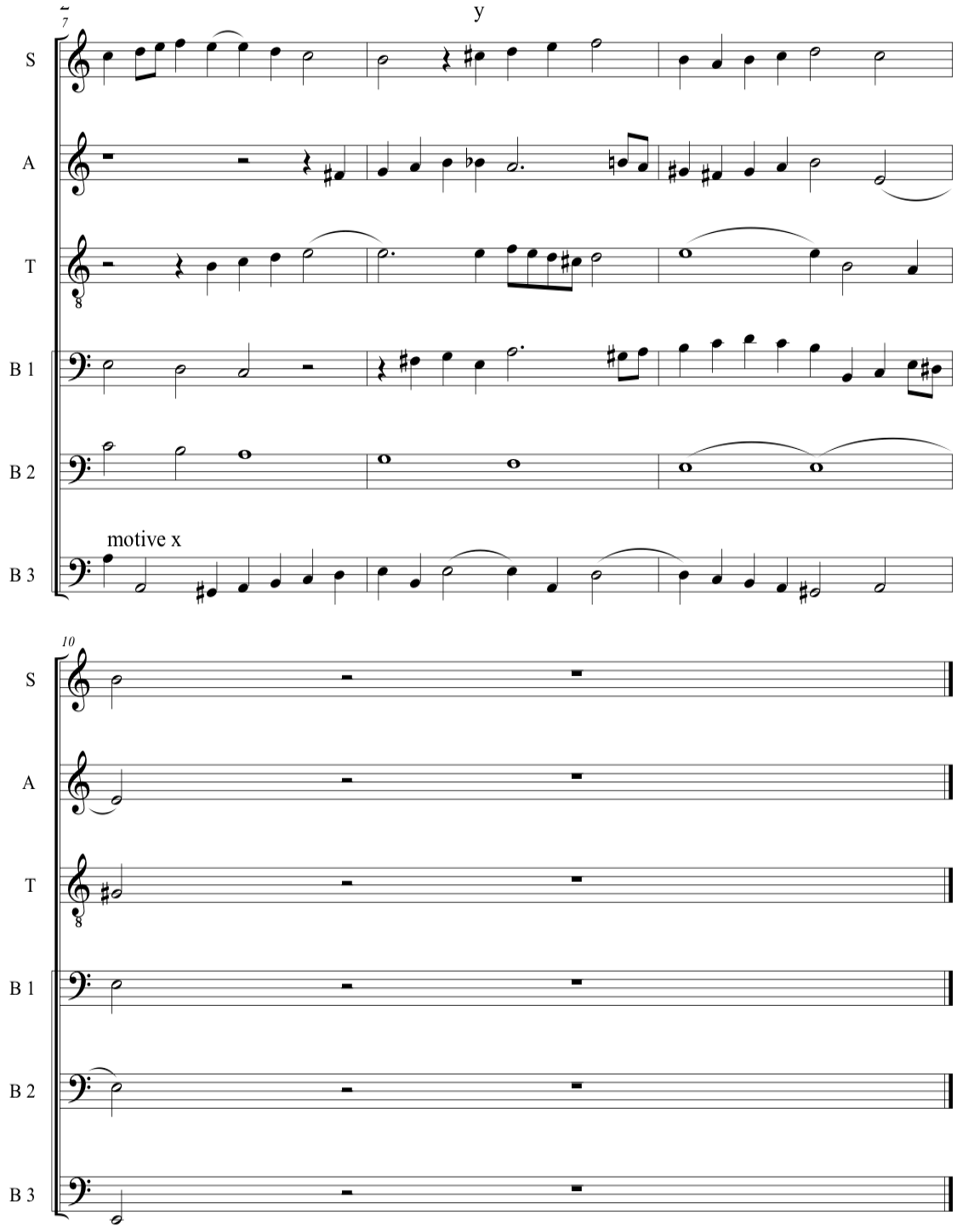
Example 18 shows that phrase 5 begins in C again, proceeds to A minor by m. 45, resolves to a C chord in second inversion in m. 47, and in root position in m. 48. Williams[180] noted the dactyl motive that emerges in all voices in m. 48, which proceeds to the end. This writing is quite different from the earlier *stile antico* style in the piece as it uses much more parallel motion. It is as if the ending points out the piece's "newness." It also continues the opposition of A minor and E major. A minor is clearly the tonic in the middle of m. 51, as well as in the beginning of m. 52, and in m. 53. But the ending is on an E-major chord.

Pelikan is one of many writers who talk about the "motive of joy" at the end

[180] Williams, II, 220.

Example 15. Phrase 2 of BWV 686.

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B 2
motive x
B 3
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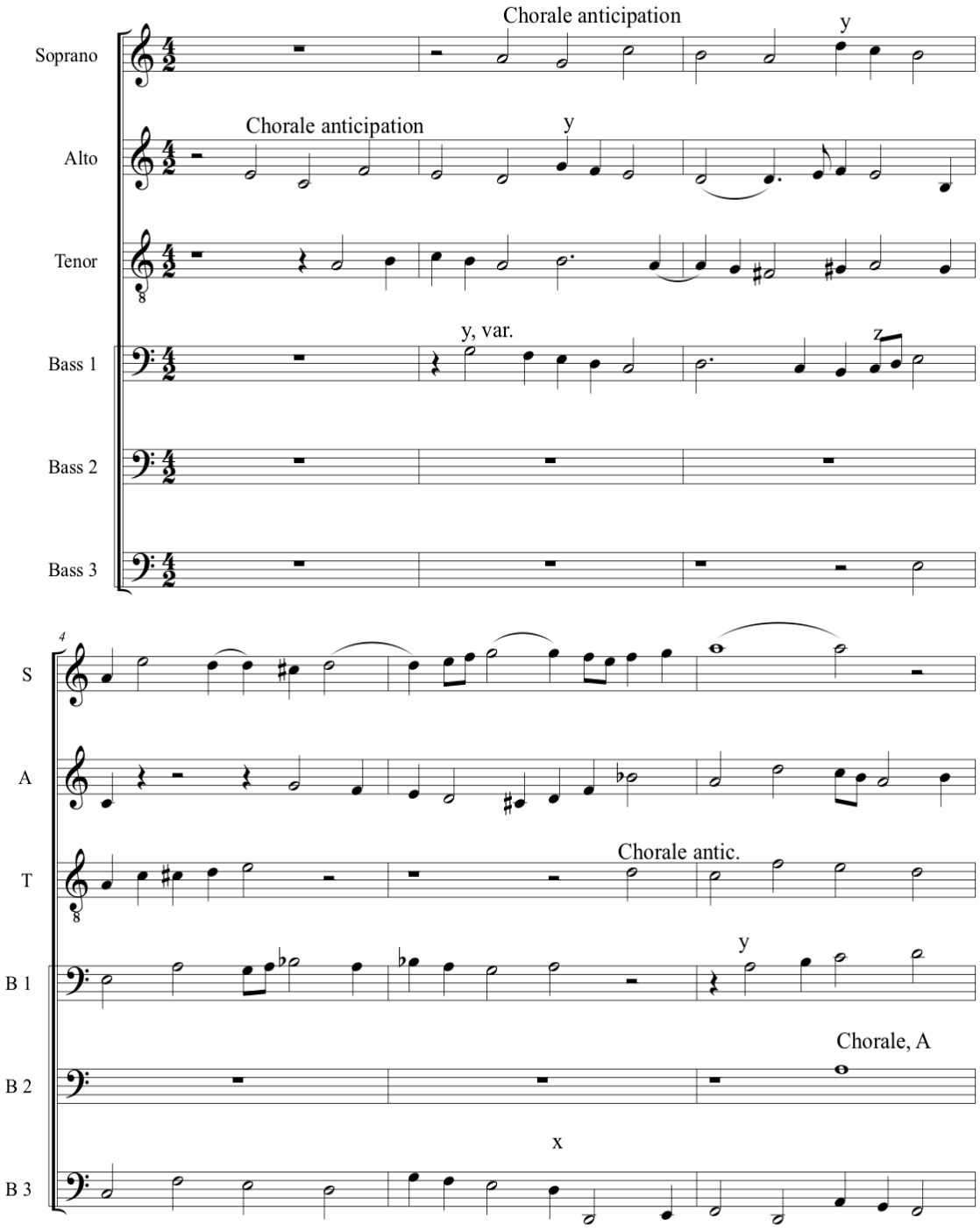
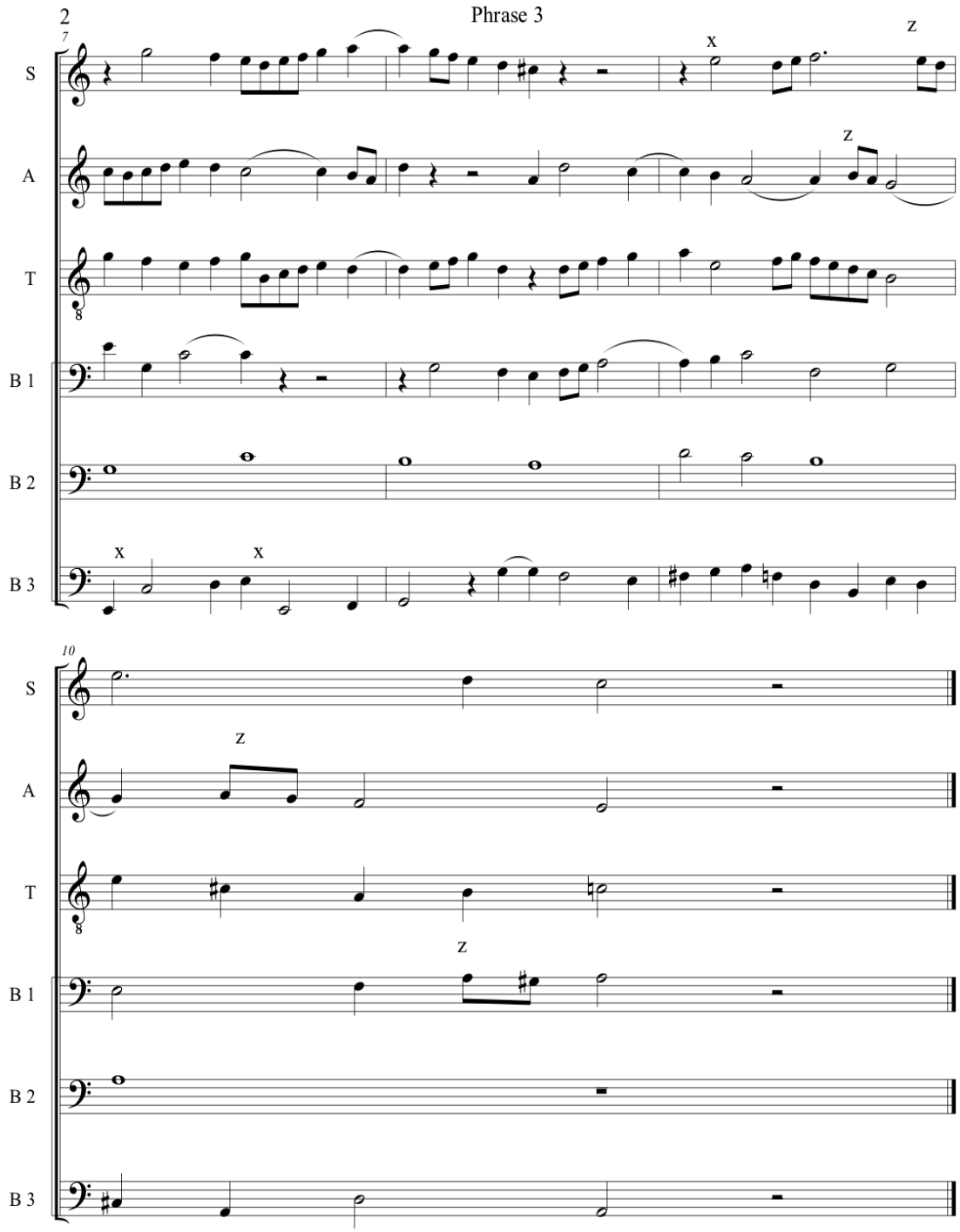
B 1
B 2
B 3

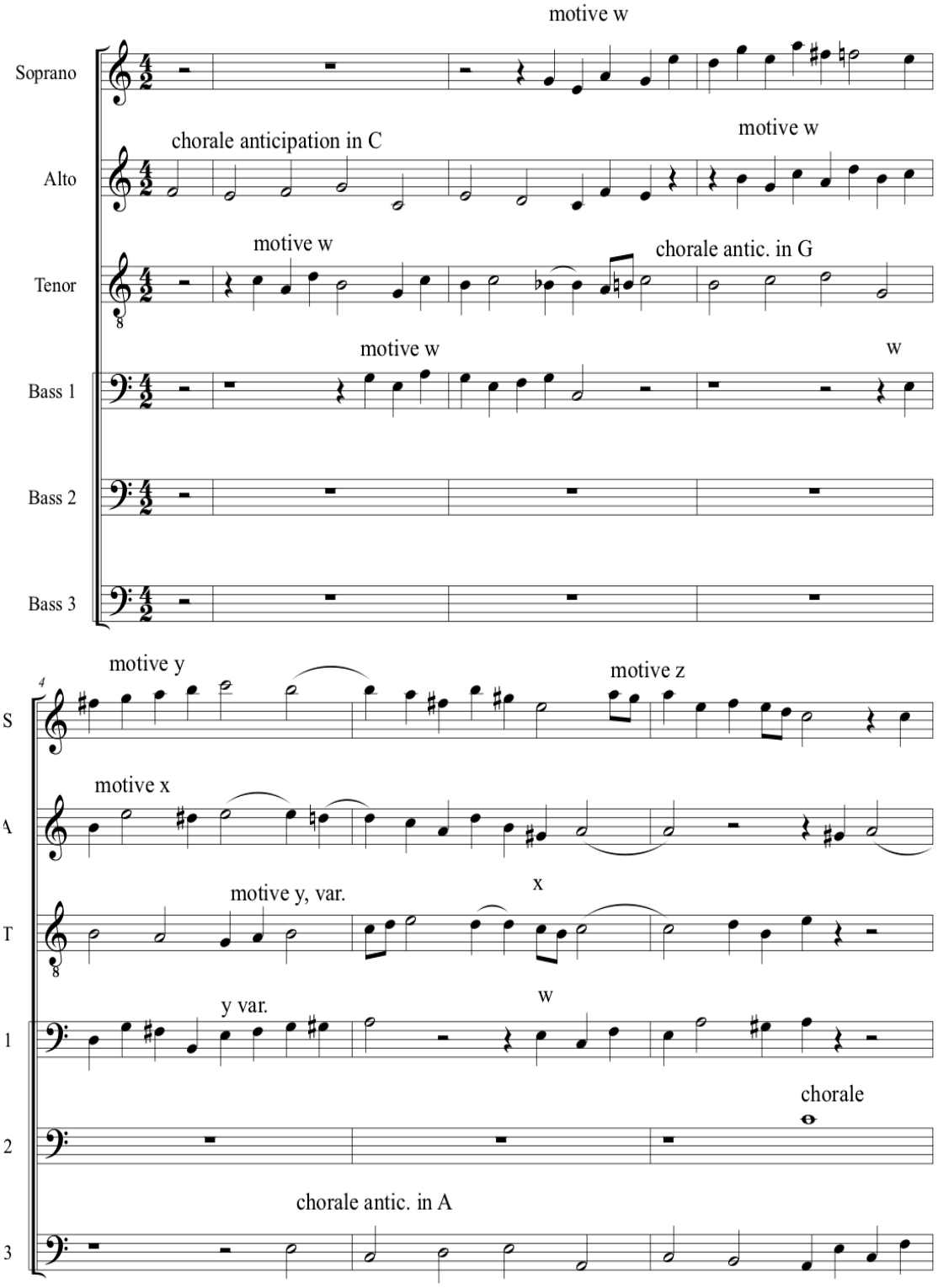
Example 16. Phrase 3 of BWV 686.

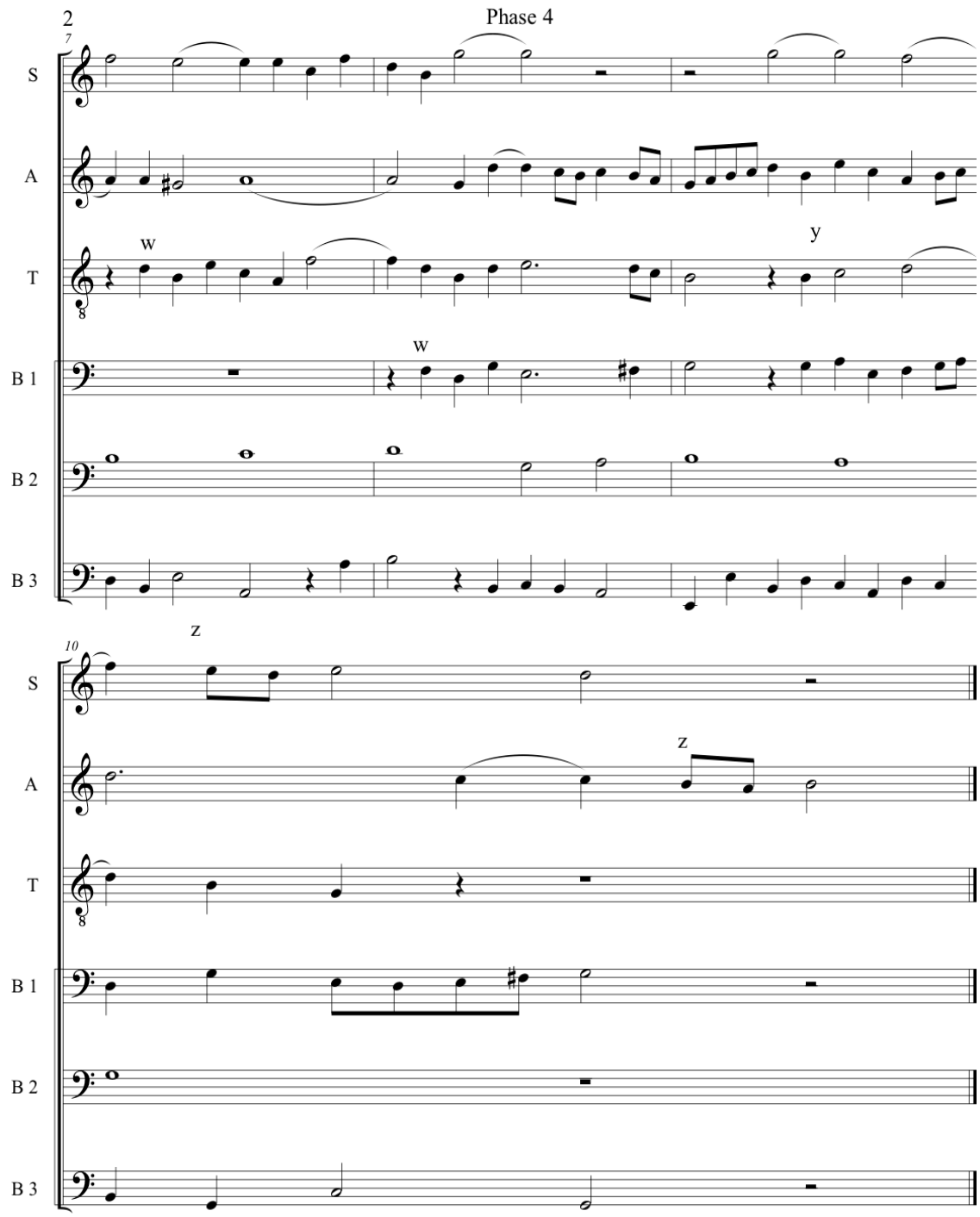




of the prelude. He says that Bach grasped Luther's doctrine of sin by the inclusion of this motive; it is a doctrine of repentance, which "all true repentance leads of itself to the joyful certainty of salvation; and so the motive of joy that struggles against the gloom of

Example 17. Phrase 4 of BWV 686.





the music and eventually gains the upper hand, has profound significance."[181]

Within all this rich texture of interweaving entries of subjects and countersubjects, Bach gradually adds new motives, and then changes them. There was an eighth-note followed by a quarter already in m. 5 of the piece. This motive takes over the whole texture at the end of the piece, but in the beginning of the work, it is simply a neighbor tone. Phrase 5 is also unusual, in the sense that there is no voice that exactly mirrors and introduces the chorale tune ahead of the chorale's entrance as there has been in the other phrases. Instead, the entry voice is a variation of the melody to come.

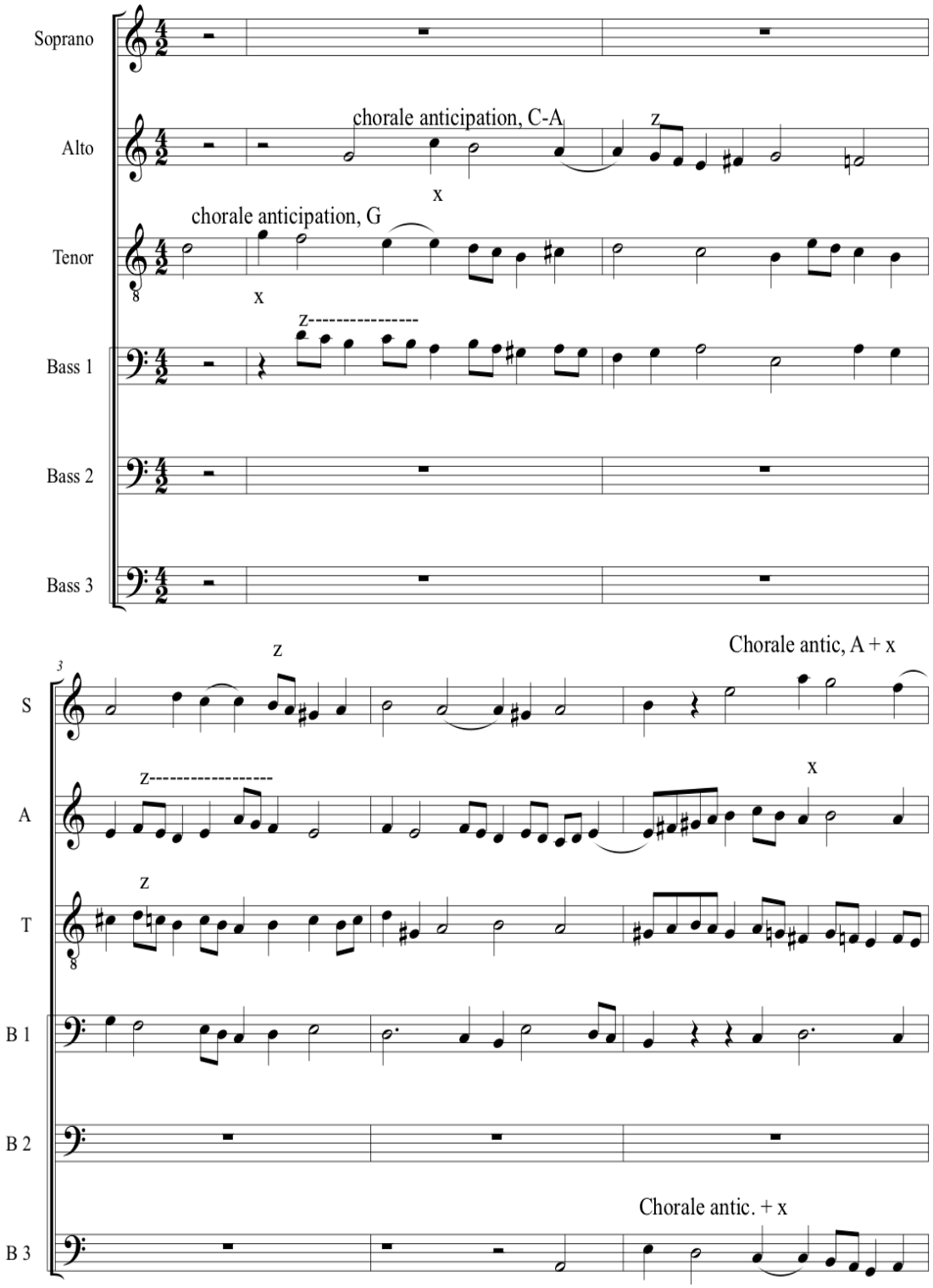
The other, perhaps more surprising element of the music is the substantial amount fragmentation in phrase five. Of course, there has been fragmentation, and overlapping of voices and motives since the beginning, but phrase five begins with the jump of a perfect-fourth interval, continuing the disjunct motion of phrase four, and this perfect fourth ushers in syncopation of the entries which continues to disrupt a feeling of a regular pulse. These syncopated lines almost war with the motive z, "the joy motive," which is present in one voice after another. No wonder the long pedalpoint is needed—it resolves the tension between the syncopated voices and the voice of the motive z, while allowing the latter motive to eventually take over the texture. This is similar, this taking over, to the tonality of A minor discussed below, which also "takes over" from E Phrygian, but has been doing so since the beginning.

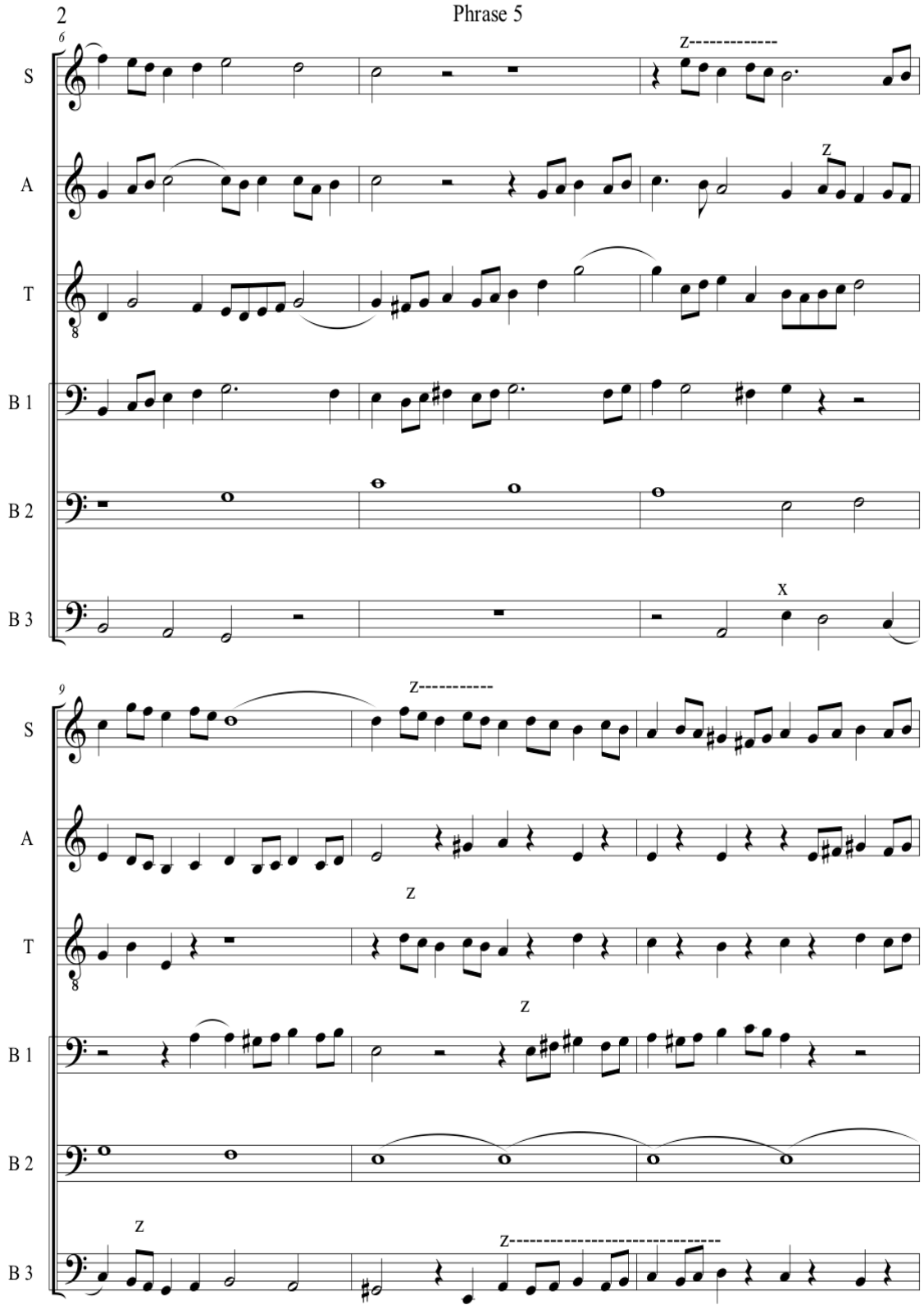
The Schenkerian Graph and Its Reading in A Minor

The comments on each phrase above are supplemented by in Example 19, the

[181] Pelikan, *Bach Among the Theologians*, 22.

Example 18. Phrase 5 of BWV 686.




2
Phrase 5
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B 2
B 3
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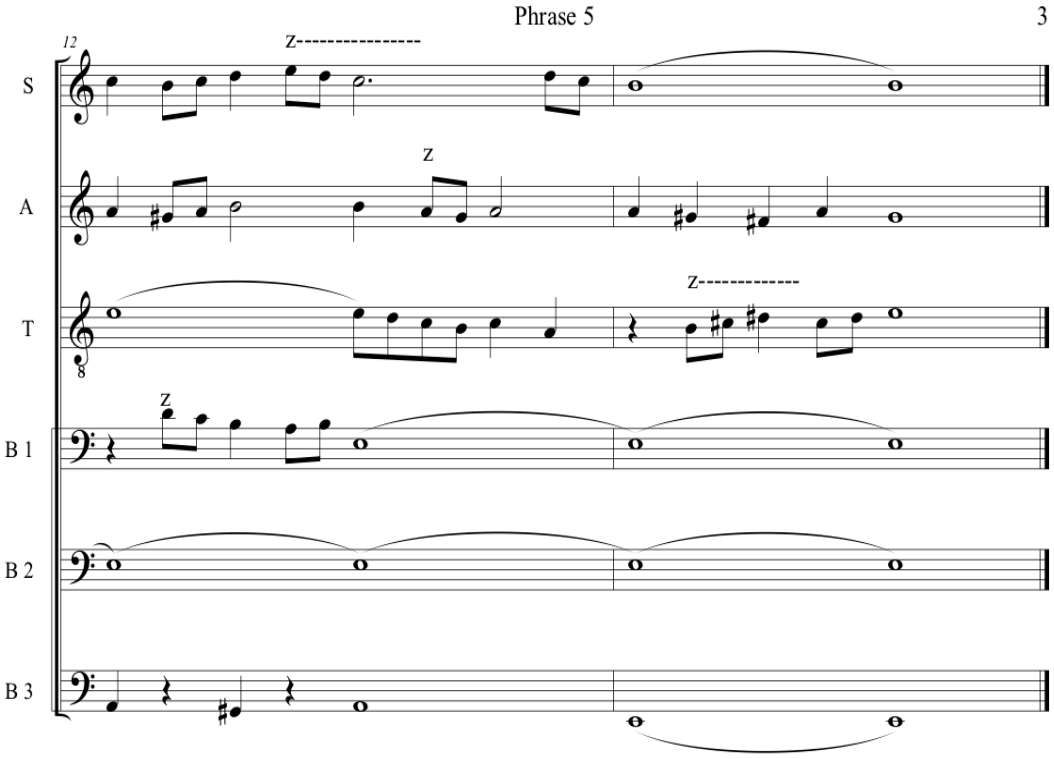
z
z
z
z----------



Schenkerian graph of the entire chorale prelude. The structure of the whole piece is clearly in A minor, starting with the first note of the *Urlinie.* The E5 of phrase 1 is not a representative of E Phrygian, but the dominant of A minor. The bass arpeggiation takes a bit longer to establish the note A in the first phrase, but does clearly do so by the cadence. These notes, then, are clearly present until the end of the piece—a surprising end.

Phrase 1

The Schenkerian graph confirms that BWV 686 is in A minor, not E Phrygian. It shows the addition of voices in the soprano line in mm. 1-5, an initial arpeggiation to the main note, E5, the first note of the *Urlinie*, of the piece, which will persist in the

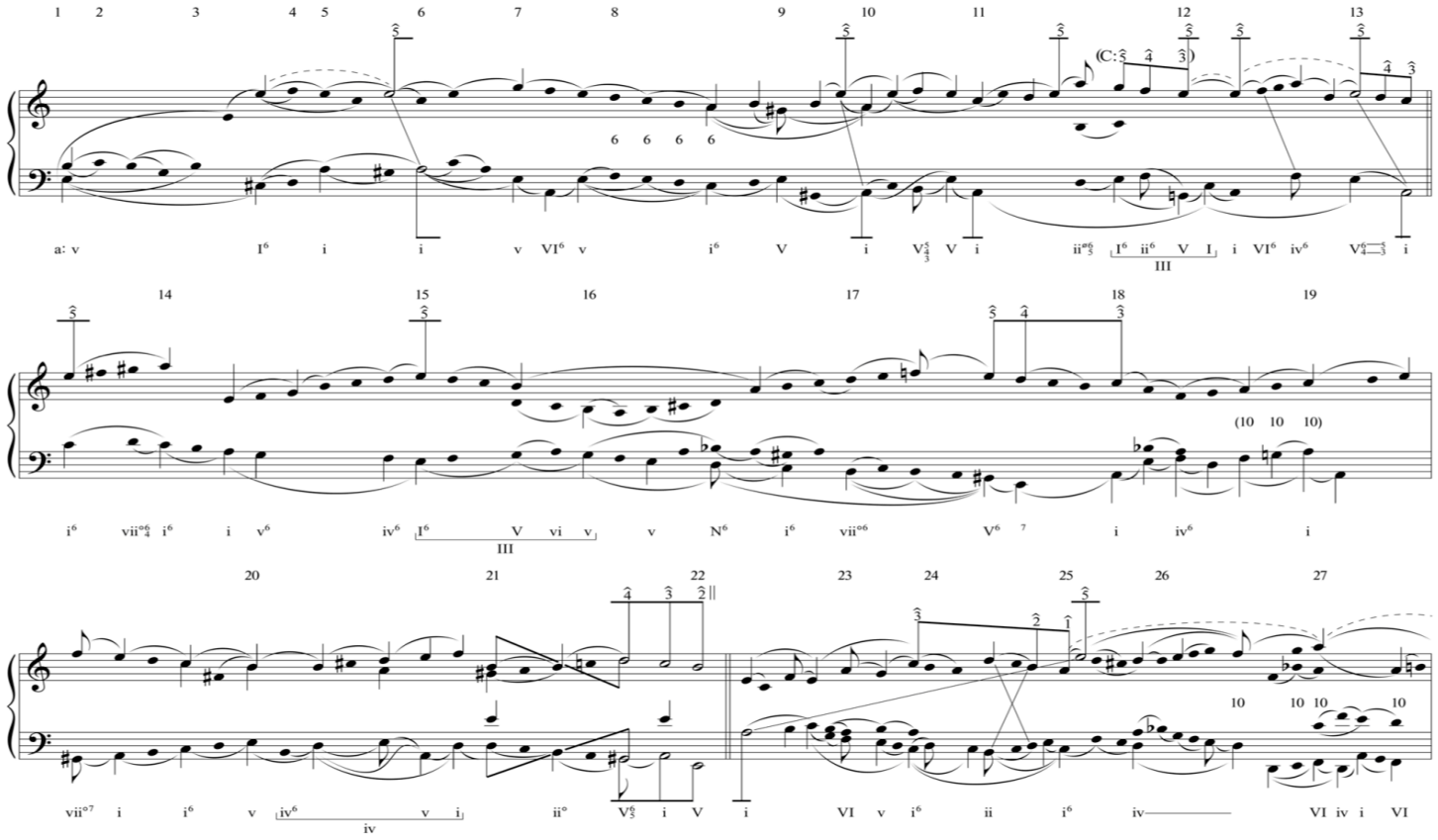
background until the end of the piece. E5 persists in the first phrase, even with a linear intervallic pattern of minor- and major-sixth intervals in m. 8, a neighbor tone in m. 10, and two leaps over the E to a high A5 in mm. 11-12. The first of these leaps leads to a small descent in the key of C major, which changes the *Urlinie's* E5 to a major-third interval above C5, and the descent from E5 is through a major-third interval comes at the end of the phrase. The bass line parallels the *Urlinie*, with the initial A3 presented in m. 6, moved, to the lower octave after the linear descent, in m. 9, and retained throughout the phrase. At the brief movement to C major in m. 12, the bass has a cadential pattern of subdominant, dominant, tonic, in C, nested within the larger cadential pattern of A minor. This entire phrase is definitely in A minor, following its bass line, which has a G# before the first two A bass notes of m. 6 and 10, lower neighbors that balance the *Urlinie*'s upper neighbors. The last measure, m. 13, has the dominant to tonic cadence.

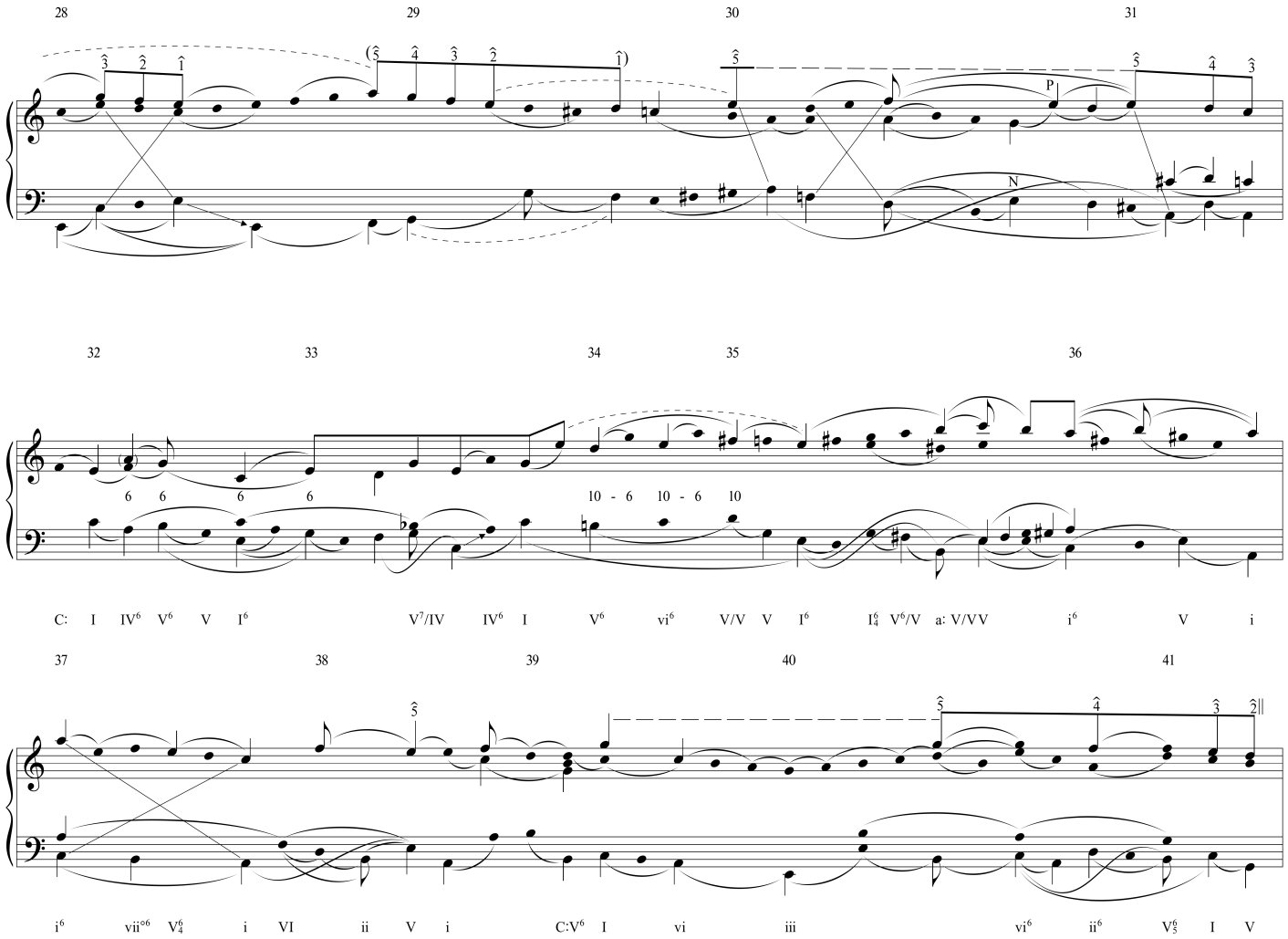
The C-major area in m. 12 can be heard as an enlargement of the initial neighbor tone C in m. 2 in the bass. The second stepwise span in the *Urlinie*, in m.12, which reaches up to the high A5, will be seen again in phrase 2, but here the stepwise spans are taken from the chorale melody. After the leap of a perfect-fifth interval descending and ascending in the first measure, the melody proceeds to C4 and moves downward by step to G3. This perfect-fourth interval is not only the inversion of the opening perfect-fifth, it is also the origin of the step-wise linear patterns in the middle-ground, and the motives in the foreground.

Phrase 2

Two elements of phrase 1 are retained in the beginning of phrase 2. The stepwise

Example 19. The Schenkerian Graph of BWV 686.




28
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30
31
P
N
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33
34
35
36
6 6 6 6
10 - 6 10 - 6 10
C: I IV6 V6 V I6 V7/IV IV6 I V6 vi6 V/V V I6 I64 V6/V a: V/V V i6 V i
37
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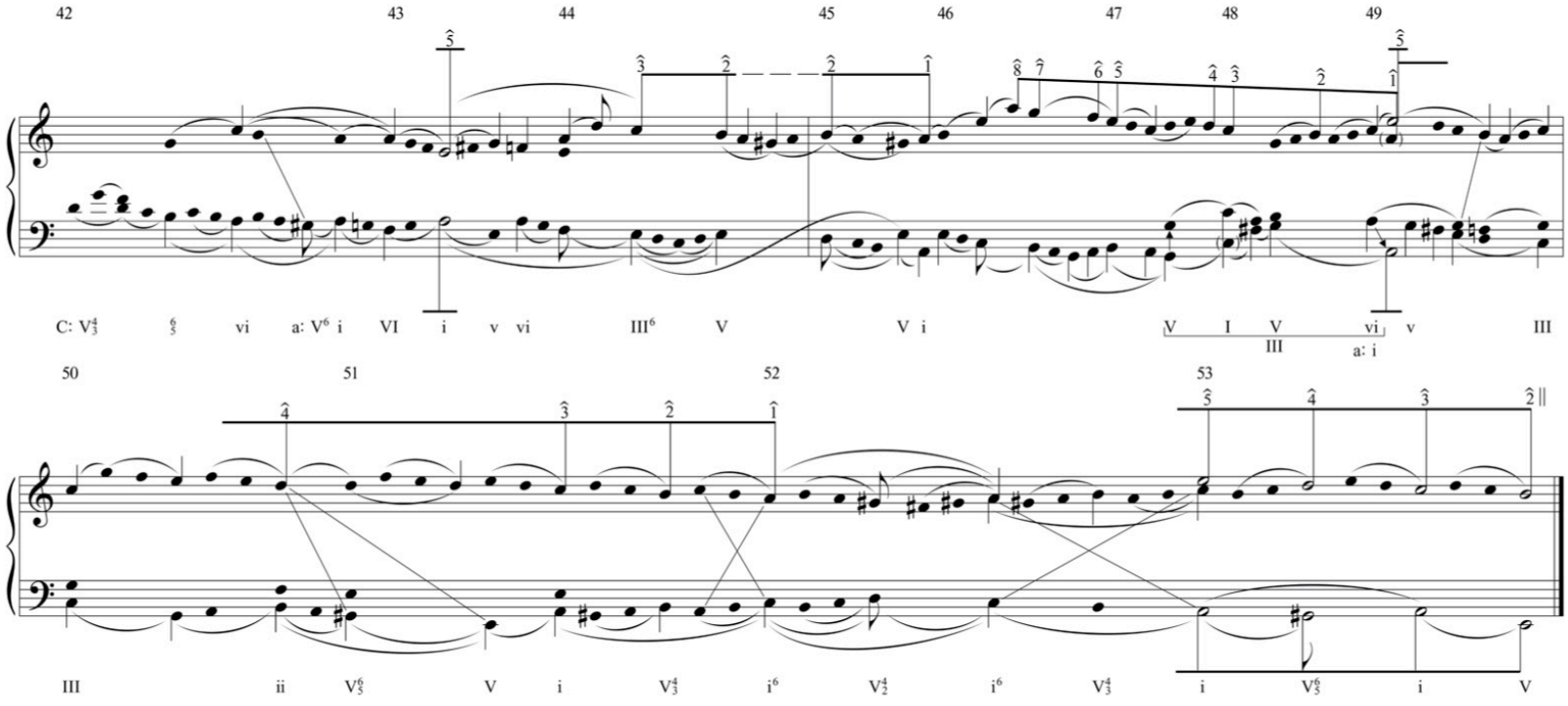
39
40
41
i6 vii°6 V64 i VI ii V i C:V6 I vi iii vi6 ii6 V65 I V


42
43
44
45
46
47
48
49
C: V4/3
6/5
vi
a: V6 i
VI
i
v vi
III6
V
V i
V I V vi v III
III
a: i
50
51
52
53
III
ii
V6/5
V
i
V4/3
i6
V4/2
i6
V4/3
i
V6/5
i
V

motive of a perfect-fourth interval from the first phrase is repeated, substituting F# and G#, in m. 13 for their respective naturals. E, as the *Urlinie* note, is retained, but there is a small descent to C at the end of m. 17. And the fundamental bass note, A, continues until m. 21. The outer voices move in contrary motion in this section. The bass line descends from an A to an E in m. 14, the mirror inversion of the E upward to A motive of m. 13; both lines move inward in another inversion, at m. 15, outward at m. 16, and parallel with neighbor motion at m. 19. The motion consists of parallel-tenth intervals in mm. 16 and 18. Tonally, Bach introduces the Neapolitan chord in m. 16, which resolves through a viio6. In m. 21, a dominant-seventh chord is unfolded at the end of the passage to a half cadence. This cadence contains repeat signs in the original chorale, as it does in the chorale prelude. The second time we hear the half cadence, after the repeat, propels the music onward to the third phrase. In phrase 2, there is a temporary area in C again, and an area in D minor in m. 20, complete with cadence. D minor is the subdominant of A minor, and moves to the dominant, E, at the final cadence of phrase 2. D minor was present in the first phrase, near the beginning of m. 4, and at the cadence in m. 12, but in phrase 2, it is expanded to a temporary tonicization. It should be noted that D is the highest note in the chorale melody in phrase 2, so the D tonicization is a reference to the chorale's note D.

Phrase 3

This phrase is securely in A minor, as it was in the chorale melody. Evidence for this is the opening perfect-fifth interval between the soprano and the bass, the opening arpeggiation from the first E4 in the soprano, up an octave to the next E5, and then the

soprano moves further to the high A5, a note that recalls the bass's opening A, and other C to A passing motions in mm. 12-14. While the soprano is ascending, the bass moves downward in contrary motion, emphasizing D by mm. 25 and 27. D minor becomes strong by the end of the phrase with the voice exchange at m. 30, and is also the penultimate chord before the cadence at m. 31. D, again, is the highest note of the soriginal chorale in this phrase. The cadence of phrase 3 is plagal. Motivically, the four-note descent from soprano A5 to E5 is carried over from phrase 2, and a retrograde of this exists in the bass in m. 30. The motive is elongated in the soprano in m. 29 to include the note, D, and completes the *Urlinie* transference to D minor.

Phrase 4

Another initial ascent by linear minor-sixth intervals, and a 10-6 alternating pattern, reaches up to high C6 in m. 35, the highest note of the piece. The arrival at this note is also marked by the previously-seen fourth-span of E up to A in the tenor voice, this time with an added chromatic passing tone. This C, and the opening sonority, begins an emphasis on C major, and the final cadence of the phrase in m. 41is a half cadence, which like the half cadence at the end of the second phrase, must continue. A half cadence will also be present at the end of the fifth phrase, so the cadence in phrase 4 is a prediction of the end of the piece. In phrase 4, A minor inserts itself into the prevailing C major at mm. 35-9. This is both a remembrance of the opening of the piece, and an affirmation of C through its submediant. Indeed, the harmonies return to C major right after this. Motivically, there is a downward fourth-span, from G to C, in the soprano voice leading to the cadence. Of course, Bach must cadence on a G chord as the original

melody did. But, he cadences his own way, by making it a half cadence, reinforcing the key of C major from the neighbor note of the first phrase.

Phrase 5

The last phrase begins in C major, but quickly progresses to A minor by way of the G# in the bass line in m. 42. Another initial arpeggiation in the soprano leads to high A, which progresses down a minor-sixth interval to C, but returns to an implied E in m. 39. In mm. 44-46, there is a downward-moving melodic fourth interval from the neighbor note D to A in the soprano, reinforced by the low A in m. 45. This A is repeated under the implied soprano E in m. 49 (after a lower G in a cadential formula in C major), and the motion begins a downward –fifth span in A in mm. 50-52. This motion, with accompanying bass chords of tonic, dominant, tonic, dominant, and tonic again, might be seen as the final descent of the piece except for one note—the bass C in m. 52 is not an A and the resolution needed to a tonic chord in root position at the end of a piece is not present! Instead, Bach signals here that C was an important note in the piece by means of the imperfect-authentic cadence.

Thus, he begins to write the *Urlinie* and bass arpeggiation again, with the soprano E and bass A in m. 53. The line descends as the ends of pieces most often do, but there is an abrupt half cadence that finishes the work, instead of a final tonic chord. The descent and bass arpeggiation is thus, unfinished, and the work must continue, as fits the words of the form of the piece, "chorale prelude." A prelude is a prelude to something, here, most likely a chorale, possibly sung by the congregation, in the worship service.

The uniqueness of the first not quite-complete closing *Urlinie* and bass line at m. 50, followed by the interrupted actual closing at m. 53, is signaled motivically by the three-note, filled-in, major- and minor-third intervals that break out in mm. 50 and following. This motive, mentioned above, I believe, comes from the last verse of the chorale, which speaks of the Good Shepherd freeing Israel from all its sins. The motive also refers to the chorale's lowest three notes in the last phrase, the E3-F3-G3, but put by Bach into faster rhythm. The motive looks backward to the chorale, and forward to forgiveness.

Conclusion to the Graph

The graph proves conclusively that Bach wrote *Aus tiefer Not* in A minor. This is shown by the *Urlinie* descent to A in m. 52. That this *Urlinie* is not quite complete with an imperfect-authentic ending, signals that there are still remnants of the E Phrygian mode in the piece. But the last chord of the piece, an E-major chord, is not one of them. This chord is a dominant in the key of A minor, and fulfills the same role as the E-major chord at the end of the second phrase at the repeat—the role of the half cadence, the role of continuation. However, other remnants of E Phrygian remain in the piece. One of them is the strong presence of C major in Bach's prelude. In 1563, Gallus Dressler, a German composer, theorist, and church musician wrote of the mode of E Phrygian as having three principal cadences: on E, B, and C, and two secondary ones: on G and A.[182]

[182] Robert Forgács, *Gallus Dressler: Precepta musicae poëticæ (The Precepts of Poetic Music): New Critical Text, Translation, Annotations and Indices, Studies in the History of Music Theory and Literature*, Vol. 3, ed. Thomas J. Mathiesen (Urbana: University of Illinois Press, 2007), 127.

The secondary cadences, plus tonic, are those seen in the old chorale melody, retained by Bach in his chorale prelude at the ends of phrases. But Bach adds the C cadences internally in the phrases of his work. These C cadences might support a modal reading of the chorale prelude, but they are also the relative major key of A minor, as well as its mediant key. This C remnant of E Phrygian can be used to place the piece into A minor as well as E Phrygian.

The proof of A minor's ascendency over E Phrygian is left to the *Urlinie* descent mentioned above and to the D minor areas of the Piece. D minor, as subdominant of A minor, is first seen in m. 12, moving to the dominant at the end of the first phrase. It does the same at the end of phrase two, after being tonicized at m. 20. A plagal cadence uses it at the end of phrase three, and it is the supertonic in phrase four in m. 40, another subdominant function, leading to dominant at the end of the phrase. This use of D minor as the subdominant of A minor helps us hear the piece firmly in that key, certainly as much as the use of E major in both triads and seventh chords in the early phrases of the piece (mm. 13, 17, and 21) These are dominant chords, they move to tonic chords or function in half cadences. They are not E Phrygian cadential chords. It is the last chord, the E chord of the half cadence at the end of the piece that has confused musicians over time into believing that Bach's chorale prelude is in the E Phrygian of the *stile antico* texture. But Bach fuses modality and tonality; the hopefulness of the last line of text is reflected, changed from the depths of despair of the opening, by the expectant dominant in the key of A minor—the hope of going on to an A minor chord. The "motive of joy" is after all at the end of the piece, and takes over the texture. I think this "taking over" by the motive z is just another signal of the change from E Phrygian to A minor. While the

motive grows into a near perpetual motion at the end, and A minor was present from the beginning of the work, nevertheless, both of these elements show that Bach was putting aside the older modality for his own era's tonality, while blending his newer ideas about tonality with an ages-old chorale motet structure. It is a perfect summary of the old and new in his time. He moves modality into tonality, connecting with his past, and, to him, his own era.

And Bach does something else that confuses the A minor cadence even more, or perhaps confirms it. There is an alto secondary line that can be read in E major in the last measure of the piece. But here again, this is not E-Phrygian, but E major, the dominant of A minor--confusion and confirmation, both! If the piece were in E major or E Phrygian, the A minor chords and *Urlinien* would signal an extremely strong subdominant, so strong that the subdominant would be taking over the entire piece. And that is essentially what it does, and changes the tonality to itself, A minor.

It should accordingly be remembered that Bach did all this in a chorale prelude, which is a prelude to something else. And, it is this motion to something else that confirms that the last chord is a dominant. It leads onward just as the dominant chords did in the earlier part of the piece. In the worship service in Leipzig there were many opportunities for preludes:

<u>Order of the Divine Service in Leipzig</u>
<u>On the First Sunday in Advent: Morning</u>

1 preluding
2 Motet
3 Preluding on the *Kyrie,* which is performed throughout in concerted manner
4 Intoning before the altar
5 Reading of the Epistle

6 Singing of the Litany
7 Preluding on [and singing of] the Chorale
8 Reading of the Gospel (crossed out: and intoning of the Creed)
9 Preluding on [and performance of] the principal music [Haupt-Music]
10 singing of the Creed [Luther's Credo hymn]
11 The Sermon
12. After the Sermon, as usual, singing of several verses of a hymn
13 Words of Institution [of the Sacrament]
14 Preluding on [and performance of] the music [another concerted piece]. After the same, alternate preluding and singing of chorales until the end of the Communion, and so on[183]

BWV 686 is a prelude, probably played before the singing of the chorale. As such an ending on the dominant would simply propel the congregation into the hymn. (Of course, the chorale also ends on E-Phrygian, and projects the duality of E and A.) Bach has preferred tonality over the modal system in response to typical stylistic characteristics of his era. It does not matter to this study that the chorale following the prelude has the same difficulty in its modal/tonal definition. The chorale prelude simply goes on (probably) to it in the worship service. But, standing by itself, A minor emerges as the tonic in BWV 686.

Through its emphasis on looking forward, the technique of tonality reflects hope in God helping the people of Israel, and for Bach's German congregation, the hope of God's "mercy:"

> *with God there is much more mercy;*
> *his helping hand has no limit*
> *however great the harm may be.*

[183] Wolff, *Learned*, 255-6. Found in the autograph of BWV 61 in Leipzig, "Nun komm der Heiden Heiland."

CHAPTER III

ADESTE FIDELIS BY CHARLES IVES

Charles Ives' piece, *Adeste Fideles,* is included in my study of organ music for the unique method Ives used when borrowing a well-known Christmas carol. It contains added dissonances and an inverted melody, and no longer sounds like a carol, particularly one for Christmas. This short work also gives a glimpse into the early music of Ives, into the beginnings of the cumulative style of his later years, and my chapter will show how Ives bent and manipulated the tonal implied chords given by the borrowed melody, pushing at tonality to form extended sounds and polytonality.

Charles Ives (1874-1954) was an organist from a young age. He was a "kind of boy prodigy" and studied Bach's Toccata, Adagio, and Fugue in C Major, BWV 564, by age 13.[184] He was considered the "youngest organist in the state," when taking the job at the Second Baptist Church in Danbury--he was 15 years old. Ives composed *Adeste Fidelis In An Organ Prelude* (1897) during his years as organist at another church, Center Church in New Haven, where the music director was John C. Griggs. This choir director was receptive to Ives' music, and he and his choir sang some of Ives' vocal music. Ives was also free to play his own organ works at the regular services.[185] Dr. Griggs seems to have become a father figure to Ives after Ives' father's death. Ives said later of Griggs that "[he] was the only musician friend of mine that showed any interest, toleration, or tried to understand the way I felt . . . about some things in music."[186] That may have been

[184] J. Peter Burkholder, Organist, 264.

[185] Frank R. Rossiter, *Charles Ives and His Music* (New York: Liveright, 1975), 61.

true after his father's death, but George Ives definitely supported his son when George was alive. Charles Ives studied at Yale with Horatio Parker, who did not always enjoy or support his young student's experiments. At Ives' first lesson, Parker said there was "no excuse" for some of Ives' unresolved dissonances. Writing home, before his father's death, George Ives wrote back: "Tell Parker that every dissonance doesn't have to resolve, if it doesn't happen to feel like it, any more than every horse should have to have its tail bobbed just because it's the prevailing fashion."[187]

Frank R. Rossiter, in *Charles Ives and His America*, says that during his time in New Haven, "Ives often got bored with the conventional harmonic progressions of most music, and would on occasion fill out the interludes between verses of a standard hymn with dissonant chords, played very softly in the upper registers."[188] After receiving encouragement in his position in New Haven,[189] Ives changed jobs in 1898 and became organist and choir director at the First Presbyterian Church in Bloomfield, New Jersey. In 1900, he held the same positions at Central Presbyterian Church on West Fifty-seventh Street in Manhattan. In these later positions, Ives had a different experience from his time in New Haven. In Bloomfield, he played the *Adeste Fideles* at a Christmas service in

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[186] Rossiter, 61.

[187] Jan Swafford, *Charles Ives: A Life with Music* (New York: W. W. Norton & Company, 1996), 111, which is taken from Ives' *Memos*, ed. John Kirkpatrick (New York: W. W. Norton, 1972),116.

[188] Rossiter, 62.

[189] Swafford, 113-114, writes of Griggs' encouragement after one of Ives' "wilder" pieces was played in church: "Never you mind what the ladies' committee says; my opinion is that God must get awfully tired of hearing the same thing over and over again, and in His all-embracing wisdom he could certainly embrace a dissonance—might even positively enjoy one now and then."

1898. On the manuscript he wrote, "Rev. J. B. Lee, others, and Mrs. Uhler said it was awful." At Central Presbyterian, he performed another piece, the "Hymn-Anthem for Chorus, Organ, and Piano." He said, "it was not successful," and the pastor, Dr. Wilton Merle Smith," turned around and glowered at the choir."[190]

Ives was successful in many other ways. Aaron Copland, in the forward to *Charles Ives Remembered*, speaks of him as "the first [American] composer of major significance," and he was recognized by the American musical community by 1974, if not before, in the centennial year of his birth.[191] Copland says that America had, in Ives, a comparable musical figure to literary figures of the nineteenth-century—such as Whitman, Thoreau, Emerson and Dickinson, even though Ives came a bit later.[192] Copland describes Ives' music as "humanly" moving (*Harvest Home Chorales*), and "incredibly daring."[193] In the latter category, Copland says that musicians often thought Ives' music, "confusing," which in 1974, allowed the music to have "special excitement."[194] He also thought it tragic that Ives did not hear much of his music, but still wrote music that is "so many-faceted, so rich in textures, and so various in content, from the simplest to the most complex pages."[195] This is true of the piece for my

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[190] Rossiter, 146.

[191] Aaron Copland, "Foreword," in Vivian Perlis, *Charles Ives Remembered*, An Oral History (New Haven: Yale University Press, 1974), xi.

[192] Copland, xi.

[193] Copland, xi.

[194] Copland, xi.

[195] Copland., xii. According to J. Peter Burkholder, James B. Sinclair and Gayle Sherwood Magee, "Ives, Charles (Edward)," *Grove Music Online, Oxford Music Online*

analysis, the simple and also complex *Adeste Fidelis* that was indeed heard in church—but, perhaps, not beloved by all.

Ives wrote at least six symphonies, four overtures, four marches and 32 other works for orchestras, seven works for band, several sonatas for violin and piano, many other chamber works, piano solos, organ works, choral works, and about 200 songs. There is an unknown number of lost works, and many incomplete pieces. Dating of the works is also uncertain, sometimes based on the manuscript paper and Ives' handwriting, and some were actually dated by Ives later in life.[196] For organ, the *Variations on "America"* is a popular piece (as of this writing, there are at least a dozen recordings on YouTube.com). *Adeste Fidelis* is much less known (as of this writing, there are only two YouTube recordings). Both of these works have been orchestrated for ensembles.

The Origin of the Tune *Adeste Fidelis*

Even though the tune *Adeste Fidelis* is widely known, it is not certain if it was written by the person to whom it is generally attributed. Both words and music are attributed to John Francis Wade (c. 1711-1786), a plainchant copyist who was born in

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at https://www-oxfordmusiconline-com.libproxy.uoregon.edu/grovemusic/view/10.1093/gmo/9781561592630.001.0001/omo-9781561592630-e-1002252967?rskey=VjWZ0K#omo-9781561592630-e-1002252967-div1-9 (accessed August 7, 2019), Ives works did receive performances starting in the late 1920s to 1930s. Henry Cowell was a supporter, as well as Nicolas Slonimsky, Copland and others. With the publication of a catalogue by John Kirkpatrick in 1960, and publication of Ives' scores, Ives became more well known. Henry and Sidney Cowell also wrote a biography, Charles Ives and His Music (New York: Oxford University Press) in 1955.

[196] James Sinclair completed the work of John Kirkpatrick to produce a catalog of the music of Ives. James B. Sinclair, *A Descriptive Catalogue of the Music of Charles Ives* (New Haven: Yale University Press, 1999).

England but may have been in France by 1731, for there was a John Wade living at the Dominican college at Bornhem then, who may have later lived in London.[197] *Adeste Fideles* appears in up to 10 manuscripts, and in none of Wade's manuscripts does he ascribe authorship.[198] An early example of the melody from 1760 is included in Example 20 with an unknown composer. While others have stated that the composer may have been John Reading or Marcus Portugallo from Portugal--these two do not have a compelling authorship, according to the musicologist Bennet Zon, in "The Origin of *Adeste Fideles*," or, as he says, more likely the authorship could be given to Stephen Paxton, or Thomas Arne.

Example 21 shows that the tune is remarkably similar to another tune from the Theatre de la Foire Saint German in Paris, from a comic opera entitled *Acajou*, with Vaudeville by M. Favart, in 1744. It is called *Rage inutile*, directed to be sung to an *Air Anglois*:[199]

Other places that *Adeste Fideles* is found are many. The Hathi Trust includes *Adeste Fideles* as *Portuguese Hymn, composed by Webbe*.[200] In 1916, "Oh Come, All Ye Faithful" (*Adeste Fideles*) was called a Latin Hymn, and harmonized by J. Reading in

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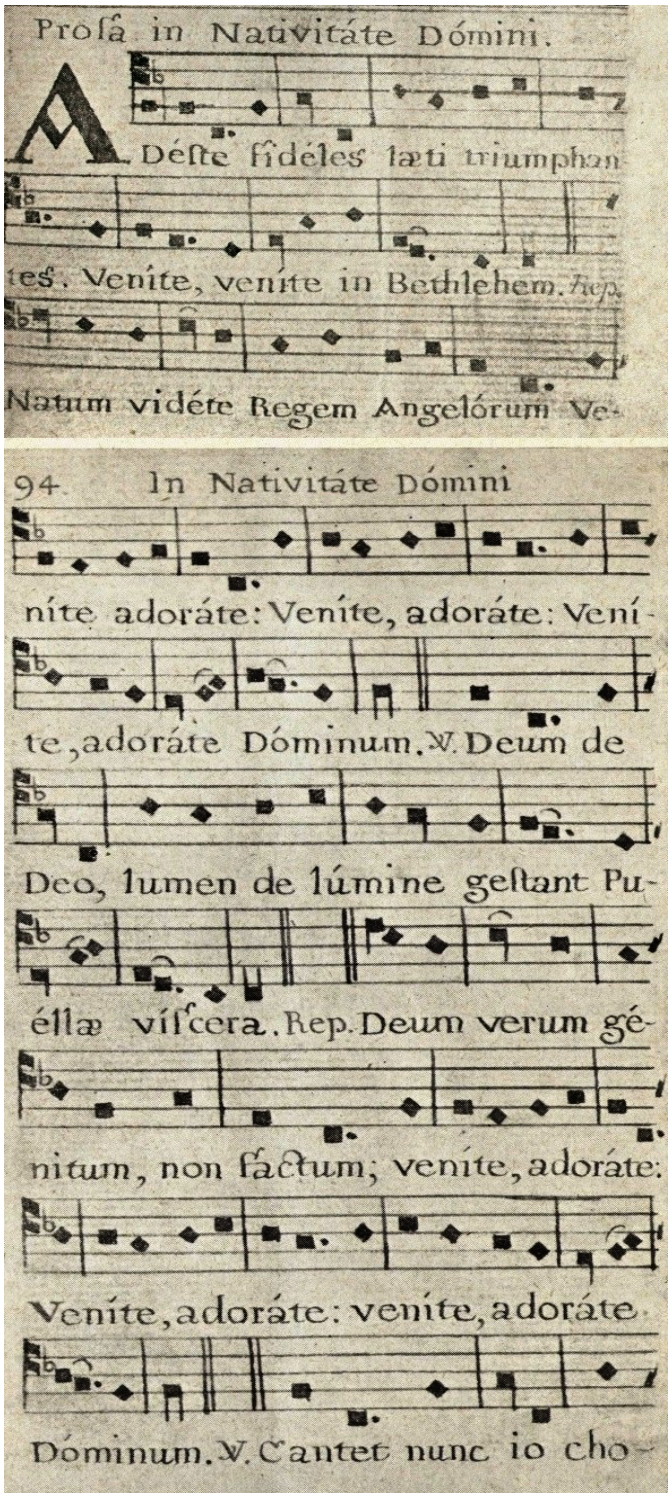
[197] Bennett Zon, "The Origin of *Adeste Fideles*," *Early Music* 24, No. 2 (May 1996), 280.

[198] Zon, 282.

[199] Zon, 283.

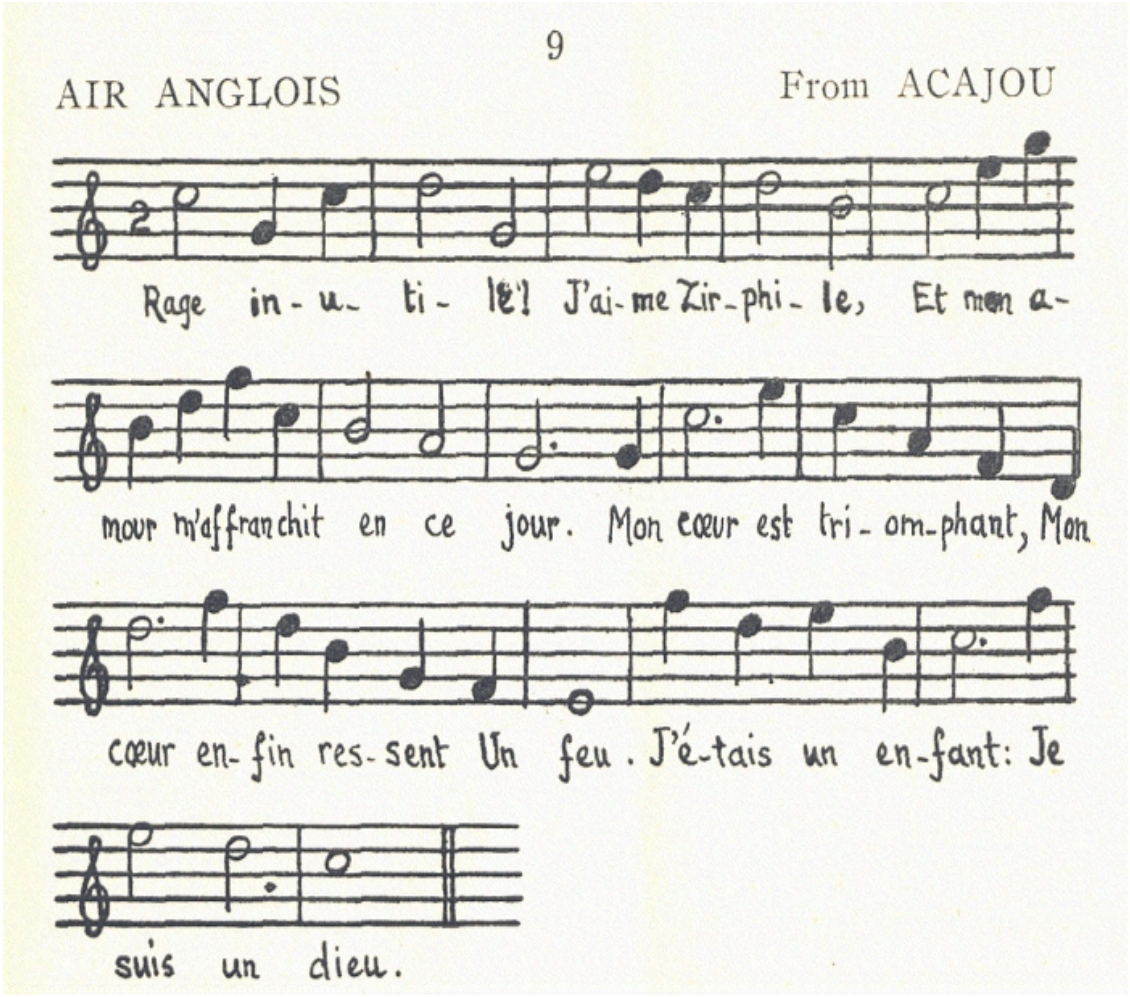
[200] HathiTrust, *Portuguese hymn/[composed by]Webbe. Sicillian mariners* (Baltimore: G. Willig, (184-?). at https://catalog.hathitrust.org/Record/101754496 (accessed 08/09/2019).

Example 20. An Early Version of *Adeste Fidelis*.[201]



[201] Zon, 282, Copy from *Antiphonae et Lamentationes* of 1760.

Example 21. *Air Anglois* from 1744.



Theodore Presser's *Christmas Carols We Love to Sing*.[202] Three other hymnals 1890s were found to include *Adeste Fidelis*: *The Church Hymnal* from Boston (1892), *The Hymnal of the Church* of the Protestant Episcopal Church (1897) and *The Plymouth Hymnal* (1893).[203] In Britain, but also printed in New York, John Stainer included *Adeste*

[202] *Christmas Carols we Love to Sing* (Philadelphia: T. Presser, c9c. 1916) at https://catalog.hathitrust.org/Record/009434221 (accessed 08/10/2019).

Fidelis in *The Church Hymnary* of 1898.[204] (A modern transcription of the melody is in Example 22.) And, of course, composers have built organ preludes on this tune. Another one from the Romantic era is by Sigfrid Karg-Elert (1877-1933). His work from 1923, *Cathedral Windows, Six Pieces on Gregorian Tunes for Organ*, Op. 106,[205] includes a fourth piece that is based on *Adeste Fideles*. The piece uses several pedal points on tonic and dominant notes, and the melody is obscured by additional melodies placed above the original tune. Mostly, it is not as dissonant as Ives' piece, however, due to the return at the ends of many phrases to notes or chords from the borrowed material. There is a tonic-sharp 11th chord at the end of the piece, seemingly less dissonant than it really is, because of its placement in the high registers of the organ and its quiet dynamic (Ives also used high registers in his piece.)

The Form of Ives' *Adeste Fidelis*

The formal structure of Ives' piece shows the beginning of the cumulative style which Ives used in many of his later compositions, often with a borrowed melody from

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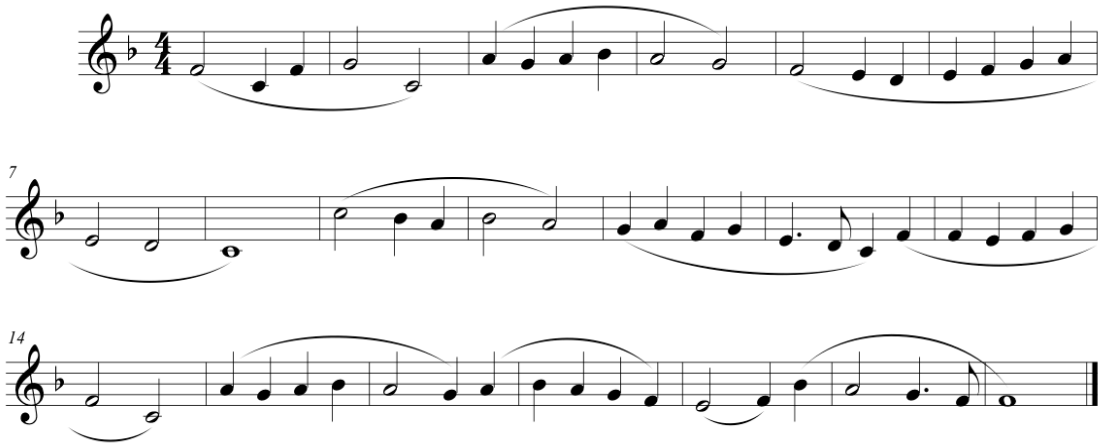
[203] *The Church Hymnal, Revised and Enlarged*, ed. Charles L. Hutchins (Boston: The Parish Choir, 1892), 49. *The Hymnal of the Church, Revised and Enlarged*, edited by James H. Darlington, (New York: Thomas Whittaker, 1897), 49. *The Plymouth Hymnal*, edited by Lyman Abbott, *for the Church the Social Meeting and the Home* (New York: A.S. Barnes and Co., 1893) 167.

[204] John Stainer, ed. *The Church Hymnary, Authorized for Use in Public Worship by The Church of Scotland, The Free Church of Scotland, The United Presbyterian Church, The Presbyterian Church in Ireland* (Edinburg and New York: Henry Frowde, 1900), no. 30, p. 25 at http://conquest.imslp.info/files/imglnks/usimg/a/a3/IMSLP318106-SIBLEY1802.16198.e45b-39087011259027score.pdf (accessed 08/11/2019).

[205] Sigfrid Karg-Elert, *Cathedral Windows, Six Pieces on Gregorian Tunes for* Organ (London: Elkin & Co., Ltd., 1923).

Example 22. A Modern Transcription of *Adeste Fidelis*.



popular songs, such as his arrangements of marches on “My Old Kentucky Home,” ”That Old Cabin Home Upon the Hill,” and “Here’s to Good Old Yale.”[206] According to J. Peter Burkholder, the procedure of presenting a countermelody before the tune itself, as happens in these marches and in *Adeste Fidelis*, is not new with Charles Ives, but may have been inspired by classical music examples, such as Bach’s organ chorale, “*Wachet auf, ruft uns die Stimme*,” BWV 645, or ”Jesu, Joy of Man’s Desiring” from Cantata 147. Beethoven also used the procedure (sometimes modified) in the finale of his Eroica Symphony, the Eroica Variations for piano, Op. 35, and the second movement of his Seventh Symphony. These latter examples have a bass line, sometimes varied, before the main theme is presented above it.[207] In another place, Burkholder says that Ives must

[206] Discussed in J. Peter Burkholder, *All Made of Tunes: Charles Ives and the Uses of Musical Borrowing* (New Haven: Yale University Press, 1995), 223.

[207] Burkholder, *Tunes*, 224-5.

have known the music of Mendelssohn, whose Sonata Number 1 for organ presents the theme of a chorale after forty measures of other music, including motives developed from the chorale in these opening measures.[208] Of course, Burkholder says that Ives may have developed the form from improvisation on hymn tunes in church: "In 19th-century Protestant churches, before a hymn was sung, the organist would typically present a short prelude and then play through the hymn tune, often in varied form. When the prelude was improvised, organists often drew motives or phrases from the hymn and developed them."[209]

Ives wrote numerous works where the borrowed tune is stated for the first time near the end of the work, preceded by its countermelody. Burkholder says that two of these works are simple in form: the countermelody is presented, then it is combined with the tune, and followed by a short coda; this is one type of "cumulative form."[210] The simple pieces are the song, "*The Collection*, using the hymn tune *Tappan*, and *Adeste Fidelis in an Organ Prelude* (1897-99), where the countermelody is an exact inversion of the hymn itself."[211] Other examples include *In the Night* (c. 1914), with *Eventide* ("Abide with Me") combined with "Down in de cornfield" from Foster's "Massa's in de Cold Ground," and the finale of the Trio for violin, cello, and piano (ca. 1911) with Ives' song *The All-Enduring* and the hymn tune *Toplady* ("Rock of Ages"), and a newly-

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[208] Burkholder, Organist 304.

[209] Burkholder, Organist, 303.

[210] Burkholder, *Tunes*, 225.

[211] Burkholder, *Tunes*, 225.

invented theme.[212] Another type of cumulative form appears in others of Ives' works, that of fragments of a theme, sometimes developed, that precede the full theme at the end of a work. This happens in Symphony No. 3, movement 1, where fragments of the melody—the hymn tune *Azmon* ("O for a thousand tongues")--are presented, then a fugue, then more thematic development, before the full tune is finally introduced.[213]

Adeste Fidelis is unusual, as Burkholder has said, because the countermelody is an exact inversion of the tune itself. In the opening section of the work, this inversion (played *mp* in the left hand of the organist) is accompanied by a softer (*ppp*) chord, a B-flat minor chord in first inversion, played in the right hand of the organist, actually sounding an octave higher than written (the use of 4' sound is indicated). Ives wrote that this chord "should be like distant sounds from a Sabbath horizon."[214] It is also accompanied by a pedalpoint on B-flat, played on the pedals. A short interlude, notes accompanied by chords from a whole-tone scale follows, before the entrance of the hymn tune played simultaneously with its inversion. Again, three layers of dynamics are included, the tune, *Adeste Fidelis*, *ff* (very loud); the inversion, *p* (quiet); and pedal, *pp* (very quiet). These dynamics make the tune prominently sound out, but higher notes of the inversion are still heard. Following the simultaneous tunes and inversion is a polytonal coda.

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[212] Burkholder, *Tunes*, 225-6.

[213] Burkholder, Organist, 302.

[214] Burkholder, Organist, 286.

This tune, *Adeste Fidelis*, of course, is "borrowed," and thus fits the category of this dissertation. Steven Nehrenberg in "Three Levels of Quotation in the Music of Charles Ives,"[215] a thesis from the University of Oregon, discusses the different categorization of the types of quotations in Ives' music using the writings of Clayton Henderson and Burkholder. Henderson's classification system uses two broad categories, "limited," and "numerous."[216] In *Adeste Fidelis*, the quotation is limited, but obviously functions as a theme, which is one of Henderson's sub-categories. [217] In Burkholder's dissertation, according to Nehrenberg, the identification of five areas of quotation are put into categories: (1) Modelling, (2) Paraphrase, (3) Cumulative, (4) Oratorical Gesture, and (5) Quodlibet or Medley.[218] Cumulative form has been discussed above, however, the inversion of the theme of *Adeste Fidelis*, I believe, can also be seen as paraphrase. Nehrenberg says that a paraphrase technique may be an opening fugal area of a work, and it is typically an area of the music in which the tune is not exactly quoted.[219] The Quodlibet or Medley category is a "succession or superimposition" of tunes, generally referring to distinct quoted melodies.[220] While *Adeste Fidelis* does not fit the exact definition, the way the inverted melody is combined with the original is at least

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[215] Steven D. Nehrenberg, "Three Levels of Quotation in the Music of Charles Ives," MA thesis, University of Oregon, 1992.

[216] Nehrenberg, 22.

[217] Nehrenberg, 23.

[218] Nehrenberg 26.

[219] Nehrenberg 28.

[220] Nehrenberg, 32-3.

reminiscent of two different melodies combined together. And Nehrenberg's thesis is exceptional in its discussion of the layering techniques in the music of Ives:

> . . .This layering of the musical lines is achieved by contrasting each line from the others. This contrast is accomplished through rhythmic, harmonic, or textural means or through a combination of these modes. Each line may move at different speeds, be in different keys, or occupy a particularly high or low range.[221]

In *Adeste Fidelis*, the two lines of the melody and its inversion move in different keys, and the coda also has two layers.

Both layering and quotation can be seen later in Ives' work also, in *Decoration Day*, the second movement of *A Symphony: New England Holidays*, written later in Ives' life. The layering involves simultaneous combinations of different, or the same tunes, and the quotation involves the use of several tunes, including *Adeste Fidelis*.[222] The movement is a remembrance, according to Ives, but not of Christmas when *Adeste Fidelis* is usually played, nor of church, like the prelude of 1897. Instead, Ives says it is a remembrance of a march to a cemetery: "The march to Wooster Cemetery is a thing a boy never forgets. The roll of muffled drums and *Adeste Fideles* answer for the dirge."[223]

Ives quoted many American tunes. He also quoted European masters, such as J. S. Bach, the subject of the second chapter of this study. Burkholder has found a motive from the three- part Sinfonia in F Minor: m. 93 of Ives' Second Symphony, first

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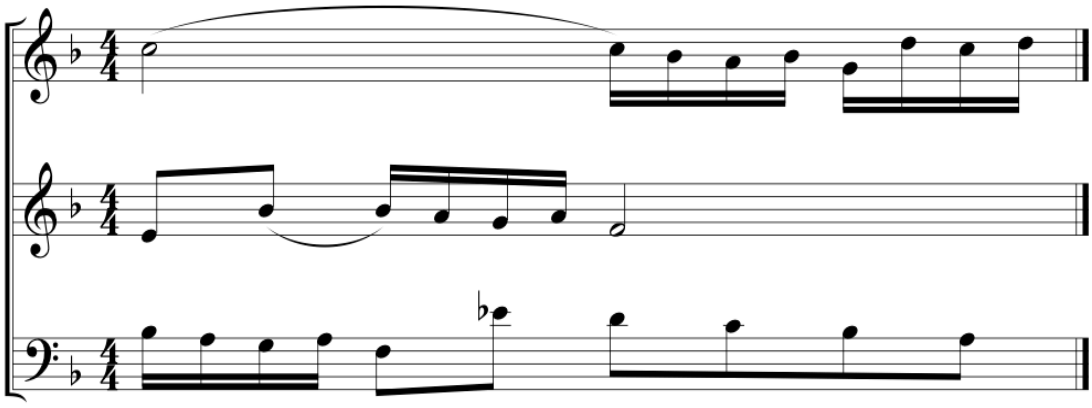
[221] Ibid., 35.

[222] Charles E. Ives, *Decoration Day*, transcribed for Concert Band by Jonathan Elkus (New York: Peer International Corporation, 1962}.

[223] Ibid., "Ives' Postface."

movement, quotes m. 28 of the Bach.[224] Also, Jack Boss found a Bach motive (seen in Example 23) in the Third Symphony. Measure 28 of the third movement quotes Bach's *Simfonia* number 4 in D minor:[225]

Example 23. Bach, *Simfonia* 4 in D minor, m. 28 (the harpsichord voices have been written on three staves to see the individual voices).[226]



Bach repeated the motive, first seen in the bottom line on the first beat, in the middle line on the next beat of the measure, and in the top line, transposed, in the third and fourth beats. Ives lengthens the motive (see Example 24), but also repeats it.

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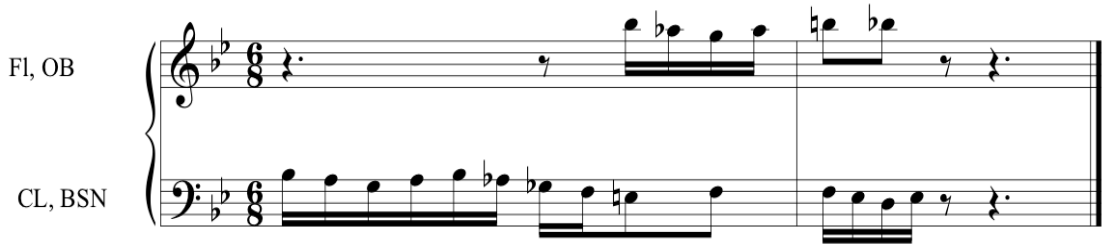
[224] J. Peter Burkholder, "'Quotation' and Paraphrase in Ives's Second Symphony," *19th-Century Music* 11-1 (Summer, 1987), 19. Original is 3-25.

[225] Jack Boss, private conversation, University of Oregon, Summer, 2019.

[226] J. S. Bach, *Sinfonia* No. 4, Bach-Gesellschaft Ausgabe, Band 3, p. 23 (Leipzig: Breitkopf und Härtel, 1853) at IMSLP, org. at https://imslp.simssa.ca/files/imglnks/usimg/e/ef/IMSLP00764-BWV0790.pdf (accessed March 22, 2020).

Since this prelude is the only one that uses the inversion of the tune ahead of its

Example 24. Ives, Symphony III, Movement 3, *Communion*, *Largo*, m. 28-9:[227]



normal placement, the piece may be seen as part of Ives' experiments in music that were first introduced by his father's teachings. George Ives taught his son percussion, piano, violin, cornet, sight-reading, harmony, and counterpoint—on strict academic principles, but the father himself experimented with quarter-tones, pianos tuned in overtone partials, tuned glasses, new scales, echos, bands in stereophonic positions, and a device he called a humanophone—an arrangement of singers where each one sang a different tone of the scale when the tune called for it.[228] Of course, Ives' experimentation was tempered by his University training with Horatio Parker in composition, who taught in a more serious, traditional way--Parker once asked Ives not to bring his exploratory work into the

[227] Charles Ives, Symphony No. 3, *The Camp Meeting* (New York: Associated Music Publishers), p. 29 at IMSLP.org, http://petruccimusiclibrary.ca/files/imglnks/caimg/3/34/IMSLP545981-PMLP480120-ivessym3.pdf (accessed March 22, 2020).

[228] Henry Cowell and Sidney Cowell, *Charles Ives and His Music* (New York: Oxford University Press, 1955), 26, 20, 21.

classroom.[229] At the same time, however, Parker was not known for his rigid adherence to conservative views in his own music. Rosalie Sandra Perry in *Charles Ives and the American Mind* says that many of Parker's compositions were considered innovations in late nineteenth-century American musical culture.[230] She mentions the "restless" harmonies in Parker's opera, *Mona*, which disturbed critics, with "ugly dissonance which apparently has no psychological or dramatic point."[231] The New York Sun pointed out "the ceaseless change of tonality and endless intrusions of opposing rhythms. . ."[232]

Ives said of Parker, however:

> The First Symphony was written while in college. The first movement was changed. It (that is, the symphony) was supposed to be in D minor, but the first subject went through six or eight different keys, so Parker made me write another first movement. But it seemed no good to me, and I told him that I would much prefer to use the first draft. He smiled and let me do it, saying "but you must promise to end in D minor.[233]

Since *Adeste Fidelis* was written early in Ives' career, Parker must have had both a serious and an experimental influence on this composition. After rich dissonances at the end of the piece, it does end in the tonic key, and there is a clear cadential formula. Thus, this piece blends experimentation with tradition. The borrowing of a Protestant hymn

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[229] Cowells, 32.

[230] Rosalie Sandra Perry, *Charles Ives and the American Mind* (Kent: The Kent State University Press, 1974), 9.

[231] Perry, quote from Max Smith, "On Music," *Musical America*, 25, no. 20, (3/23/1912), 1-4.

[232] Perry, quote from William Kay Kearnes, *Horatio Parker 1863-1919: A Study of His Life and Music*, Illinois, university Ph.D. dissertation, 1965, 684.

[233] Stuart Feder, *Charles Ives: "My Father's Song:" A Psychoanalytic Biography* (New Haven: Yale University Press, 1992, 147.

tune,[234] with its clear harmony, is inverted, true, but given the clear, sustained harmony of B-flat minor, and in the cadential formula at the end of the piece, which is at first obscured by the polytonality, the harmony becomes apparent by way of predominant to dominant to tonic in the key of F major.

The Analysis

Example 25 provides a Schenkerian reading of the original melody. Four times the melody proceeds downward from ^3 to ^2 before the final descent to ^1. The Schenkerian graph of this melody reveals an *Urlinie* of 3^-2^-1^, starting on A4 (a major sixth above middle C) a major third above the tonic note of F4, progressing to a G4, and ending on tonic at the end of the piece. What is unusual, however, are the four interruptions in the melody, where the melody progresses from the major third above the tonic, to the major second, but does not proceed to tonic. In the score (the measure numbers are for the complete score), the interruptions are in mm. 27, 31, 34-5, and 39, every four measures where there are half-cadences, but not all half-cadences present G4 as the soprano note, only those in mm. 31, and 35 do. These are the stronger half-cadences, and lead me to conclude the melody is tri-partite, with the middle section in the dominant of C major. The form, however, does not repeat, so it is an ABC melody sectionally, but has elements of rounded binary. The material after the second interruption cannot function by itself--the opening and closing sections could, based on

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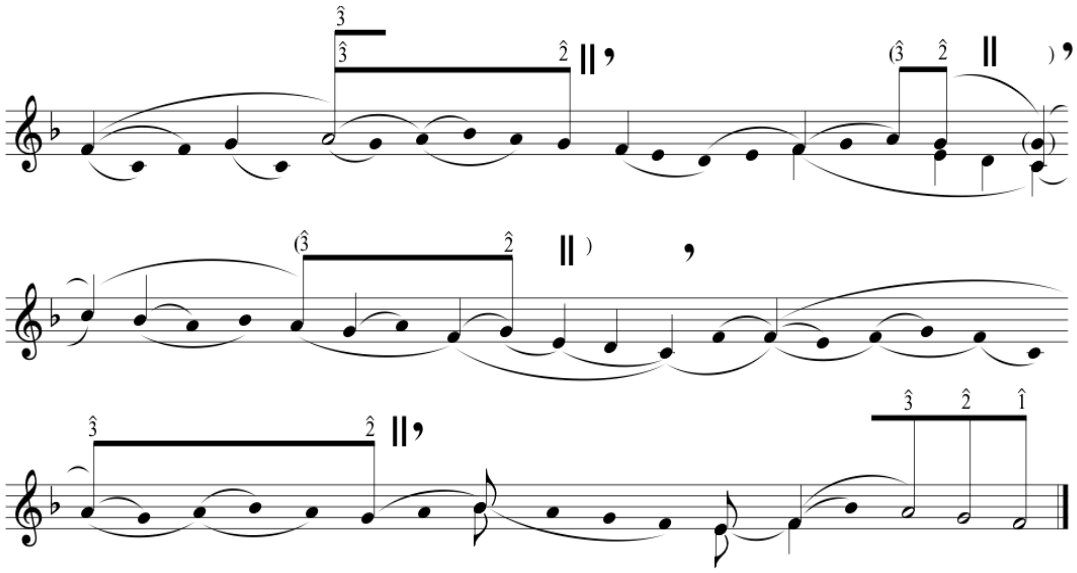
[234] Protestant church music and its effect on Ives is discussed in J. Peter Burkholder, "Ives and the Four Musical Traditions," *Charles Ives and His World*, ed. J. Peter Burkholder, *The Bard Music Festival Series* (Princeton: Princeton University Press,1996), 8-9.

the length of each section, and the home tonality of F major. Joseph Riepel (1709-1782)

Example 25. Schenkerian Graph of *Adeste Fidelis*.



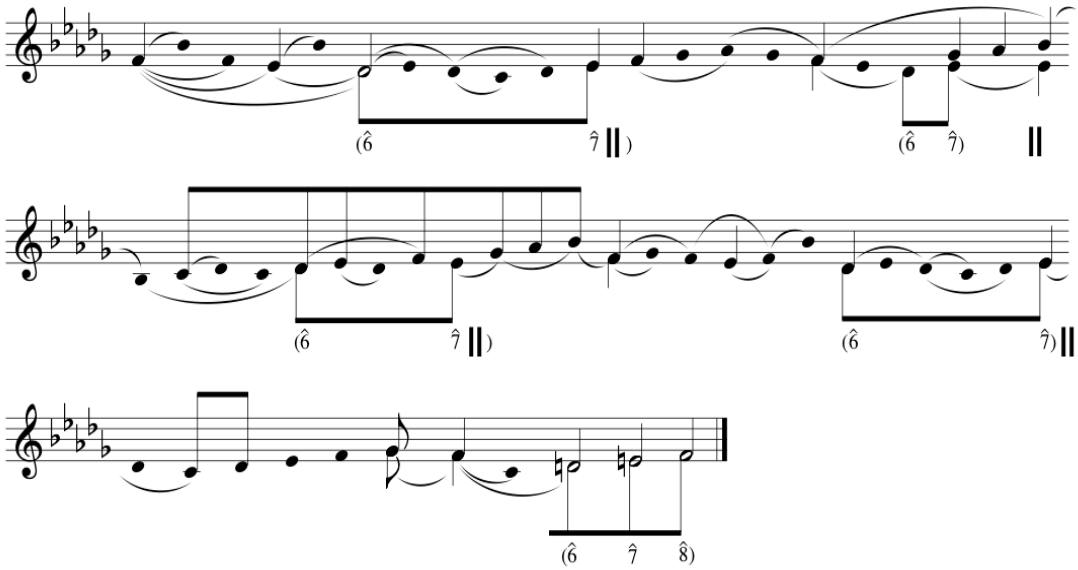
discussed various sections of musical form that function in the beginning of the second half of a binary form. The material in mm. 32-35, based on the pedalpoint, are a *ponte*, a musical bridge, in this case, leading to the return of the tonic in m. 36.[235]

Example 26 shows that the inversion is exactly the same as the original melody, but, turned upside down. The *Urlinie* can be heard as going UP, with an ending on the

[235] This is one way *Adeste Fidelis* can be seen as binary. *Ponte* is discussed by Riepel in John W. Hill, *Joseph Riepel's Theory of Metric and Tonal Order: a Translation of His Anfangsgründe zur musikalischen Setzkunst,* (Hillsdale, NY: Pendragon, 2014), 221.

sixth-, seventh-, and eighth-scale degrees. The major third is now below the ending tonic, and the penultimate note of the *Urlinie* is now a major second below the tonic—this makes the mirror image exact.

Example 26. Schenkerian Graph of the Inversion of *Adeste Fidelis*.

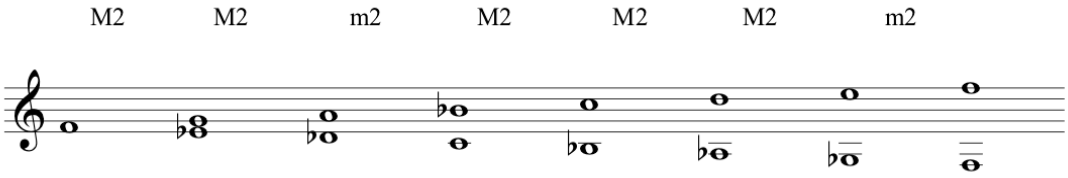


The opening section of Ives' organ prelude contains the inversion accompanied by a B-flat minor chord in first inversion, signifying the "distant sounds from a Sabbath horizon."[236] In Ives' first inversion, the minor-third interval note of D-flat is doubled as the lowest and highest pitch played in the right-hand of the organist. The inversion of the melody is accompanied by a B-flat pedal point in the lowest notes of the organ. The emphasis on both B-flat and D-flat secure the place of B-flat minor as a prominent key in the piece.

[236] Burkholder, Organist, 286.

Example 27 shows that the key of B-flat minor can be found by writing the mirror inversion of F major in a scale going down the same intervals as a major scale going up, where the scale goes up a major second, the inversion goes down—the same is true for the minor seconds of a scale.

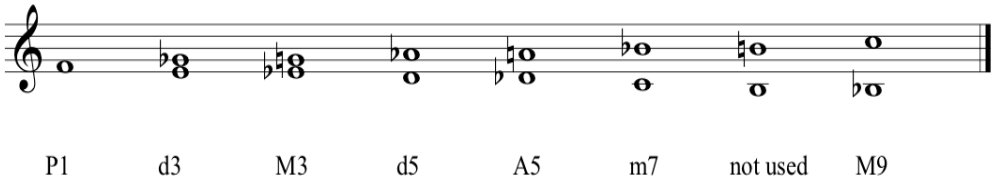
Example 27. Inversion of F-major Scale with the Bb-minor Scale.



Example 28 shows that another method of observing mirror inversion is to proceed from the chromatic scale, again moving up and down from "F," but this time, using only half-steps (Ives used all of these intervals in the second half of the piece, except the octave notes on B). Two of these intervals are considered dissonant. The diminished-third sounds like notes a major second apart and the diminished-fifth is an interval known as a tritone and quite dissonant. The others are less dissonant, the major-third is quite consonant, the augmented-fifth and minor-seventh intervals are not as harsh as the diminished-fifth. The major-ninth is the same as a major-second interval plus an octave, but seems less harsh with the octave than without. The interval succession does not contain a perfect-fifth, one of the components of major and minor triads. These intervals are detailed on the score below, but first, I will include some more theoretical principles.

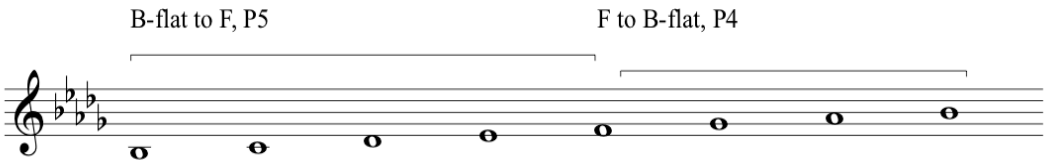
Returning to the F-major ascending scale of example 3-8, the inverse of this scale is F-Phrygian, where the half-steps are between the first and second notes, and the fifth and sixth notes, ascending, beginning on the lowest note of the scale, on the right side of the graph. Example 29 shows this scale is also a B-flat natural minor scale, if starting on the note, B-flat, which is the fourth note of the F-major scale. However, the note,

Example 28. Chromatic inversion of First Five Notes of the F-major Scale.



B-flat, is also a perfect-fifth interval below F.

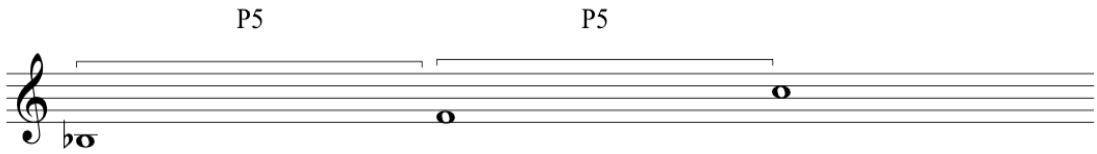
Example 29. B-flat Minor Scale.



Example 30 shows that by descending to the "B-flat," the perfect fifth, the placement of this note is the same distance as the interval of the "F"-major scale of "F"

ascending to “C,” also a perfect fifth. The C is the dominant, the fifth scale tone, of F-major. But the B-flat is also a perfect-fifth interval away from F by being lower; it can assume the same position as C. It is still a perfect-fourth interval above F, so it can serve both functions of being a perfect-fourth interval and a perfect-fifth interval away from F. The first of these functions, the lower position of the B-flat is important in the first section of Ives’ *Adeste Fidelis*, as he builds the entire section, and the inversion of the melody on it.

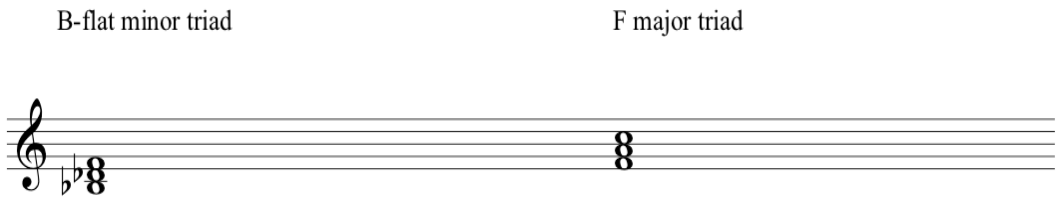
Example 30. Placement of P5 Intervals around F.



Example 31 shows that the B-flat note is expanded into a triad, which serves as the tonic chord of this section of the piece. The example shows both the tonic chords of B-flat minor and F major.

Arthur von Oettingen (1836-1920) in the 1866 book *Harmoniesystem in dualer Ertwicklung* gives much weight to the minor chord and explains that the minor chord is “active,” due to its inclusion of different fundamental tones, each note being a partial on a harmonic series gamut of a different fundamental (the lowest thirds of a harmonic series are major). The note, B-flat, for instance, can, of course, be a fundamental, but also the octave above a fundamental (2:1 ratio), an octave and a perfect fifth above an E-flat

Example 31. Tonic chords of B-flat Minor and F Major.



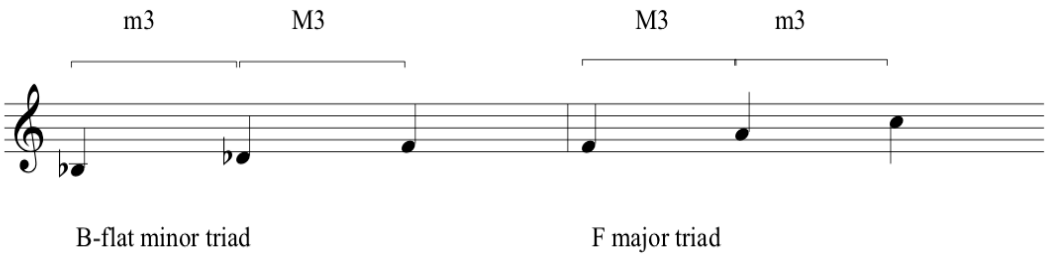
fundamental 3:2 ratio), and a major third plus two octaves above a G-flat fundamental (5:4 ratio to the nearest octave). In the B-flat minor triad, the minor third of the chord, D-flat, also has all these potential relationships. Oettingen explains that these different fundamental possibilities make the chord more active than a major chord whose notes are all included on one fundamental: in the triad F, A, C, the F is the fundamental, or the octave immediately above it (2:1 ratio), the C is the fifth above the second octave, (3:2 ratio), and the A is the major third above the next octave (5:4 ratio), but all on the same harmonic series.[237] To chords progressing higher from a tonic chord, Oettingen gave the name of "tonicity" (Tonicität). To those which are in direct inversion, he gave the name of "phonicity" (Phonicität**).**

All of this can then show that the B-flat triad is not only the equivalent of the dominant C triad in relation to F major, but the B-flat phonic triad has the same intervals

[237] As explained in Henry Klumpenhower, "Dualist Tonal Space and Transformation in Nineteenth-Century Musical Thought," *The Cambridge History of Western Music Theory*, ed. Thomas Christensen (Cambridge: Cambridge University Press, 2002), 463.

as the tonic F chord, just in inversion, which was seen in the scale diagram above and is also shown in Example 32. Thus, from the note F, one can ascend through the F triad, or descend through the B-flat triad. Ives used these equal directions in *Adeste Fidelis*, beginning with the inversion.

Example 32. The Interval Structure of B-flat Minor Triad and F Major Triad.



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The Interlude

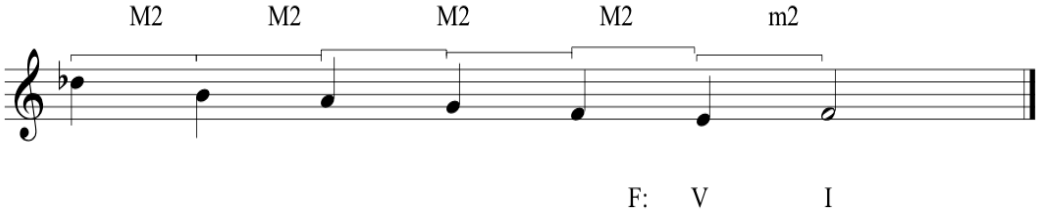
The Interlude (mm. 21-23, with an elision to section 2 in m. 24) is based on a whole-tone scale from D-flat5 descending to F4, with accompanying chords. As Example 33 shows, it ends on a dominant to tonic cadence to F Major, after a minor-second interval in the soprano. Ives harmonizes this whole-tone scale with parallel minor chords of G# minor (under the note, B, the second sonority in Example 34), F# minor (under the note, A), E minor (under the note G), and D minor (under the note, F), also descending by whole steps. The final D minor chord is above the B-flat pedalpoint, so it is, in actuality, a B-flat-seventh chord. But it is the connection between the minor sub-

dominant chord of B-flat minor (the first chord) and the parallel major B-flat chord (the fifth chord) that sets up the cadence of subdominant, dominant, tonic, one of the most recognized cadence types in music theory.

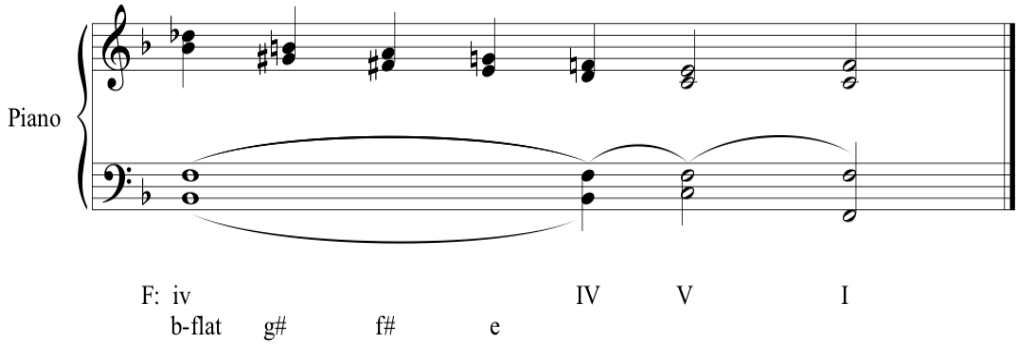
The Inversion and Original Melody Together

After the interlude, Ives shows, in this early piece, the beginning stages of his

Example 33. The Scale from the Interlude after the Inversion in Ives' *Adeste Fidelis*.



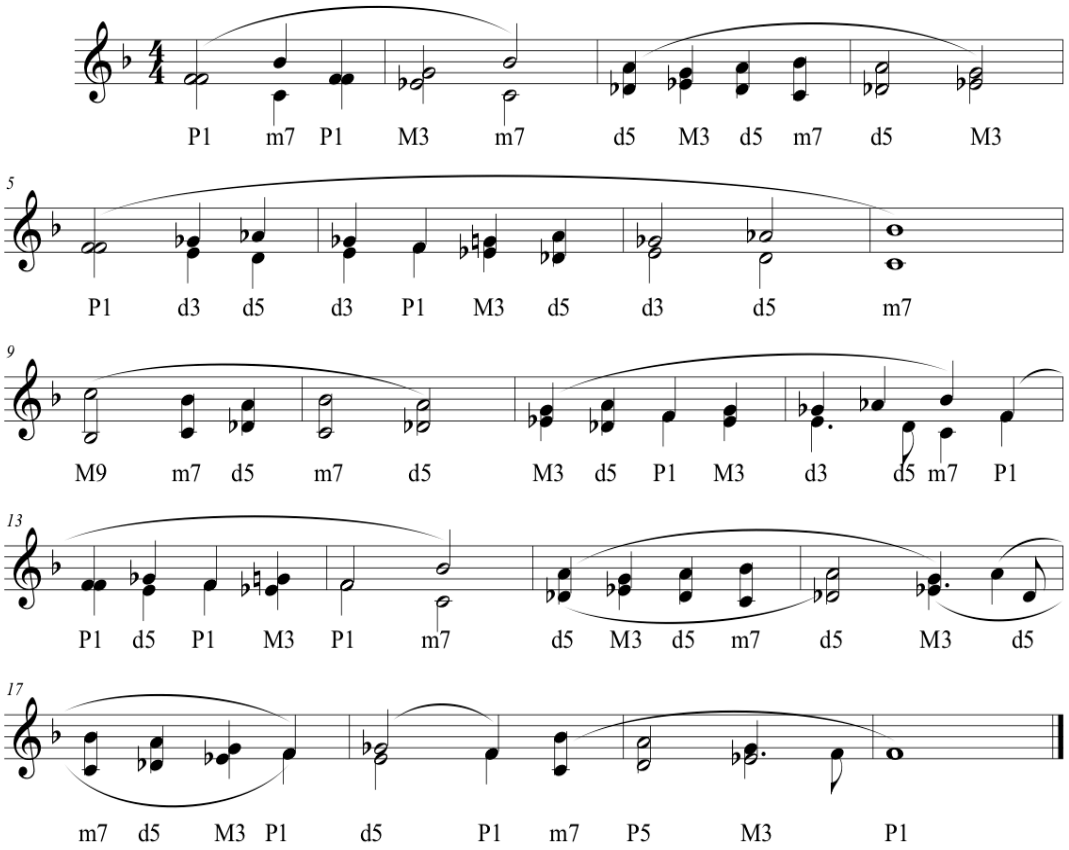
Example 34. Harmonization of the Interlude from Ives' *Adeste Fidelis*.



cumulative form, as he combines the original tune in F major with its inversion in B-flat minor, as seen in Example 35. The combination of the two tunes includes all the intervals

from the chromatic-scale chart above. The intervals used repeat frequently, and consist of perfect unisons, major and minor thirds, minor sevenths, many diminished fifths (the tritone), one major ninth, and one perfect fifth. This perfect-fifth interval created by substituting D for D-flat, in the penultimate measure is an oddity—either it is a mistake, or it is intended to signal that the cadence is approaching. In the score, a pedal part is added to these two dissonant lines. The pedal part harmonizes the original melody of F major with tonic, sub-dominant, and dominant chords, and ignores the inversion's notes in B-flat minor. This pedal line, and the dynamics that Ives uses, illustrate the concept of cumulative form, for he marks the F major original tune

Example 35. The Inversion and the Original Melody of Ives' *Adeste Fidelis*.



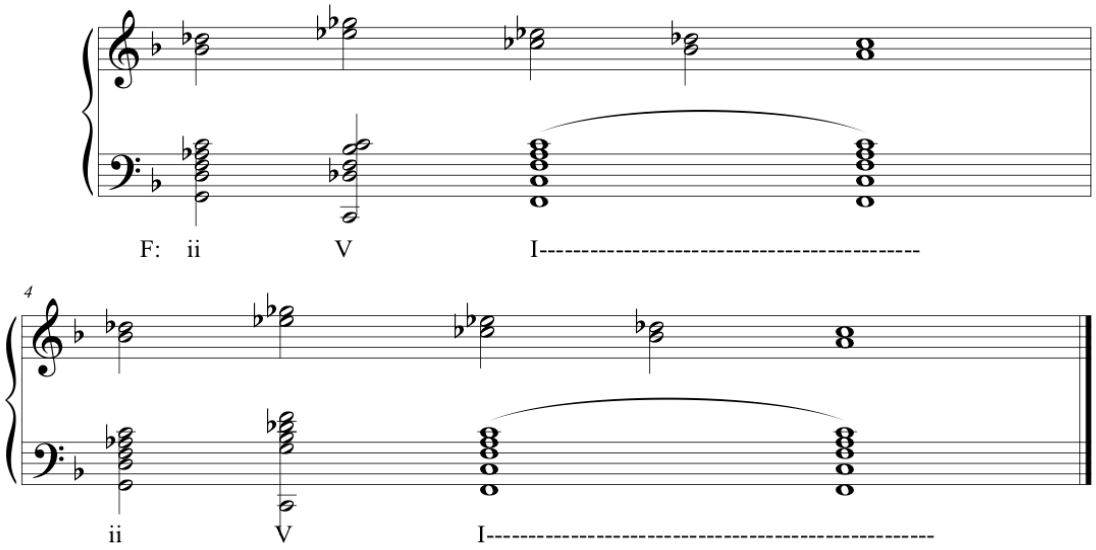
fortissimo, the inversion, *piano*, and the pedal line, *pianissimo*. The original melody is more prominently heard due to the dynamics and the pedal line harmonization.

The Coda

The Coda, mm. 43-50, consists of three layers, a reduced version is included in Example 36. It has two phrases which are nearly identical. The top two voices begin in the key of B-flat minor (reminiscent of the B-flat minor through the piece) with a C-flat (D-flat Mixolydian) in each phrase, but cadence in F major. The opening high note is the same as the high D-flat in m. 1 of the piece, and the top two voices resolve the B-flat minor phonic sonority of the opening to end in F major, the key of the original melody. The lowest notes, played on the pedal of the organ, enforce F major by a standard predominant-dominant-tonic cadence. The other bass notes are played in the left hand of the organist and form seventh-chords, the first, a D half-diminished chord, the next, a B-flat ninth chord, then--the F major tonic. The second phrase repeats the notes of the opening chord, but this time contains a G half-diminished chord, followed by the tonic. Spanning both bass and treble clefs, notes are often a minor-second apart: a D and D-flat are in the first chords of both phrases, a G and a G-flat are in the second chord of the second phrase, and the tonic chords of both phrases have a C and a C-flat in their starts. Piled together the chords are quite dissonant. They come from the three layers of this coda, the pedal, left and right hands of the organist. That they are all marked *piano* would make these chords less startlingly dissonant, but they are still dissonant, and perhaps, understandably difficult for Ives' congregation to grasp. However, they do

resolve, actually two times, to F major, just as Ives' teacher Parker said must happen at the end of pieces.

Example 36. The Coda of Ives' *Adeste Fidelis*.

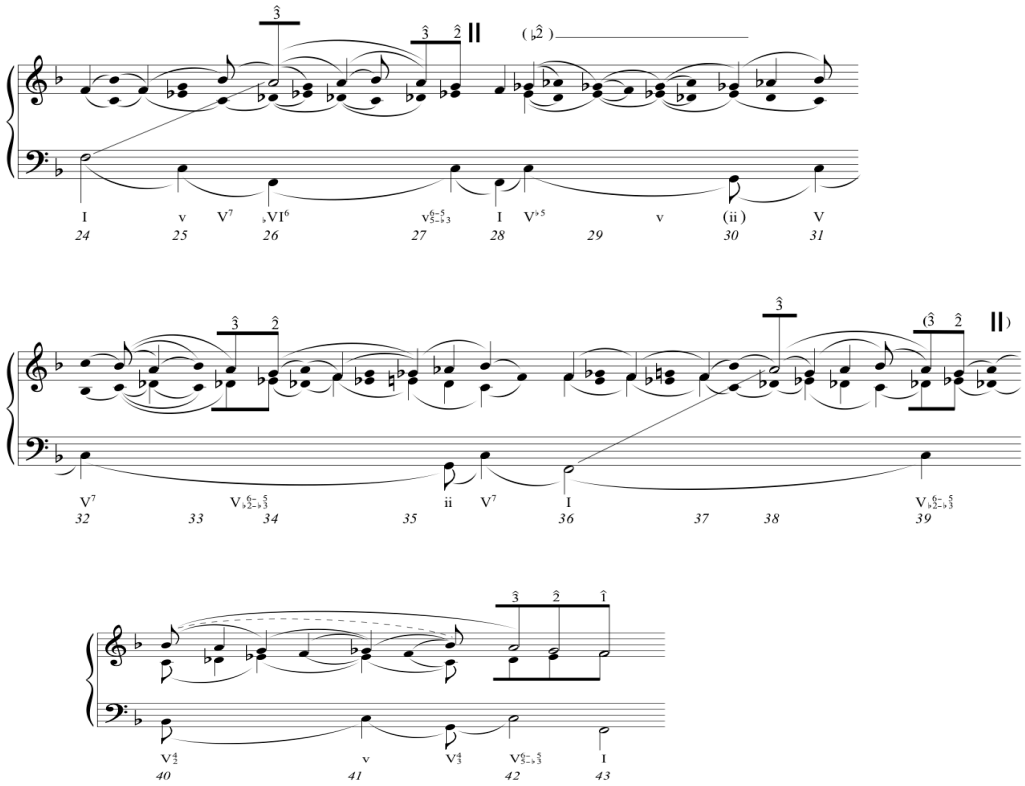


The Schenkerian Graph

The Schenker graph, example 37, shows only the second section of the piece, the area of the inversion and original tune together with the bass pedal harmonization. The *Urlinie* comes from the original melody in a descent from A, the third of the F major chord in m. 26, which has three interruptions before the final descent to the tonic in m. 42. The bass notes indicate the scale steps of F major, with Roman numerals. Most of the chords have added notes which come from the inversion. What this graph shows in addition to the Roman numerals and the *Urlinie*, is that the inversion, while quite dissonant, does not change the tonal plan of the piece, dictated by the borrowed melody,

the insistence of the note A in the soprano line as the third above F major, and the harmonizing notes of the bass pedal. In all three sections of the piece, the opening, the two-part inversion and original melody, and the coda, each section ends on a strong dominant to tonic cadence. In this middle section graphed above, there are four cadences on the dominant, mm. 27, 31 35, and 39 which increases the sense of the tonal key of F major. These are often accompanied by a motive in the alto voice (sometimes these are a measure ahead of the cadence), an E or E-flat—D—C, which has a strong downward directionality to the C. The strong dominant cadences, on C, are often C minor or

Example 37. Schenkerian Graph of mm. 34-43 of Ives' *Adeste Fidelis*.



seventh-chords. However, the dominant function also comes from the strongly anchored bass on the notes, C, and G, the supertonic (G is the dominant of C, a secondary-dominant relationship in F major). There is another third-span motive, a G or G-flat (6^)—A-flat (7^)—B-flat (8^), present at mm. 30, 35, and 38. This motive comes from the inversion's rising lines above the original melody. The B-flat eventually changes from its role of tonic in the inversion to a neighbor of A, the upper note of the *Urlinie.* This way, the *Urlinie* is foreshadowed by the other thirds. The A4 to F4 *Urlinie* is a major-third interval. So are the intervals of G-flat to B-flat and C to E, all versions of the intervals of the foreshadowing. In this way, Ives is using the foreground to present the same ideas as he does in the formal aspects of the piece: the major-thirds anticipate the *Urlinie*, the inversion in the first section, heard alone, anticipates the cumulative form of it with the original melody.

In this middle section of this piece, containing the inversion and the original tune, dissonant notes often change the foreground chords, although the straight forward bass line continues the steady pace to a tonal cadence. Thus, Ives uses his borrowed material, tonally, to make the piece seem very dissonant, but it really is not so. The steady bass line as well as the dynamics--the original melody, the tonal line in F major, which is the loudest line in the piece overshadow the dissonance. And there is the strong A-G-F *Urlinie* motion at the end of this section in the soprano voice, much like many tonal compositions. This forerunner to his cumulative style is quite tonal, surprisingly so. Ives has surrounded his borrowed melody with many non-harmonic tones, however, he still retains a sense of tonal direction and cadence. His innovations are in the layering of melodies and tonality. And while he is still a tonal, traditional composer in the larger

sense, he is working at breaking out of the boundaries of tonality through the positioning of two melodies together in the middle section of this piece—and two layers of music in different keys in the Coda. Thus, within tonality, he is working toward the outside of the "box" of tonality, setting aside the idea that only one key area can be present in a piece at one time.

The Americans in my study are certainly innovative but their music is rooted in tradition. In my next chapter, I will discuss a piece in which John Cage also builds new music from borrowed material building on tradition in a different, no less innovative way. In 1974, Copland reported that many people found Ives' music "confusing." This is true if listening only to the dissonances and the surging outside tonality. John Cage uses totally different methods to change his borrowed material into his own. What the next chapter explores is whether Cage continues to be rooted in the tonality of his borrowed material, or if he uses his music to prove other ideals. Americans, innovative, yes; traditional, yes; exhibitors of tonality, perhaps. In Ives, I think so—but pushing hard to get out.

CHAPTER IV

SOME OF THE HARMONY OF MAINE BY JOHN CAGE

The American composer John Cage (1912-1992) wrote a lot about his and others' music. The idea of "sounds can be sounds" is sometimes coupled with indeterminacy in his writings:

> What is an experimental action? It is simply an action the outcome of which is not foreseen. It is therefore very useful if one has decided that sounds are to come into their own, rather than being exploited to express sentiments or ideas of order. Among these actions the outcomes of which are not foreseen, actions resulting from chance operations are useful. However, more essential than composing by means of chance operations, it seems to me now, is composing in such a way that what one does is indeterminate of its performance.[238]

Ideas of silence, sounds, and indeterminacy are all found in *Some of "The Harmony of Maine*." This work is different from the other works of my study, in that it varies through subtraction of notes rather than addition. *The Harmony of Maine* was written in the late 18th-century for three- and four-voice choir. Cage rewrites 13 pieces from it for three-part organ. But, more importantly, he uses a system which eliminates notes to form his new works. All of the other pieces we have considered to this point (and will consider) are additive in varying ways. His is the only one who is subtractive. And he does not stop with the reduced score, but chooses organ timbres according to chance procedures that enable him to portray his ideas of space, emptiness, chance, and individual sounds in this work.

Cage wrote of collage, space and emptiness:

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[238] John Cage, "History of Experimental Music in the United States," *Composers on Modern Musical Culture: An Anthology of Readings on Twentieth-Century Music*, edited by Bryan R. Simms (New York: Schirmer Books, 1999), 163.

> Implicit here, it seems to me, are principles familiar from modern painting and architecture: collage and space. What makes this action like dada are the underlying philosophical view and the collagelike actions. But what makes this action unlike dada is the space it is in. For it is the space and emptiness that is finally urgently necessary at this point in history (not the sounds that happen in it—or their relationships) (not the stones—thinking of a Japanese stone garden—or their relationships but the emptiness of the sand which needs the stones anywhere in the space in order to be empty).[239]

To explore "emptiness" we need to discuss Cage's belief in the tenets of Zen Buddhism. Rob Haskins discusses both emptiness and relationships of pitch material in two of Cage's works in his article, "Aspects of Zen Buddhism as an Analytical Context for John Cage's Chance Music."[240] While Cage often stated he wanted to listen to sounds in themselves, disregarding their relationships to each other, Haskins says that Cage's acknowledged mentor, D. T. Suzuki, reveals a more complex picture:

> Emptiness does not mean the state of mere nothingness. It has a positive meaning, or rather it is a positive term designating the suchness of things (Tahatã).[241]

Suzuki also says there is an interconnectedness to all things:

> {Suzuki) then spoke of two qualities: unimpededness and interpenetration. Unimpededness is seeing that in all of space each thing and each human being is at the center and furthermore that each one being at the center is the most honored one of all. Interpenetration means that each one of the most honored ones of all is moving out in all directions penetrating and being penetrated by every other one no matter what the time or what the space. So that when one says that there is no cause and effect, what is meant is that there are an incalculable infinity of causes

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[239] Cage, 163.

[240] Rob Haskins, "Aspects of Zen Buddhism as an Analytical Context for John Cage's Chance Music," *Contemporary Music Review* 33:5-6 (2014): 617 at http://web.b.ebscohost.com.libproxy.uoregon.edu/ehost/pdfviewer/pdfviewer?vid=1&sid=72f1dce8-1eb4-432e-90b0-2043392d90cf%40pdc-v-sessmgr01 (accessed 4/21/2019).

[241] Haskins, 617.

> and effects, that in fact each and every thing in all of time and space is related to each and every other thing in all of times and space.[242]

Haskins continues in the article to discuss two compositions using interval, interval class, and collection analysis. He shows that Cage does weave together pitches and two- and three-note sonorities--primarily an 027 trichord in *One5*. Much as Cage may have wanted the sounds to exist as themselves with no references to other sounds, analyses such as Haskins' reveals that musical sounds exist in sonorities and intervals, and can move from one pitch to another. Suzuki says that everything in time and space is related to each and every other thing. This inspired me to use Schenkerian graphic notation which shows the relationship, not only of tones in the musical text, but also between the works and their models. Set-theory analyses (like Haskins' work) are possible, and do not necessarily negate the philosophy of Cage, or, at least Suzuki. Remembering that "sounds can be sounds" is the other part of the analysis; both the sounds' relationships and the sounds themselves are explored in this study. In addition, my study responds to these aspects of Cage's philosophy with the question of whether the organ piece, *Some of The Harmony of Maine (Supply Belcher),* is written by randomly choosing individual sounds and rests, or by using operations from the *I Ching*, or whether any of the sounds, particularly those that happen vertically, are somehow determined, or chosen, by Cage himself. For Cage did study with Arnold Schoenberg for two years, and just before Cage died, he was still studying Schoenberg's *Harmonielehre*.[243] Cage

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[242] Haskins, 617-8.

[243] David W. Bernstein, "Review of James Pritchett, *The Music of John Cag*e (New York: Cambridge University Press, 1993," *Music Theory Spectrum* 10 (1996) Vol 18-2, 272.

learned how to look for more than one method of varying a piece from Schoenberg's teaching (as quoted by David W. Bernstein):

> My composition arises out of asking questions. I am reminded of a story early on about a class with Schoenberg. He had us go to the blackboard to solve a particular problem in counterpoint (though it was a class in harmony). He said, "When you have a solution, turn around and let me see it." I did that. He then said: "Now another solution please." I gave another and another until finally, having made seven or eight, I reflected a moment and then said with some certainty: "There aren't any more solutions." He said: "OK. What is the principle underlying all of the solutions?" I couldn't answer his question; but I had always worshipped the man, and at that point I did even more. I spent the rest of my life, until recently, hearing him ask that question over and over. And then it occurred to me through the direction that my work has taken, which is the renunciation of choices and the substitution of asking questions, that the principle underlying all of the solutions that I had given him was the question that he had asked, because they certainly didn't come from any other point. He would have liked the answer, I think. The answers have the question in common. Therefore the question underlines the answers.[244]

Bernstein asserts that Schoenberg's "principle underlying the solution" was the musical idea, which may be expressed through more than one compositional realization. He finds that Cage's questions with multiple chance-generated answers are not so far from Schoenberg's approach:

> In composing, Cage, like Schoenberg, began with a musical idea; the difference lies in that the former did not express his ideas in terms of organically integrated compositions.[245]

Bernstein finishes his article by saying that more analysis of Cage's music is needed:

> ". . .analysis will provide the means by which scholars can refute the myth that Cage was 'a philosopher and not a composer.'"[246]

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[244] Richard Kostelanetz*, Conversing with Cage* (New York: Limelight Editions, 1994): 215.

[245] Kostelanetz, 273.

Cage certainly did study music with Schoenberg, both in private classes at Schoenberg's home and in university classes, he chauffeured Schoenberg here and there, and he was part of a small group who attended a rehearsal of Schoenberg's *Fourth String Quartet*, along with other guests such as Otto Klemperer.[247] Cage certainly must have known about Schoenberg's musical idea. If he revered Schoenberg and his teaching, it is therefore entirely possible that a musical idea, a kind of intentional choice, can be seen and heard in Cage's music. Whether the piece analyzed in this paper, *Some of The Harmony of Maine (Supply Belcher),* is based on a musical idea, or whether the piece is generated from randomness is a question I will come back to repeatedly in the analysis of the work.

James Pritchett also advocates for more analysis of the music of Cage in "Understanding John Cage's Chance Music: An Analytical Approach,"[248] in which he discusses the relationship between the score in compositions where the composer directly expresses musical ideas on paper and one of chance music, where the score is arrived at indirectly, via a compositional system.[249] He notes that music that uses chance elements has three basic components: a set of fixed, predetermined elements, or "givens," a set of rules to operate on and within these givens, and the actual execution of the rules to

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[246] Kostelanetz, 215.

[247] Kenneth Silverman, *Begin Again: A Biography of John Cage* (New York: Alfred A. Knopf, 2010), 17.

[248] James Pritchett, "Understanding John Cage's Chance Music: An Analytical Approach," in *John Cage at Seventy-Five*, edited by Richard Fleming and William Duckworth (Lewisburg: Bucknell University Press, 1989), 249-261.

[249] Pritchett, 252.

produce the finished musical score."[250] He notes where Cage has used all these components, and where he believes, Cage has used "free choice" within the execution of the rules:

> "the distinctive use of long pedals in the *Two Pastorales* was the result of Cage's free choice, not of system design. Another such system employing Cage's discretion was that used to compose *Music of Changes*. The core of this system was the random selection of sounds, durations, and dynamics from the charts, . . . Although their selection may have been purely random, these materials were complex and diverse, making their coordination in the score far from a mechanical process but rather one that allowed for a considerable amount of creativity on Cage's part.[251]

In my analysis of *Some of The Harmony of Maine*, fixed elements—such as the model of early American music—and creative components incorporated by Cage will be discussed. But first, I will review more generally how Cage his borrowed material.

Cage's Organ Pieces and Other Works that Use Older Material

Cage wrote four organ pieces, *Some of The Harmony of Maine (Supply Belcher*) (1978), *Souvenir* (1983), *ASLSP* (1985), and *Organ²/ASLSP* (1987). *Some of The Harmony of Maine* was written for the German organist Gerd Zacher. It is part of a group of pieces including *Apartment House 1776* (1976),[252] and *Hymns and Variations, for Twelve Amplified Voices* (1979), where Cage selected eighteenth-century hymns by

[250] Pritchett, 253.

[251] Pritchett, 258.

[252] *Apartment House (1776)* was a commission in honor of the bicentennial of the American Revolution. Pritchett, 258.

William Billings, Andrew Law, and Supply Belcher and altered them through the lengthening and erasures of notes.

But these pieces were not the only ones where Cage used pre-existing music from Western music history. In HPSCHD (1967-9), he included music by Mozart, Beethoven, Chopin, Schumann, Gottschalk, Busoni, Schoenberg, himself and Lejaren Hiller, rewritten with a FORTRAN computer program, based on substituting other material for Mozart's "Dice Game."[253] Also, in 1969, Cage wrote *Cheap Imitation* for piano solo based on *Socrate* by Erik Satie. It "imitated" the Satie work, but changed it by using chance operations from the *I Ching*. He used chance to choose a mode and a transposition, then rewrote the pitches to conform with the ideas chosen. This way, "he preserved structure (phrases and proportions), materials (12 chromatic pitches) and form (rhythm and dynamics) of the original," but "generated a fresh but familiar outcome."[254] For his organ collection based on the 13 pieces of Supply Belcher, Cage also preserved the structure of the works, such as length and phrases, but he eliminated pitches and rhythms, and all the dynamics and tone colors are new.

Cage called his works based on early American hymnody, "subtractions," subtracting from the original "old sounds." This is one way of freeing accepted material from learned associations:

> I began to hear the old sounds-the ones I had thought worn out, worn out by intellectualization—I begin to hear the old sounds as though they are not worn out. Obviously, they are not worn out. They are just as audible as the new

[253] William Brooks, "Music II: from the late 1960s," *The Cambridge Companion to John Cage*, edited by David Nicholls (Cambridge: Cambridge University Press, 2002): 136.

[254] Brooks, 136.

> sounds. Thinking had worn them out. And if one stops thinking about them, suddenly they are fresh and new.[255]

But, it does not seem that Cage liked all of the older, received music:

> Several other kinds of sound have been distasteful to me: the works of Beethoven, Italian *bel canto*, jazz, and the vibraphone. I used Beethoven in the Williams Mix, jazz in the Imaginary Landscape Number V, *bel canto* in the recent part for voice in the Concert for Piano and Orchestra. It remains for me to come to terms with the vibraphone. . . (but) Beethoven now is a surprise, as acceptable to the ear as a cowbell.[256]

David Bernstein proposes that John Cage used the works of others throughout his career as a source for his own creative writing.[257] In Cage's early writings, he drew from such writers as Carlos Chavez and Luigi Russolo, as well as South Asian philosophy and the 14th-century German mystic Meister Eckhart. In the 1960s, his writings took ideas from those of Buckminster Fuller, Henry David Thoreau, and Marshall McLuhan. In poetry, he included Ludwig Wittgenstein, Marshall McLuhan, Buckminster Fuller, his own works, and various newspapers. In music, in *Credo* (1942) he instructed a performer to play a phonograph recording of a piece by a classical composer. In addition to *Williams Mix* and *Landscape V* above, he used folk songs from 151 countries in HMCIEX (1984). *Roaratorio* (1979) combines more than 2000 sounds recorded at localities mentioned in *Finnegans Wake* with Irish ballads, jigs, and instrumental music. But in 1969, his composition changed. In *Socrate*, he was denied the right to use Satie's

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[255] John Cage, "Lecture on Nothing," *Silence* (Middleton, CT: Wesleyan University Press, 1961), 117.

[256] John Cage, "Composition as Process," *Silence*, 30-31.

[257] David W. Bernstein, "Techniques of Appropriation in Music of John Cage," *Contemporary Music Review*, 20, part 4 (2001): 71-90 at http://web.a.ebscohost.com.libproxy.uoregon.edu/ehost/pdfviewer/pdfviewer?vid=1&sid=164f08f4-bbd1-484b-825f-c1dd168c7e97%40sessionmgr4010 (accessed 04/23/2019).

score, so he used the *I Ching* to determine the notes remaining. However, he did allow himself some choice:

> I went through many trial runs with the *I Ching* to determine the way in which I would compose it. For the first page, let's say I have several ways. Then I choose one with which to continue. It's like discovering a computer program, but once I find a program, I let it operate.[258]

Cage did explain his use of subtraction in *Apartment House (1776).* He subjected the source four-part hymn to chance operations:

> Chance operations in that each note in a line became either active or passive. If it was active, then I wrote the note down that was in the original, and I held it until the next active number in the line, and that began a silence which continued until the next active one, which became the next sound. So in that way a line of say fourteen sounds was reduced to a line of say four sounds, or four events. One line could be two events, and two of them sounds. And when you hear that you hear something you know is harmony, still sounding like harmony, but removed from the laws of harmony.[259]

William Brooks in "John Cage and History: Hymns and Variations," has wrestled with several questions about a similar piece, *Hymns and Variations*.[260] His questions deal with what is preserved in Cage's transformed works: Is the "intention" of the original preserved, does knowledge of the original affect how one hears the new work, what about performance practice, and how does one analyze---the outcome or the transformational process?[261] He wrestles with the composition process, counting notes, rests, attack-points before deciding on a process that asks whether each successive source note can "continue

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[258] Bernstein, 76.

[259] Bernstein, 80.

[260] William Brooks, "John Cage and History: Hymns and Variations," *Perspectives of New Music*, 31-2 (Summer, 1993): 74-103.

[261] Brooks, 77.

(Y/N)[Yes or No]?" This way, each silence or pitch has a 50% change of continuing through a second note-value, a 25% chance of continuing through a third, and so forth. However, this method accounts for "nearly all" of the pitch decisions—except the anomalies.[262] These anomalies are from the beginnings and ends of the phrase structure of the source. Brooks applies his method to the text of *Hymns and Variations* and to the dynamics. For pitches, he works with standard deviations from his expected results of mathematically proving the Y/N method. The probability distribution of the dynamics seems "highly skewed." All of this may be due to Cage's use of the 64 hexagrams from the *I Ching,* and a computer program he used to generate the hexagrams. His results would be strings of numbers chosen randomly to which he assigned a Y/N (1-32 means Yes, 33-64 means No). But it is all complicated by the use of various voices and lines of music.[263] Brooks eventually gets to a solution phase where he makes corrections to the errors of his system, but as he says, it is appropriate to make corrections only if the composition is the process. If the composition is the result, the notes on the page, it could be argued that the notation should remain unaltered.[264] In my study, I do not alter notes, but only observe the "notes on the page."

But all of Brooks' diagrams and equations may not matter, as well as his errors and corrections according to his methods, for Cage has said, "error is an excellent

[262] Brooks, 82.

[263] Brooks, 89

[264] Brooks, 93.

thing."[265] It should be noted that errors make it nearly impossible to recreate Cage's method of composition. It will be seen in *Some of The Harmony of Maine* that a number of factors, mostly from chance operations, make the recreation of the work, and the analysis of it, quite difficult. Before attempting this analysis, I will comment briefly on the works of Supply Belcher.

The Works of Supply Belcher

Linda G. Davenport has transcribed all of the works of Supply Belcher, in *Supply Belcher (1751-1836): The Collected Works*. Davenport says in the Preface that:

> New England composers wrote for choirs of mixed voices, usually in four parts of treble, counter, tenor, and bass, which corresponds to soprano, alto, tenor and bass of today. The main melody of the piece was usually carried by the tenor, sung by males. The bass was sung by males, and counter was often sung by young boys, but may have included some deeper female voices, although most females sang the treble. . . Some composers. . ., composed music in only three parts: treble, tenor, and bass. In this arrangement, the principal melody was usually in the treble voice, although it sometimes appeared in the tenor.[266]

She also says that the choir of the day probably consisted of fifteen to thirty singers, and included a large proportion of male singers: "Most writers of the day recommended that at least half the voices be assigned to the bass part, with the rest spread fairly evenly

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[265] Richard Kostelanetz, *John Cage* (New York: Praeger Publishers, 1970, 116.

[266] Linda G. Davenport, editor, "Preface," *Supply Belcher (1751-1836): The Collected Works*, Volume 5 of *Music of the New American Nation: Sacred Music from 1780 to 1820*, Karl Kroeger, ed, (New York: Garland Publishing, 1997), xi.

among the other parts. This produced a male-dominated vocal sound with the main melody in the tenor and a special emphasis on the bass." [267]

Belcher was the first musician in the town of Hallowell, Maine, and was leader of singing schools and the choir leader in churches. In 1794, he published *The Harmony of Maine*, which includes 63 tunes. In 1796, in a review in the town paper, he was called "the Handell (sic) of Maine." [268] Davenport says this might be due to his extended melismas, sequences, and "hallelujah" endings in the settings *CAROL*, *THE DAWN*, and *ORDINATION*. In 1797, he composed and published more fuging-tunes, and published seven new pieces in other collections between 1805 and 1819. As late as 1817, he was still publishing new tunes, many of which were reprinted in the 19th-century.

Like those of William Billings, Belcher's tunebook, *The Harmony of Maine*, was a collection of only his tunes.[269] And it was the first tunebook by a Maine composer, as such, a collection of American, only American, music.[270] It contained mainly religious music, but at least one song, *THE POWER OF MUSIC*, was secular, and others have quasi-secular texts, which may have been used at a singing school.[271] Now let us turn to Cage's realizations of these tunes.

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[267] Davenport, xi.

[268] Davenport, xxii.

[269] Linda Gilbert Davenport, *Divine Song on the Northeast Frontier: Maine's Sacred Tunebooks*, *1800-1830*, *Composers of North America, No. 18* (Lanham, Md.: The Scarecrow Press, Inc., 1996), 82. Only one other tunebook of the time from Maine was by a single composer: Abraham Maxim's *Oriental Harmony* of 1802. All the other tunebooks included music from many composers, p. 83.

[270] Davenport, 83.

[271] Davenport, 85.

Some of The Harmony of Maine (Supply Belcher)

Cage's organ piece consists of 13 variations on 13 hymns of Supply Belcher. In both Belcher and Cage's work, they vary from a dozen measures, to two that are longer. Cage has preserved the length of Belcher's original in every case. The pieces with their number of measures are in Table 4-1:

Table 5. *Some of The Harmony of Maine* Movement Names and Length.

Name (In Both Belcher and Cage)	Length
1 Alpha	14 measures
2 Majesty	17 measures
3 Harmony	19 measures
4 Creation	16 measures
5 Hallowell	18 measures
6 Advent	33 measures
7 Turner	20 measures
8 Sunday	14 measures
9 St. John's	18 measures
10 Invitation	38 measures
11 Transmigration	68 measures
12 Chester	12 measures
13 The Lilly	17 measures

Cage's piece is written to be performed on a large organ: the manuals need 10 and 12 stops each, and the pedal, another 10. Cage calls for 6 assistants to help register the pieces when they are played, for there are many places that organ stop change, sometimes several changes in a single measure. He asks the assistants to pull the stops by number, and the numbers are assigned by the organist, using whatever system the organist wishes—perhaps starting on the left of a stop bank and numbering them consecutively.

However, there is nothing to say that the organist may not start on the right of a bank, or go from the top or bottom of a row of stops, or randomly assign numbers.[272]

The work is dedicated to Gerd Zacher (1929-2014), a German organist, composer and writer. Cage wrote Zacher a letter on March 10, 1980, about the method of composing these pieces, and about other ideas:

To Prof. Gerd Zacher,

Am so very glad that you like the organ pieces. C.M. means common metre and refers to the versification which is 8,6,8,6 syllables for the phrases. L.M. is long metre which is 8,8,8,8. Short metre may be 6,6,6,6 though I'm not sure. I got this information from Neely Bruce who is an authority on early American music, but examining the pieces, I note that Alpha, which is C.M. is 6,6,8,6. So I don't know what to say. Harmony, on the other hand, is as Bruce told me. I don't think it will help to know this. I have made a number of pieces derived from 18th-century American music. The first was *Apartment House 1776*, which with *Renga* was my fulfillment of a bicentennial commission from Seiji Ozawa and the Boston Symphony. Later I made *Quartets* for orchestras of three different sizes (24, 41, 93 instruments) and for concert band with 12 amplified voices. More recently I made *Hymns and Variations* for 12 amplified voices and then these pieces for organ. **The method I have used to free the original music of the theory of harmony, at the same time that its flavor is kept, is as follows: to count the number of notes in each line (sop. alt., ten. and bass) and to ask which numbers are passive and which are active, getting with the I-Ching the answers, passive being 1-32, active 33-64. An active number is first a sound which is held through to the next active number, which is then a silence that lasts until the next active number, etc. In the case of melodies, there are no silences but there are fewer tones in them than in the original tunes. The result, I believe, is a music in which each tone, since it is preceded and followed by silence, vibrates from its own center rather than because of a theory which controls it in hierarchical relations to other tones. I have tried to emphasize the autonomy of each tone (or melody)** by giving it its own chance determined registration. The indeterminate character suits I hope the differences between instruments.[273] (Bold is not original, but for my study.)

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[272] The title page of the score calls for "organ and six assistants," and the following page lists the number of stops needed. John Cage, *Some of The Harmony of Maine, Supply Belcher* (New York: Henmar Press Inc., Edition Peters 66840, 1980.

[273] Laura Kuhn, ed., *The Selected Letters of John Cage* (Middleton: Wesleyan University Press, 2016), 494. All punctuation is original.

My Results from Cage's Method

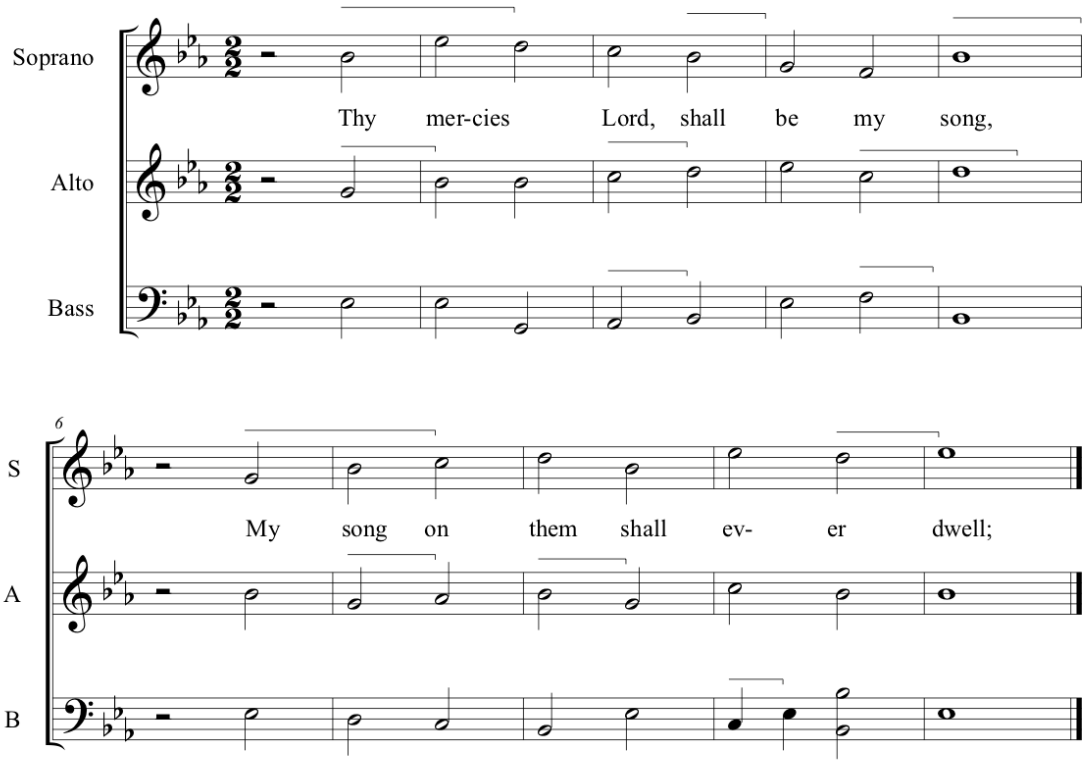
The main body of this chapter presents my results and analyses of Cage's pieces in comparison with Belcher's to show to what extent Cage's subtractions obscure the overarching tonal structures of the tunes, and to speculate whether his subtractions were random or had an underlying purpose. Many of the results are not in the 50% Yes or No realm, and some seem "highly skewed." First I will show which notes Cage retained in a few pieces.

My results (example 38) for two phrases of one of the pieces, "Turner," look like this (the original is from Belcher, the brackets indicate notes that Cage retained, the longer the bracket, the longer Cage's note).

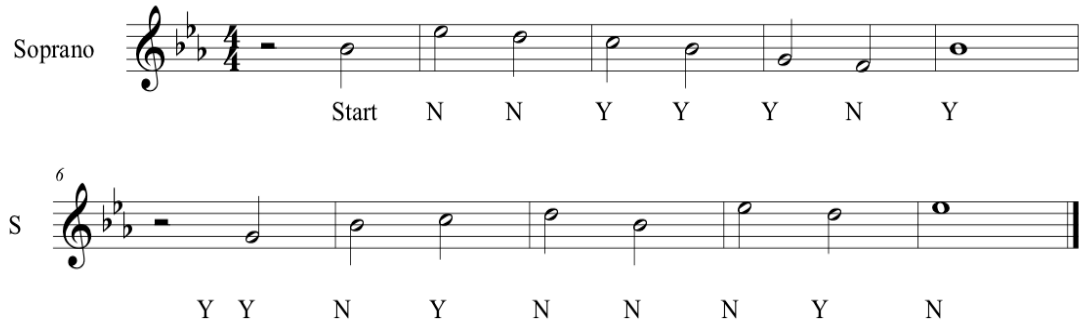
Using Cage's system of "yes" and "no," where yes (Y) means that the note or rest changes to the opposite, and no (N) means the note or rest continues, Cage altered the soprano line of the above, shown in Example 39.

Cage's method occasionally results in a change of harmony, as in the cadence of "Turner," which was originally a three-voiced piece. When Cage extracts notes from a four-voiced piece and turns it into a three-voiced organ piece, he must decide whether to use his "yes" or "no" method on the alto voice or the tenor, while keeping the soprano and bass voices. Example 41, "Chester" is a good example of this method of writing, where he selects notes from the alto, then from the tenor for his middle organ line (again, the notes Cage keeps are in brackets). Example 42 is the result of Cage's subtractive method of composition.Most of the harmonies in Cage's scores are similar to major or minor triads. But not always. The example of "Chester" contains the notes, E3, G4, and A4 in m. 3, quite different from the E-major chord in Belcher.

Example 38. "Turner," with Cage's Notes Bracketed.[274]



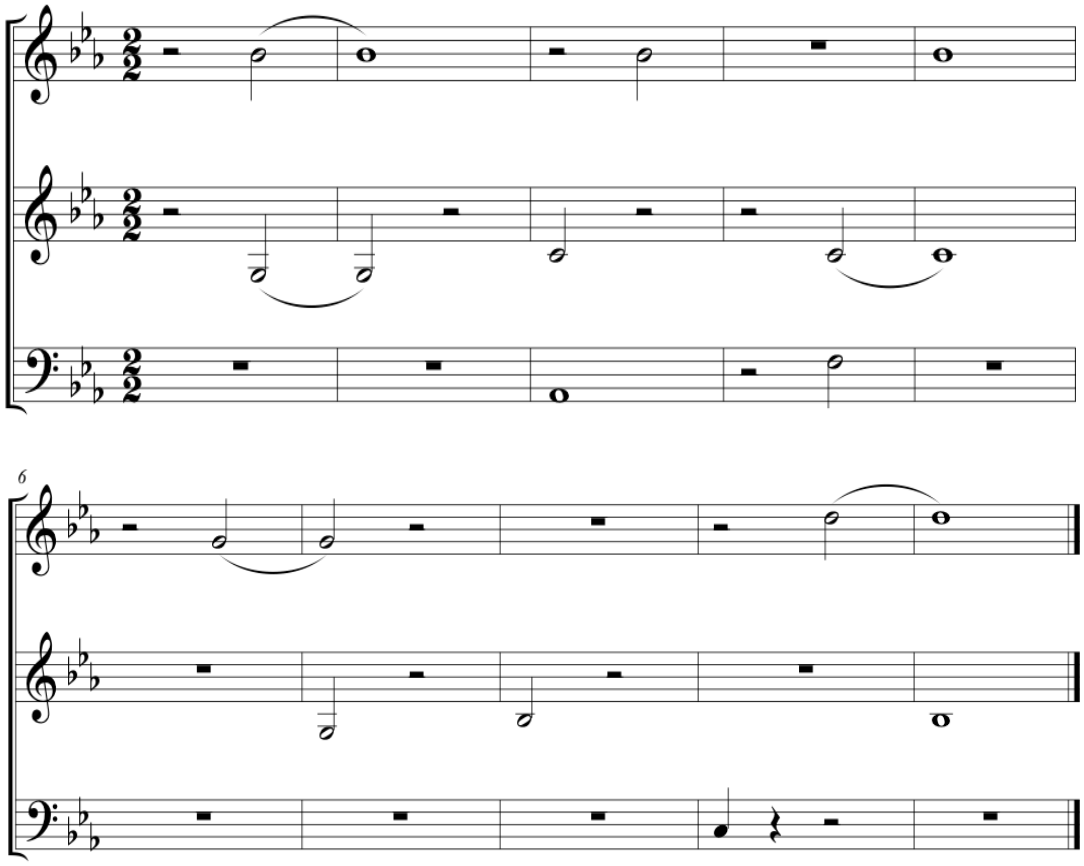
Example 39. Cage's Y and N Notes in "Turner."



274 274 From J. J. Smith, editor, *The Harmony of Maine: An Original Composition of Psalm and Hymn Tunes by Supply Belcher, Farmington, District of Maine, 1794*, reprint, (Anchorage, White Stone Press, 2012), 114.

Example 40 is the result of Cage's notes that were left after his Y and N method.

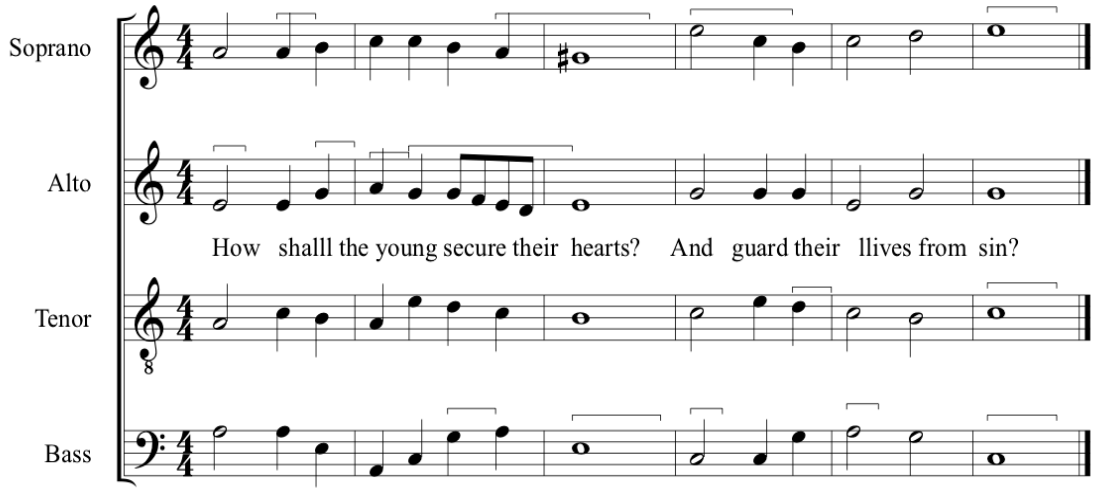
Example 40. "Turner," Measures 1-5.



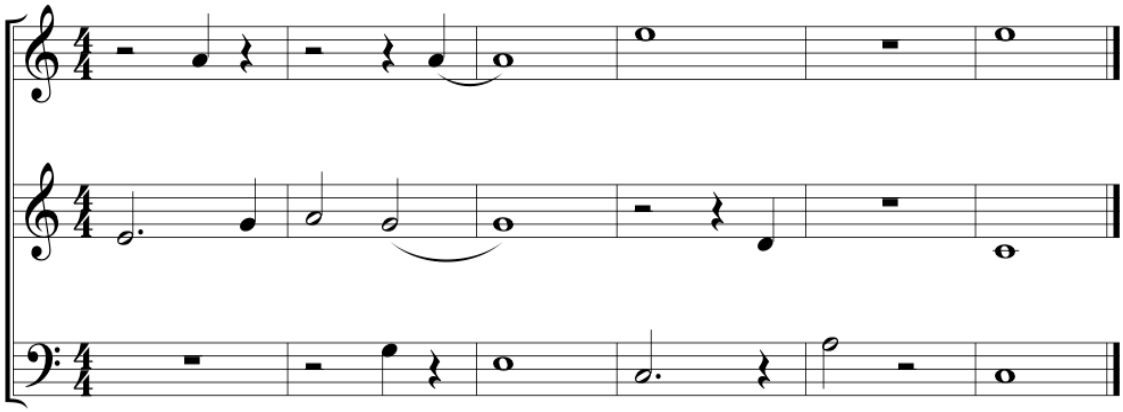
The D4 and E5 of m. 4 of Cage's score form a major-ninth interval, not the G-major chord Belcher wrote on beat 4. "Hallowell," Example 43, as well as "Alpha," Example 44, illustrate the new harmonies that result from Cage's extraction of notes. In these pieces we find Forte set classes 3-2, (013), 3-4, (015), 3-9, (027), and 3-11 (037).[275]

[275] Allen Forte (1926-2014) was an American theorist who taught at Yale University. Among his works are *The Structure of Atonal Music* (1973) in which he discusses unordered collections of pitch-class sets. He also published books about Schenkerian analysis among his 10 books—including books on the analysis music of Webern, Schoenberg, and of American popular songs.

Example 41. “Chester,” measures 1-6, with brackets of selected Belcher notes.[276]



Example 42. “Chester,” measures 1-6.



A 3-2 (013) trichord consists of three notes that include a minor- second interval and a minor-third interval above a lower note. For the 3-4 (015) trichord, the notes with C as the lowest can be C# and F#, the 3-9 (027) may be C, D, and G, and the 3-11 can be C,

[276] Smith, 31.

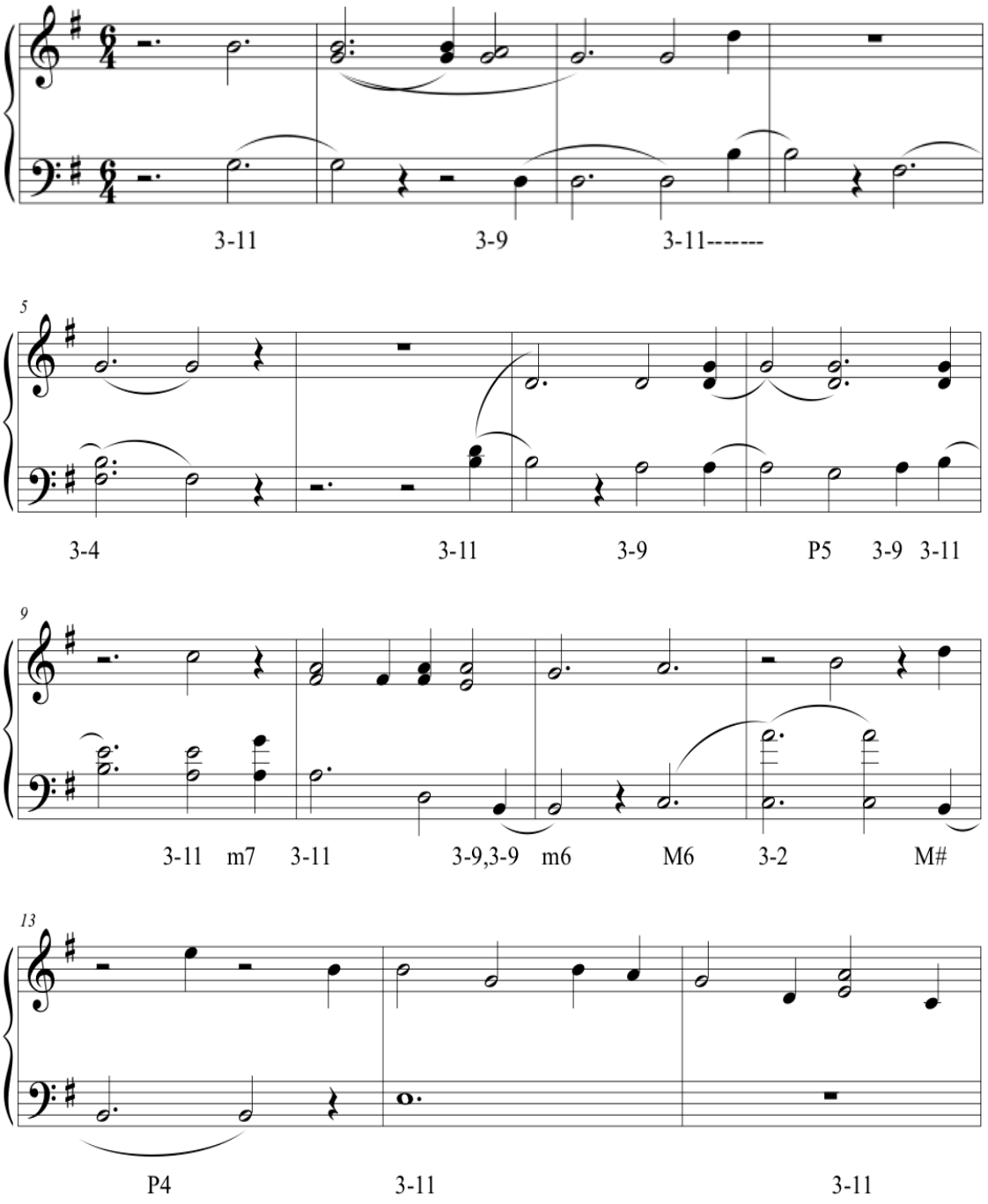
Eb, and G. All these are in the closest spacing. The 3-11 trichord is the minor triad of traditional music. Through inversion, this trichord can become a major chord. Thus, if a piece has many 3-11 trichords, as does the original "Hallowell," it will sound somewhat like a piece in a major tonality, and certainly like its model-the hymn of Belcher. It is the other trichords that emerge from this analysis that are of the most interest, as they enable Cage's music to obscure the tonality of Belcher's original, possibly intentional move. In the "Hallowell" example, a "m" denotes a minor interval, "M," a major, and "P," a perfect one. These intervals are noted if there are only two voices, or two notes, sounding. If more than two notes, the set-class numbers are used. From these examples, it can be seen that the major and minor triads, freely combine with other sonorities in Cage's version, and Table 6 furnishes further statistics for all of *Some of The Harmony of Maine* (the numbers after the "other" trichords indicate the number of times each was found).

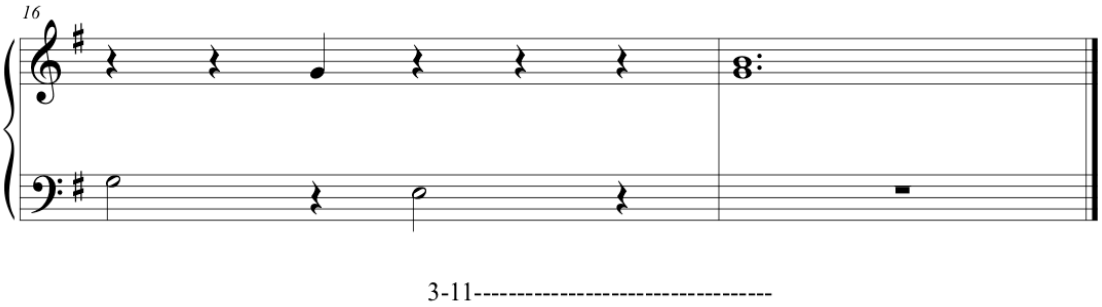
Schenkerian Analyses

The Schenkerian graphs included in this study represent the tonal hierarchies of Belcher's original compositions with the notes that Cage has left out of his versions of the chorales enclosed in brackets (for the most part). In my graphs, the phrases of theoriginal are marked as measures, dotted lines indicate that the note continues, and the brackets surround the notes that Cage has removed from the Belcher pieces. By creating these graphs with the Cage subtractions in brackets, I hope to show exactly to what extent these subtractions have the effect of obscuring tonality. Again, the question to be answered here is: Were Cage's subtractions truly random, or did they have the purpose

of thwarting the usual tonal routines?

Example 43. “Hallowell,” with set-class numbers.





Example 44. “Alpha,” with set-class numbers.

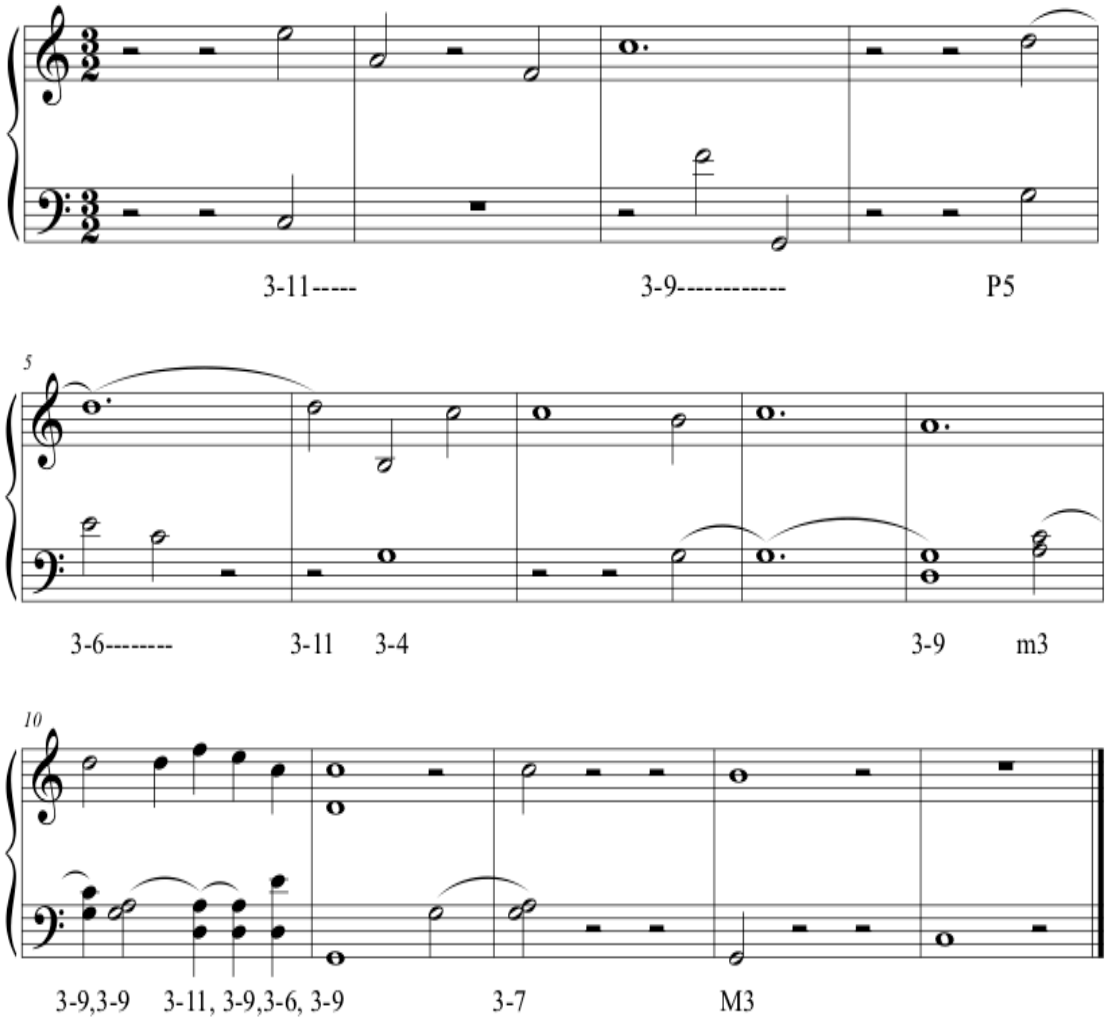


Table 6. List of Trichords in *Some of The Harmony of Maine*.

Name	3-11	3-9	3-7	3-6	3-4	3-2	M9	Other	Measures
Alpha	3	6	1	2	1	0	0		14
Majesty	4	3	3	0	0	0	0		17
Harmony	3	1	1	3	1	0	0		19
Creation	6	0	1	0	0	0	0	3-5 (1)	16
Hallowell	9	5	0	0	0	1	0		18
Advent	7	4	0	0	0	0	0		33
Turner	0	2	1	2	0	0	0		20
Sunday	1	1	0	1	0	1	0		14
St. John's	0	1	1	0	0	0	0		18
Invitation	3	3	2	0	1	1	3		38
Transmigration	15	6	4	4	3	5	4		68
Chester			2				2	3-12 (1)	12
The Lily	2	1	1	1	1	2		3-8 (1) 3-10 (1)	17

3-5 is (016)—possibly C, C#, and F#, 3-12 is (048)—possibly C, E, and G#, an augmented triad, 3-8 is (026)—possibly C, D, and F#, and 3-10 is (036)—possibly C, D#. and F#.

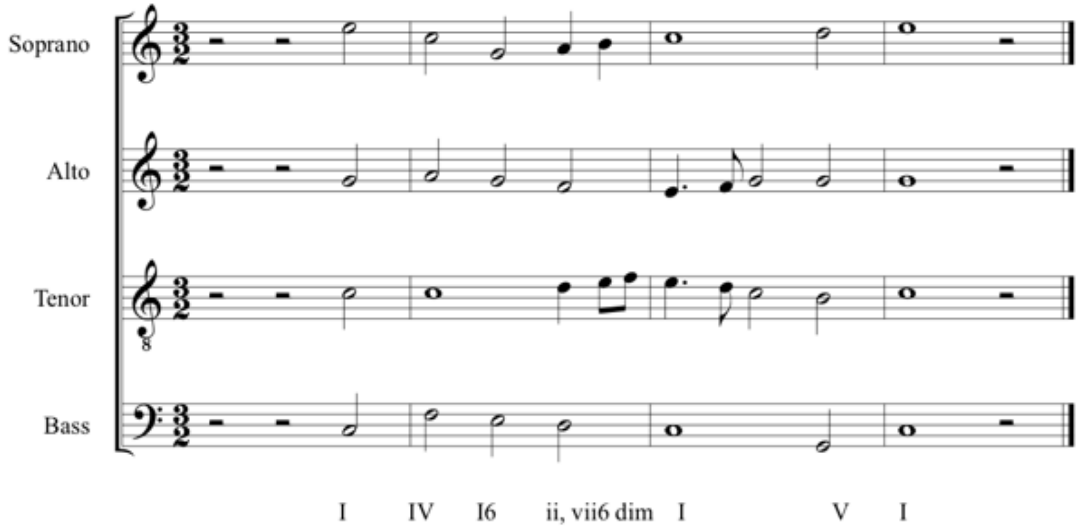
Alpha

Text by Isaac Watts:[277]
My soul, repeat his praise,
Whose mercies are so great;
Whose anger is so slow to rise,
So ready to abate.

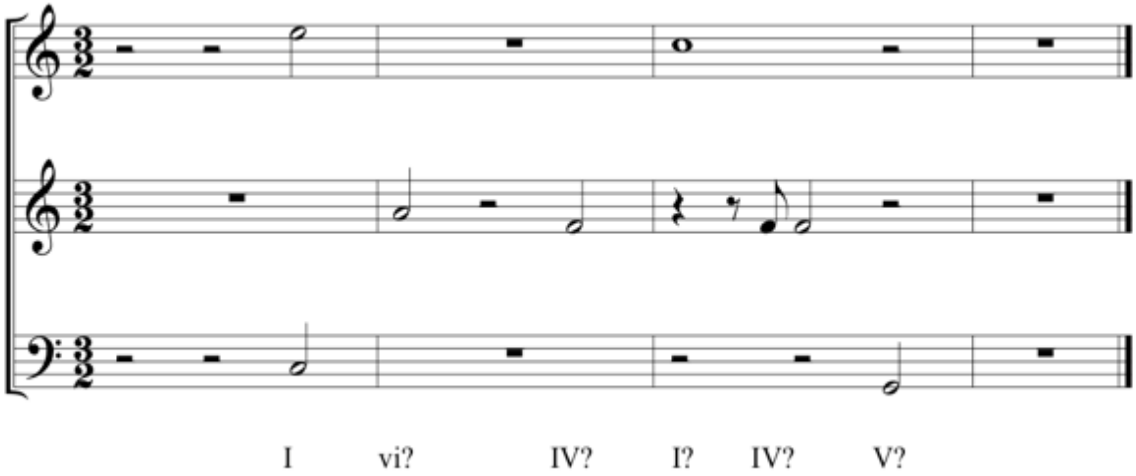
[277] Text from Smith, 1-2.

This short piece (14 measures) exemplifies the descent of the *Urlinie* in the tenor voice, with the soprano containing other chord tones. Belcher's version is for four voices, and Cage has rewritten it for 3 organ lines (Belcher's first phrase is example 45, Cage's is example 46.).

Example 45. Belcher's first phrase of "Alpha."

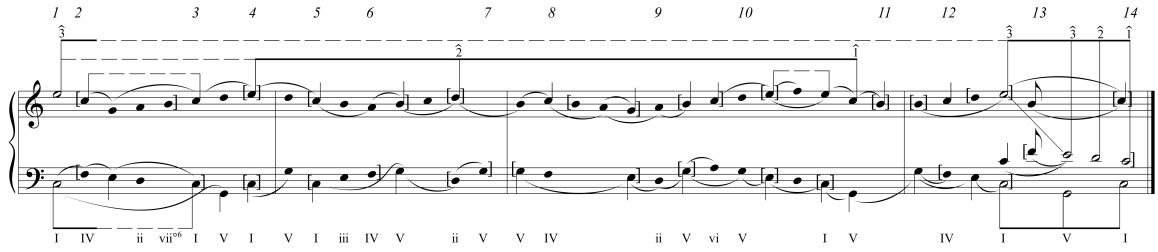


Example 46. Cage's version of the first phrase of "Alpha."



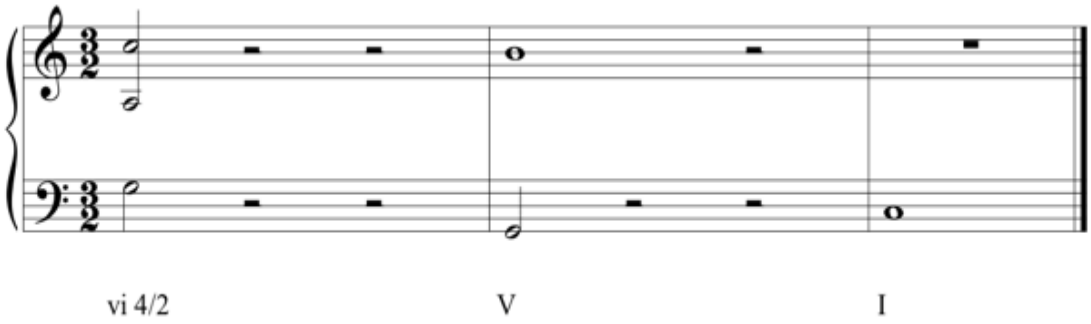
The Schenkerian graph of this piece, Example 47, illustrates the *Urlinie,* bass arpeggiation, and smaller motions of passing and neighbor tones in the piece.

Example 47. Schenkerian graph of "Alpha."



In this piece, both Belcher and Cage achieve the major-third interval above C, E5, on the first note of the first measure. Belcher writes a D5 in m. 7 and a C5 in m. 10, making a secondary descent of the *Urlinie* before the final descent in the tenor line. Cage does write a descent through a soprano D5 in m. 4, and a C5 in m. 6, but these notes are earlier than Belcher's. He does return to E5 in m. 10, followed by a C5, both quarter notes, but then progresses to a soprano B4 in m. 13 and a rest in m. 14. His middle line does contain an E as the last quarter note in m. 10, moving to a D for the cadence in m. 11, but there is no *Urlinie* descent at mm. 13-14. Cage also changes the cadence structure from Belcher's four cadential chords I, V, V, I over the four cadences of the piece to a rest after a low G in m. 4; a lone C in m. 7, possibly indicating a I chord; the notes G, D, C (set 3-9, consisting of notes that can be stacked into perfect-fifth intervals) in m. 11, and a single C in m. 14. However, this last C is the end of a traditional dominant-tonic cadence, after a submediant-seventh chord (See example 48). This is one of the most clear dominant-tonic cadences in the whole collection.

Example 48. Cage's Last Three Measures of "Alpha."

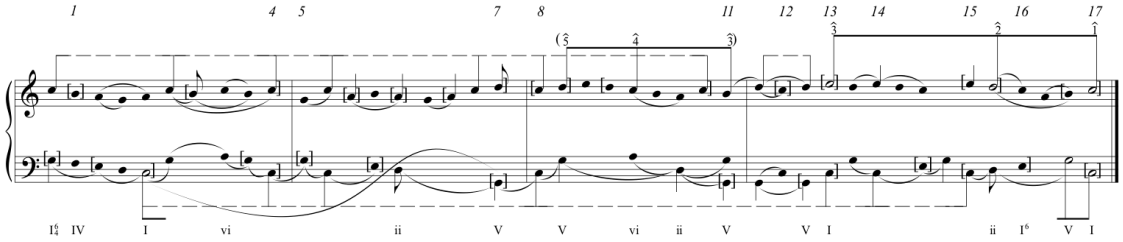


Majesty

After the text, the Schenkerian graph (Example 49) shows the entire piece, followed by the original score (Example 50).

Text by Isaac Watts:[278]
Behold, the glories of the Lamb,
Amidst his father's throne!
Prepare new honors for his Name
and songs before unknown.

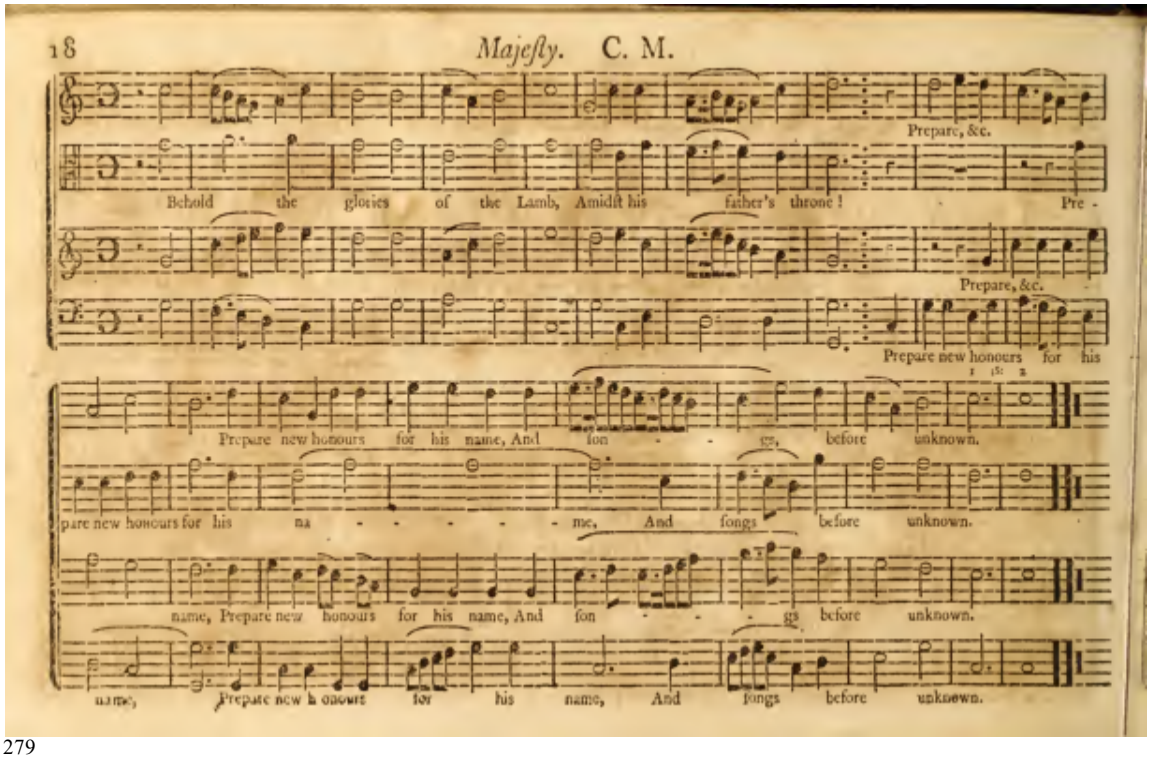
Example 49. Schenkerian graph of "Majesty."



[278] Smith, 3.

Majesty is a piece of 17 measures, the second part of which begins with imitative entries, but the entries are not identical with each other. The score shows this clearly, starting in m. 7.

Example 50. Score of "Majesty."



279

Belcher's ascent to the first note of the *Urlinie*, E5, takes until m. 13, although the bass's arpeggiation begins in m. 2. Cage changes the first bass arpeggiated note to m. 5.

---

279 Supply Belcher, *Some of the Harmony of Maine, Being an Original Composition of Psalm and Hymn Tunes of Various Metres, Suitable for Divine Worship, with a Number of Fuging Pieces and Anthems, together with a Concise Introduction to the Grounds of Musick, and Rules for Learners* (Boston, Isaiah Thomas an Ebenezer T. Andrews, 1794), 18, at https://imslp.simssa.ca/files/imglnks/usimg/3/35/IMSLP260524-PMLP84324-mainebe00belc.pdf (accessed March 15, 2020).

Belcher's *Urlinie* descends over the last three measures, and the bass matches the descent with tonic-dominant-tonic chords. The double cadence chord at the end is due to the repeat of the second half of this piece. Cage's *Urlinie* doesn't descend, however, as can be seen from the bracketed notes, but there is a small descent in m. 14. The final cadence is changed as the bass does not end on tonic. Table 7 shows that Cage matches some of the cadences, and others not at all.

Table 7. Cadences of Belcher and Cage in "Majesty."

Measure	Belcher cadences	Cage cadences
4	I	Notes G and A
7	V	Note D, after singles G,B,D 6/4 (V)
11	V	V
17	I	Notes E, G, A held, set (3-7) (or an A7 chord without the third)

Thus, in two of four cadences, Cage retains notes from Belcher. The other two are quite different.

Harmony

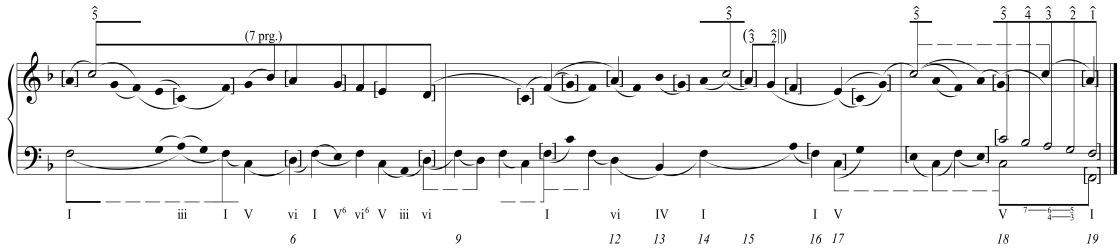
After the text, Example 51 shows the Schenkerian graph of this piece. This is another piece with the final *Urlinie* descent in the tenor voice.

Text by Isaac Watts:[280]
Come, let us join our cheerful song
With angels round the throne.
Ten thousand thousand are their tongues,
But all their joys are one.

[280] Smith, 5.

Harmony is another short piece. Cage's version has many similarities to Belcher's, although he does change the four vocal voices to three organ lines, he omits

Example 51. Schenkerian graph of "Harmony."



the opening upbeat measure, and he leaves out notes at the final cadence. Those left actually change the chord of the final measure. Table 8 show the harmonies in each version.

Table 8. Belcher and Cage harmonies in "Harmony."

Measure, F major	Belcher Chords	Cage Chords
1	I (upbeat measure)	none
2	I, passing, ii7	I
3	iii, V4/2, I	iii, F octaves plus E (m2)
4	V, iv6	V, iv6
5	I (cadence)	IV 6/4, two notes tied from 4
6	I, V6, I	I, note G, then F
7	V, VI7 I6, V/vi	I, notes F, A
8	vi (cad., modulation to D minor)	Single notes A, F
9	vi (imitation)	Note F
10	V	Note C
11	I, V, I6, I	Notes C, and F
12	vi	Ties, note D, then C-F
13	IV, M6	IV with pedal point
14	I (cadence elided)	I over B-flat pedal point
15	I	Notes, F, G,A
16	V	M6, of G and E
17	V6, I	I over notes G, and D
18	V	Notes E and C
19	I (final cadence)	C and A, (m6)

M. 17 in Cage has the same soprano broken F major chord as in Belcher' soprano. Belcher's final cadence includes a descent of a perfect-fifth interval in the tenor line, with the soprano on the third of the tonic chord. Cage's version leaves out the tonic note, however, ending only on the other two notes of the chord (as well as leaving out the other notes of the *Urlinie*). With a previous E in the measure before, the chord becomes a minor mediant. But this is not so different from the first cadence, which, through tied notes, Cage changes to a B-flat 6/4 chord, or the cadence at the end of the first section, which is a single A note, in m. 8. This is preceded, in Cage's version, by a measure with the notes, D and A, possibly signaling a submediant in second inversion, so this cadential formula is submediant to the note A. Cage is writing subdominant, submediant, and mediant cadences, and an unclear cadence to D (m. 8). Belcher uses a secondary dominant of A major as the last chord in m. 7, just before the D minor chord of the cadence, a clear key change.

Cage preserves the same texture of few notes and many rests from mm. 6 to the end of the piece, but his first four measures have complete chords, in a rhythm similar to Belcher's. Example 52 is the first four measures (with upbeat) of Belcher's hymn, Example 53 is the first four measures of Cage's.

Creation

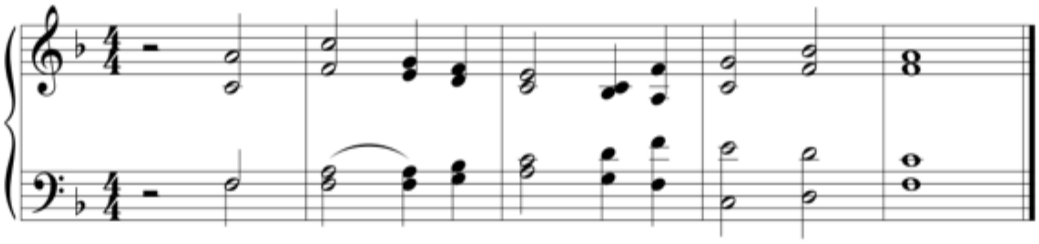
After the text, Example 54 is Belcher's 1794 score of this short piece.

Text by Joseph Addison:[281]
The spacious firmament on high,

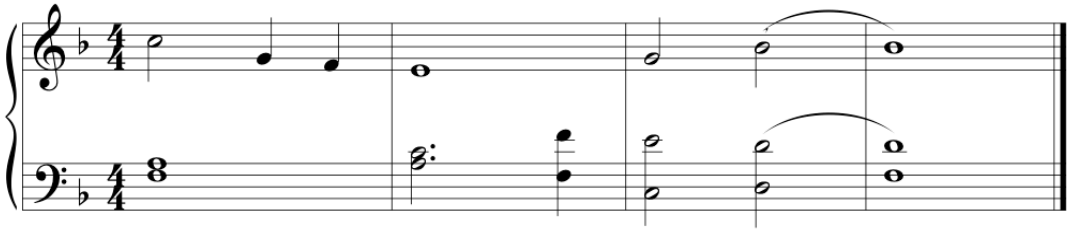
[281] Poem by Joseph Addison, "The Spacious Firmament on High" at *The Academy of American Poets*, at https://poets.org/poem/spacious-firmament-high (accessed 5/2/2020).

With all the blue ethereal sky,
And spangl'd heavens shining frame,
Their great original proclaim.

Example 52. Belcher, measures 1-4 of "Harmony."

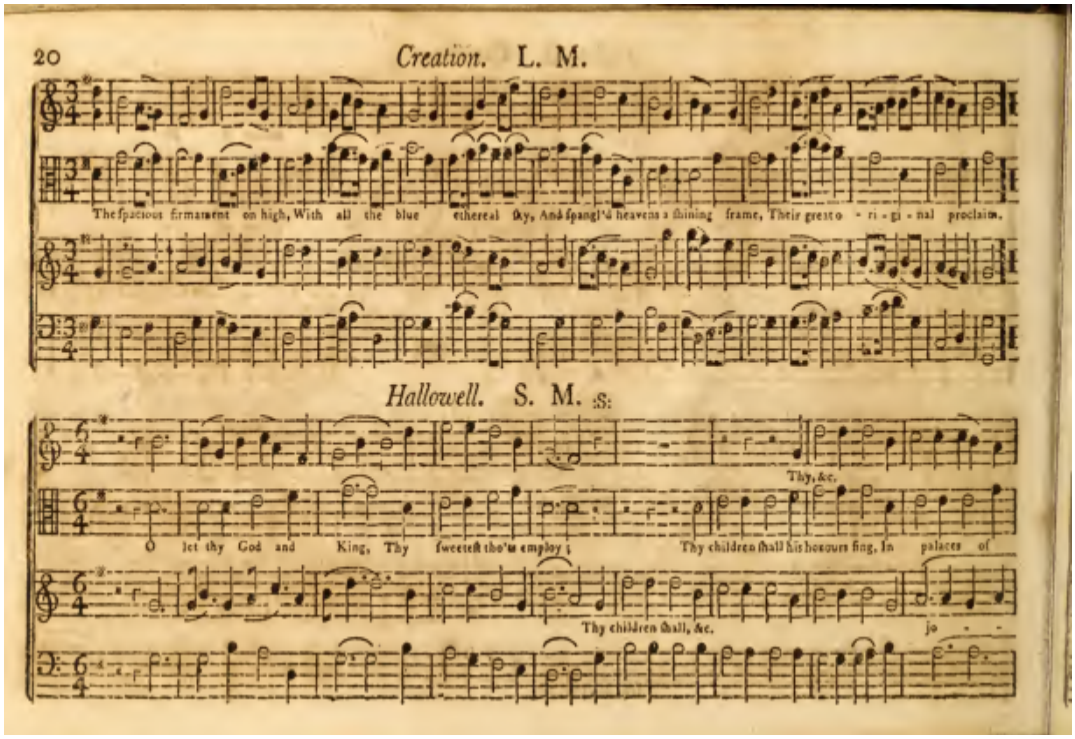


Example 53. Cage, measures 1-4 of "Harmony."



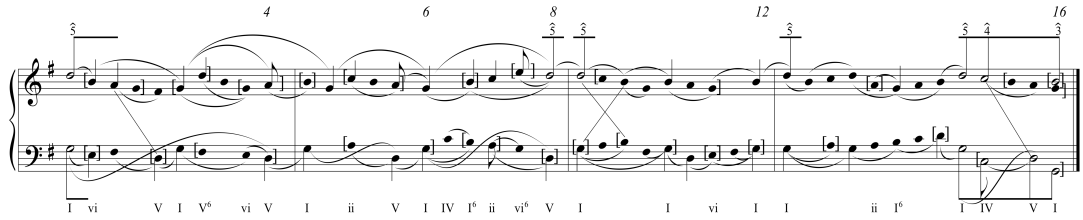
Creation is short, just 16 measures, in G major, with cadences in m. 4 on the dominant, 6 on the tonic, m. 8 on dominant, m. 12 on tonic, and at the end, on tonic. The Schenkerian graph, Example 55, shows that Belcher's *Urlinie* starts on the first note of the piece and continues until the penultimate measure when it descends. The tonic note, G, is sung by the alto, tenor, and bass, but the soprano goes back up to the third of the chord, B, at the final cadence. The bass arpeggiation begins on the first note of the piece as well, and continues until the end, when it arpeggiates a subdominant, dominant, tonic ending. The original G is still present, as can be seen in the score in the last measure, but

Example 54. “Creation,” in *Harmony of Maine.*



Belcher adds the lower octave G, probably to emphasize the foundation tone.

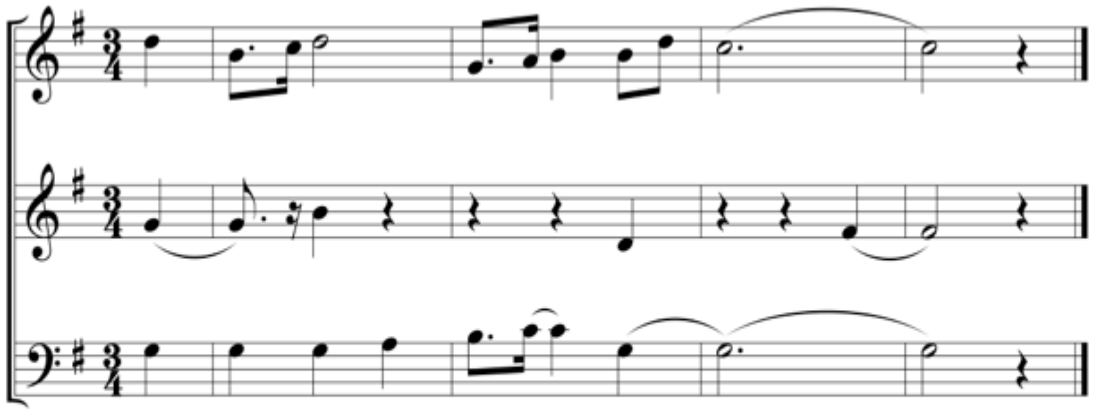
Example 55. Schenkerian graph of “Creation.”



Cage version is different. His cadences consist of the following: m. 4, the note B, after a G in the bass, thus I; m. 6, no cadence; m. 8, I; m. 12, a B minor chord, iii; and at the end, the notes G, C, and F#. The last note of the final *Urlinie* descent is subtracted, as is most of the bass arpeggiation at the final cadence. The resulting final sonority, seen in

Example 56, set class 3-5 (016), is quite dissonant, and after expanses of tonal chords and the other tonal cadences, does not form a conclusive ending to the piece.

Example 56. Cage's Last Four Measures of "Creation."



G: I---------- M7 I-------- Forte set 3-5

A mention should be made of the dotted notes in Cage's piece, which are lifted from Belcher's score. In fact, both soprano and bass in the second measure above are exactly as in Belcher's piece.

Hallowell

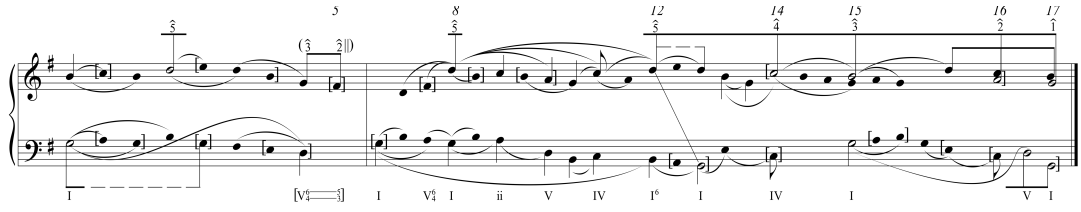
Belcher's "Hallowell" is a fuging tune. The first phrase has an interruption and is followed by 12 measures of imitative entries and elided cadences, in a 6/4 rhythm that, if energetic, reflects the words. It is graphed in Example 57 in two sections, the second is the fuging section.

	Text, by Isaac Watts:[282]
Opening:	O let thy God and King

[282] Smith, 7.

	Thy sweetest tho'ts employ:
Fuging section:	Thy children shall his honors sing
	In palaces of Joy.

Example 57. Schenkerian graph of "Hallowell."



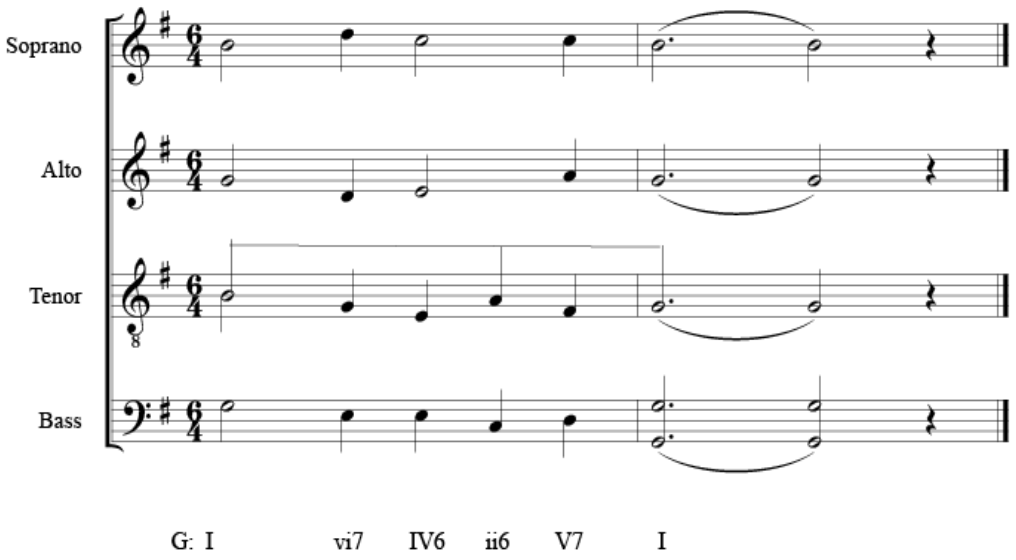
Belcher does not write the *Urlinie* descent in the soprano, but in the tenor (shown in the example above with parentheses where it normally would descend), illustrated in Example 58. In the score, the B, the third of the tonic chord, is on the downbeat of the penultimate measure in the tenor voice, with the A, actually over a supertonic chord, and also in the alto voice in the dominant-seventh chord on the following beat. It finally arrives on G in alto, tenor, and bass.

Cage changes Belcher's ending, as shown in Example 59, still ending on tonic (in fewer voices), but leaving out the dominant chord before the tonic, and there is no *Urlinie* descent, consistent with the other settings we have seen so far.

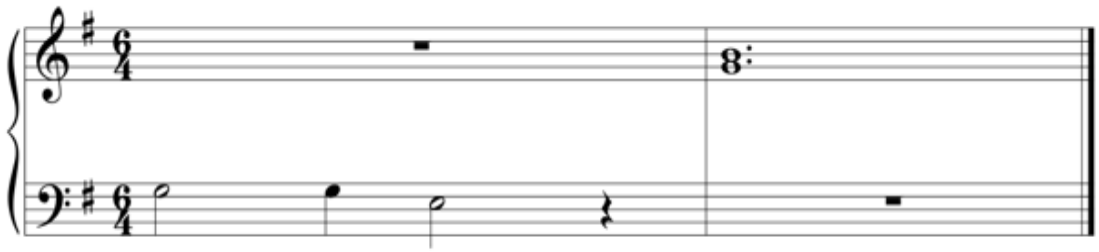
In the fuguing tune section (m. 6-15), most of Belcher's measures have the same rhythm, either half-, quarter-, half-, quarter-notes or the last three beats are filled in, half-, quarter-, quarter-, quarter-, quarter-notes, which emphasizes the strong beats 1 and 4 of the measure. Cage's rhythms vary. The rhythms of the measures of both composers are shown in Table 9.

In comparison with Belcher's stable rhythm which emphasizes the main beats of

Example 58. Belcher's ending of "Hallowell."



Example 59. Cage's ending of "Hallowell."



the measure plus the last eighth-note, Cage only places notes on the second strong beat of the measure, beat 4, about half the time, but does place notes on beat 1 more than half of the time, and on the last eighth-note. His version, therefore, somewhat

Table 9. Belcher and Cage rhythms per measure in "Hallowell's" fuging section, to end.

	Belcher, beats						Cage, beats					
M.	1	2	3	4	5	6	1	2	3	4	5	6
6	x		x	x		x						x
7	x		x	x		x				x		x
8	x		x	x	x	x			x		x	x
9	x		x	x	x	x	x			x		x
10	x		x	x	x	x	x			x	x	x
11	x		x	x	x	x	x			x		
12	x		x	x	x	x			x			x
13	x		x	x	x	x			x			x
14	x		x	x	x	x	x		x	x	x	x
15	x		x	x		x	x		x	x		x
16	x		x	x	x	x	x		x	x		
17	x						x					
	12/12		11/12	11/12	8/12	11/12	7/12		6/12	7/12	3/12	9/12
	100%		92%	92%	67%	92%	58%		50%	58%	25%	75%

This shows, beat by beat, Cage's use of the same articulation as Belcher (Belcher:Cage)--58%, 54%, 63%, 37%, and 82%.

emphasizes downbeats, and moving to the downbeats. In this case (unlike the effects they have on the tonality of Belcher's original), the Cage variants actually slightly strengthen the meter. It is the last two beats of the measures that show the most change by Cage, and argue for possible non-random choices.

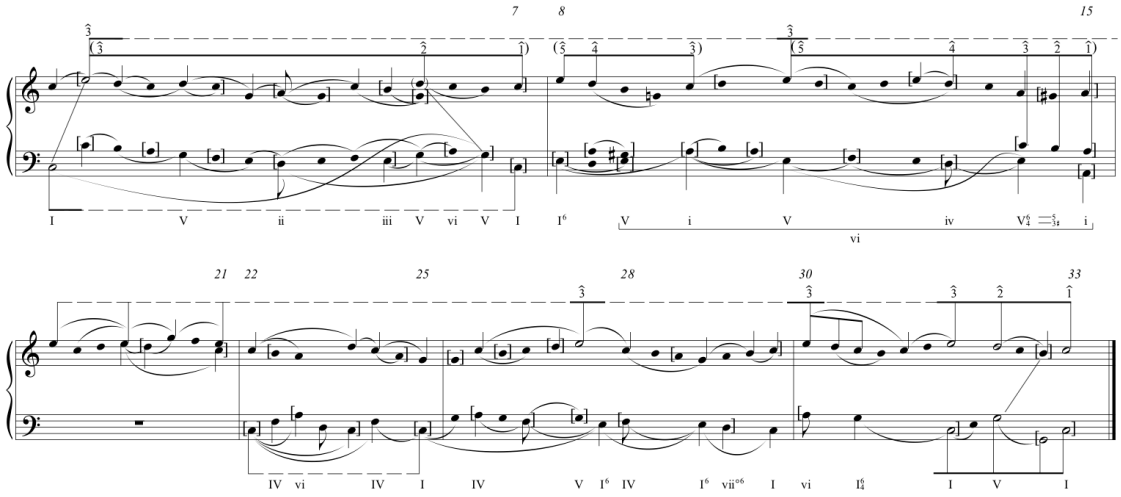
Advent

Advent is longer, with a modulation in the middle. Example 60 is the Schenkerian graph, and the text follows.

Advent has 33 measures. It is in the key of C major, but Belcher modulates to the relative minor key of A minor for the cadence in m. 15. He achieves the first note of the *Urlinie*, immediately after the upbeat, and that note stays in place throughout the piece until the final descent. He also achieves the first note of the bass arpeggiation early in the piece, in the upbeat. This note prolongs itself until the cadence in A minor in m. 15, but

is restored, and forms the tonic-dominant-cadence at the end of the piece.

Example 60. Schenkerian graph of "Advent."

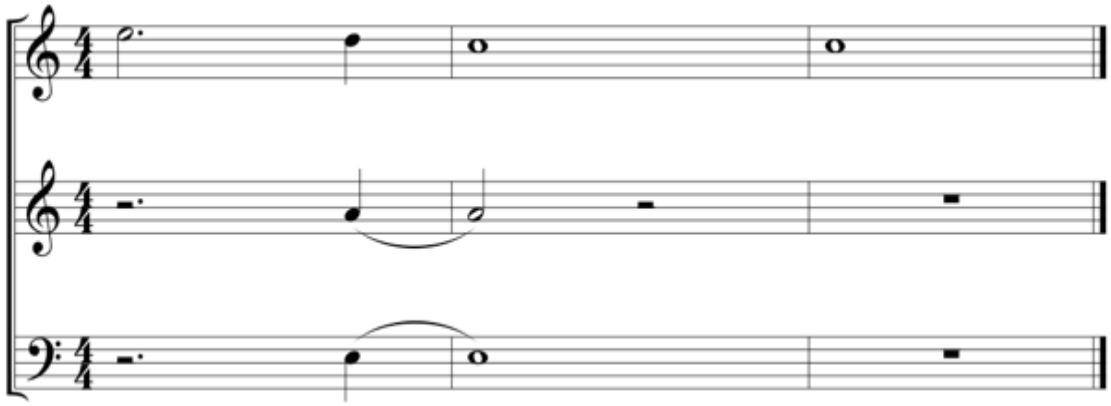


Text by Thomas Sternhold:[283]
The lord desended from above,
And bow' the heav'ns most high;
And underneath His feet He cast
The darkness of the sky.
On cherub and on cherubim
Full royally He rode
And on the wings of all the winds
Came flying, flying, flying all around.

The four voices of Belcher's version are reduced to three lines, again, in Cage's work. His *Urlinie* does not achieve the soprano E until m. 16, after the cadence in A minor. But it is present, and descends at the end of the piece, unlike many examples we have seen thus far. However, Cage's bass line does not return to the tonic note at the end, as shown in example 61, instead finishing on an E3 and an A minor chord in second inversion.

[283] Smith, 9.

Example 61. Cage's ending of "Advent."



Although a change of key, it is not as conclusive as a tonic chord it root in the bass would be.

Another example illustrates Cage's subtraction of notes from Belcher's score, that result in different sonorities. The following example 62 of Belcher, and example 63 of Cage, is of the two voices of the score, mm. 16-21.

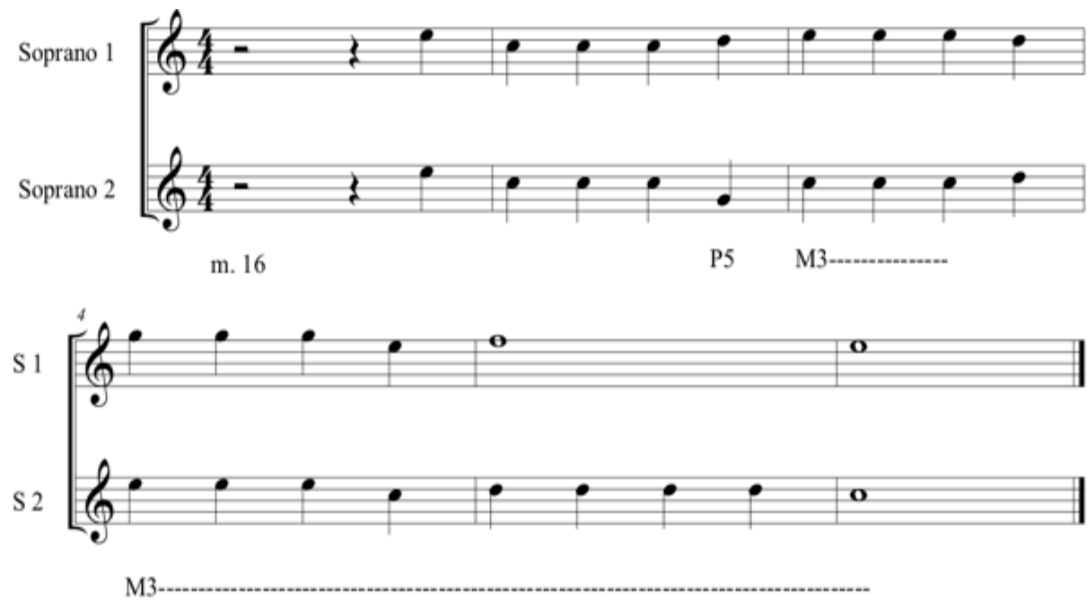
Cage's method of subtraction transforms this phrase of Belcher's major-third intervals and one perfect fifth into mostly major-second and minor-third intervals, with the same perfect fifth. The minor seconds in Cage's version are far more dissonant than the major thirds of Belcher's version. Not only do Cage's subtractions obscure main cadential points, but they also make the intervals and chords themselves more dissonant in general.

Turner

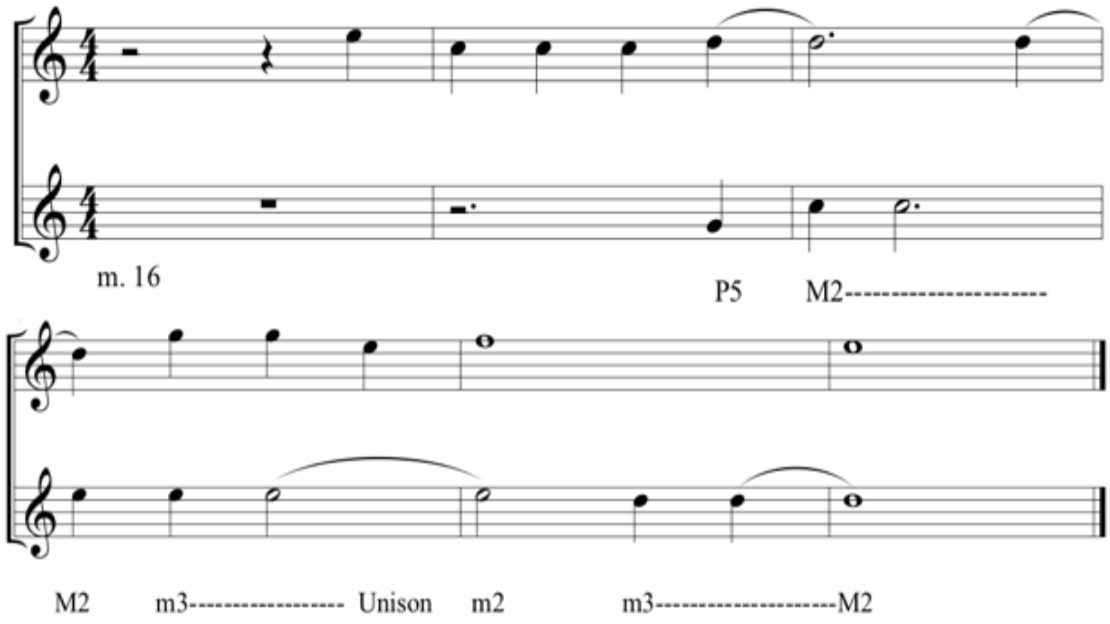
Belcher's original hymn only has one surprising feature, which I explain after Example 64, the Schenkerian graph of the whole piece, and the words of the text.

The surprise is one of the cadences. In its four cadences, the first is a half cadence, the second and last on the tonic, but the third cadence is on the submediant

Example 62. Belcher, “Advent,” mm. 16-21.

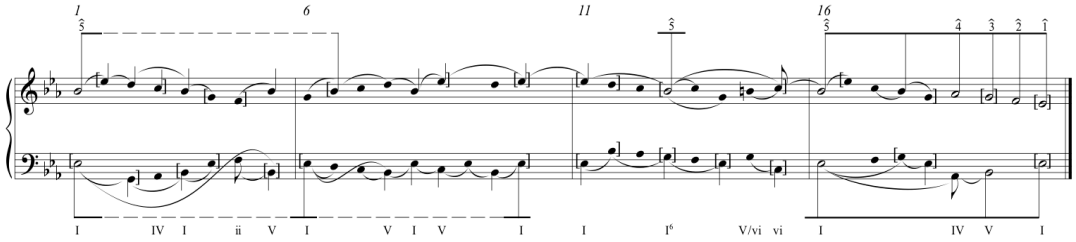


Example 63. Cage, “Advent, ” mm. 16-21.



which is a small deviation from the usual dominant-tonic-dominant-tonic plans. The original hymn is in three voices, so Cage did not need to eliminate one part. He does,

Example 64. Schenkerian graph of “Turner.”



Text by Brady and Tate:[284]
Thy mercies Lord, shall be my song,
My song on them shall ever dwell;
To ages yet unborn, my tongue
Thy never failing truth shall tell.

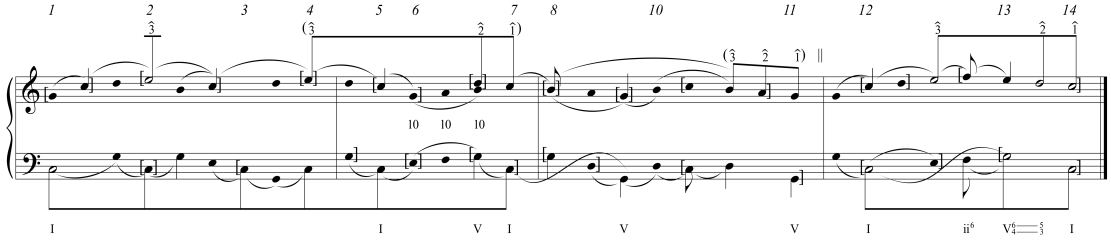
however, alter the cadence structure: Cadence 1 in Cage includes the notes C4 and B-flat 4, a minor-seventh interval, after the previous measure had included the F3 (Forte set 3-9). His second cadence is on the notes B-flat3 and D5, a major-third (tenth) interval. The third cadence is simply a G in the bass, and the fourth cadence is a held low B-flat from the measure before, which, if including the F above the B-flat in the same measure, causes the piece to end on a dominant. Of course, this (again) does not allow the *Urlinie* to descend nor the bass to finish its arpeggiation.

Sunday

“Sunday” is short, just 14 measures as seen in Example 4-28. The text is possibly by Belcher himself.

[284] Smith, 114.

Example 65. Schenkerian graph of “Sunday.”



Text possibly by Supply Belcher:[285]
Arise, Arise! The Lord arose,
On this triumphant day;
Your souls to piety disclose,
Arise to bless and pray.

Belcher’s “Sunday” has three voices as does Cage’s. They are both in 3/8 and have an upbeat. As we have seen before, Cage’s articulation points are quite different from Belcher’s, as seen in Table 10. In beats 2 and 3 of the measures, Cage is close to a 50% chance of writing notes on Belcher’s beats (48%, 56%), but on the downbeats he preserves 71% of those originally provided by Belcher. In three of the measures, mm. 1, 8, 11, plus the upbeat, Cage uses the same rhythmic articulation as does Belcher.

Belcher’s piece features cadences on the tonic (mm. 4, 7, and 14) and dominant (m. 11). Cage follows the same cadential plan, but his cadences use different inversions and include other elements: mm. 4 and 7 are first inversions, m. 11 is a single note, and the final cadence, seen in Example 66, is quite different, instead of a C major chord, the notes are D, E, F, SC 3-2, in the penultimate measure, and just an alto D at the end.

[285] Smith, 118.

Table 10. Beats in each measure of Belcher and Cage of "Sunday."

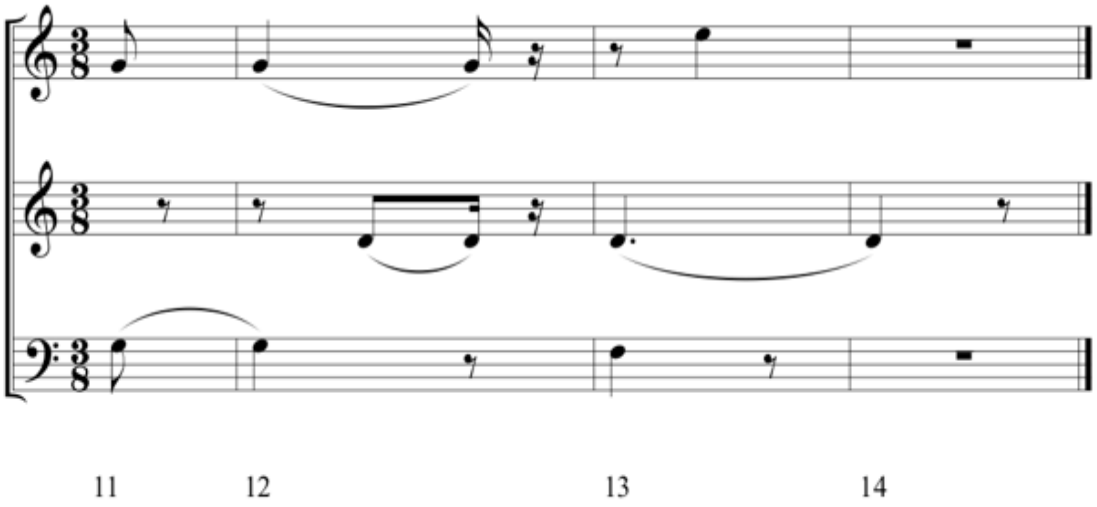
Belcher					Cage			
Measure, Beat	1	2	3		Beat	1	2	3
Upbeat		x					x	
1	x		x			x		x
2	x	x	x					x
3	x	x	x			x		
4	x		x	cadence				x
5	x		x			x		
6	x	x	x			x		x
7	x		x	cadence		x		
8	x		x			x		x
9	x		x			x		
10	x	x	x				x	x
11	x		x	cadence		x		x
12	x	x	xx	(sixteenths)		x	x	(sixteenth rest)
13	x	x	x			x	x	
14	x			cadence		none, only a tie		
	14/14	6/14	14/15			10/14	3/14	8/15
	100%	43%	93%			71%	21%	53%

The Schenkerian graph shows that the E in m. 13 is the E of the *Urlinie* that Belcher achieved by m. 2. Cage waits until the end of the piece to write it, and then does not resolve it, although he does write the first two notes of the bass arpeggiation, C and G in m. 1, and repeats the G in mm. 11-12. However, he does not return to the C at the end of the piece.

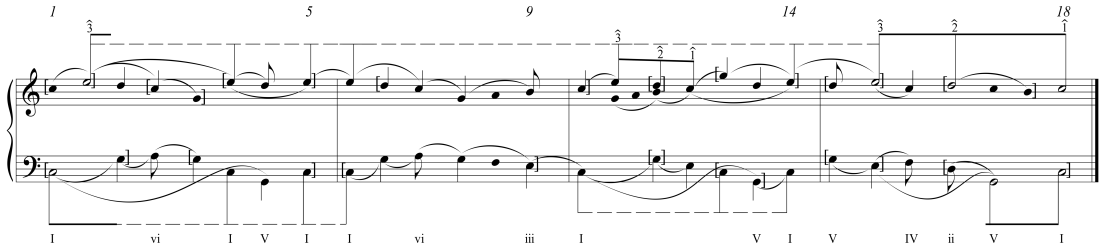
St. John's

The Schenkerian graph of this hymn of 18 measures is shown in Example 67. In this simple hymn of 18 measures by Belcher, the second note of the soprano begins the *Urlinie* which descends over the last three measures of the piece, and the bass

Example 66. The ending of Cage's "Sunday."



Example 67. Schenkerian Graph of "St. John's."

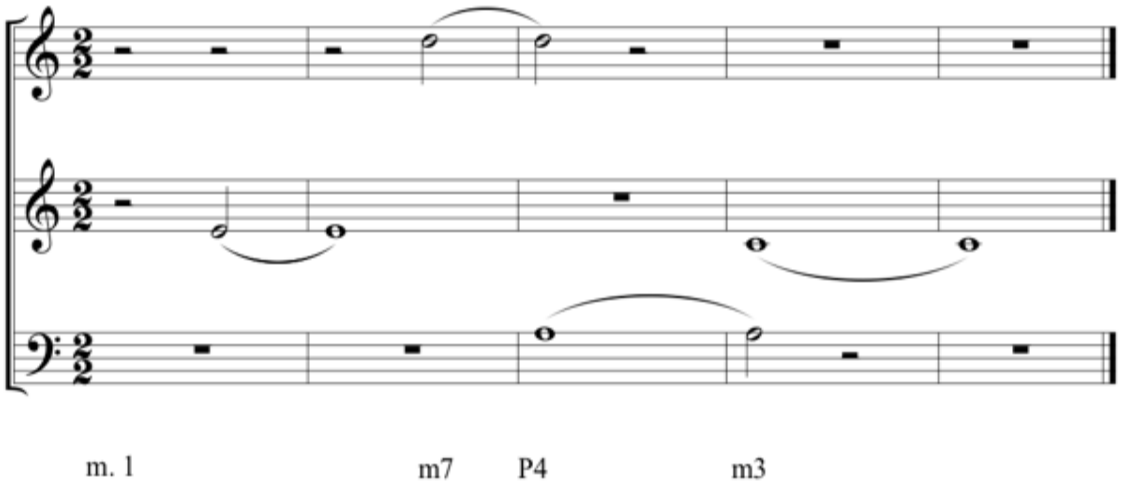


Text by Nahum Tate:[286]
With cheerful notes let all the earth,
To heav'n their voices raise,
Let all inspir'd with godly mirth,
Sing solemn hymns of praise.

[286] Smith, 122.

arpeggiation begins on the first note and completes itself at the end. The simple cadences are tonic, mediant (the only slight difference from the expectation), tonic, tonic. It is in three voices, so Cage does not need to eliminate one. Cage's score is full of ties, which affect the harmony (see Example 68 of his first phrase below).

Example 68. Cage's version of "St. John's," mm. 1-5.

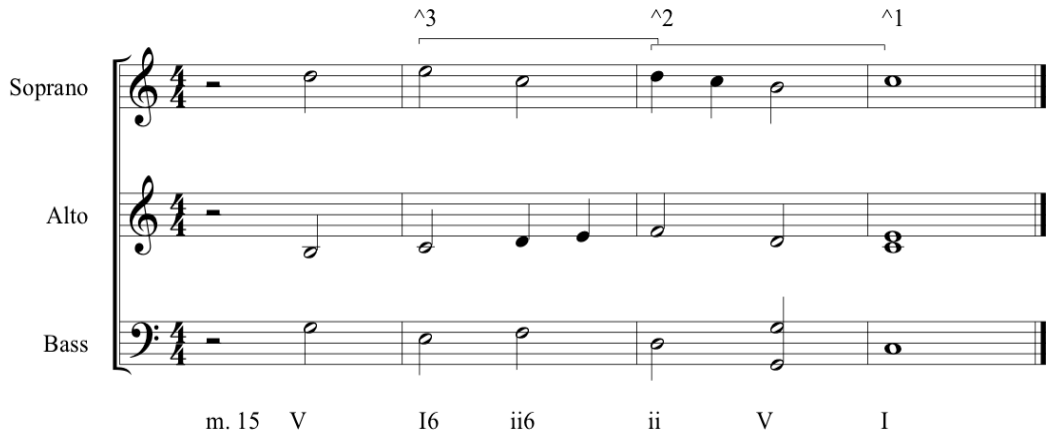


The first phrase now ends in A minor, instead of Belcher's C major. The last phrase (Example 69 is Belcher's version, Example 70 is Cage's) is also illustrates the difference between the harmonies of Belcher and Cage. Cage's last four measures attenuate both the *Urlinie* descent and the final cadence in the bass, which ends on a minor-seventh interval with the lowest note in the alto voice.

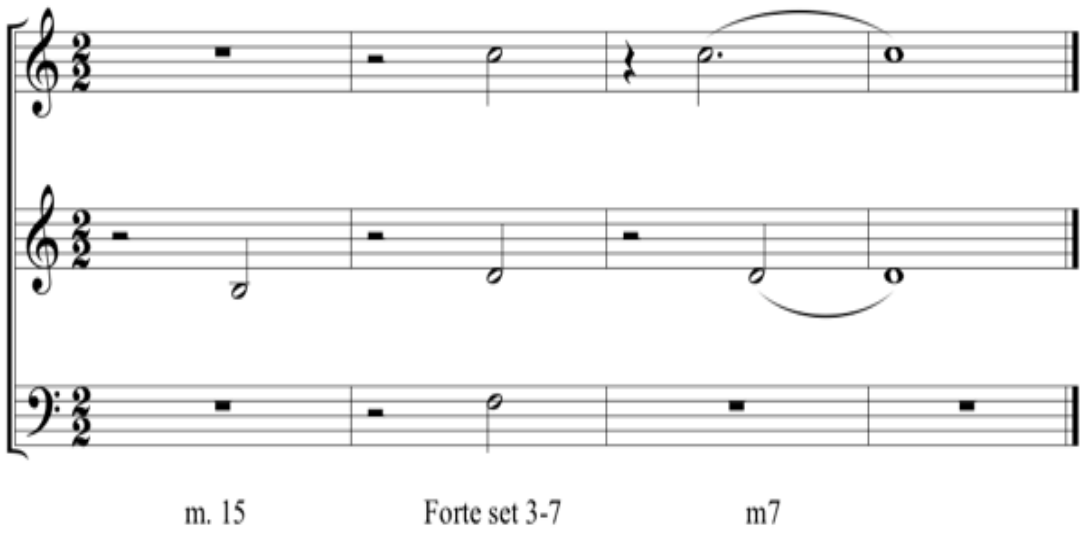
Invitation

Example 71 is the Schenkerian graph of this longer piece, "Invitation," with

Example 69. Belcher's Last Four Measures of "St. John's."

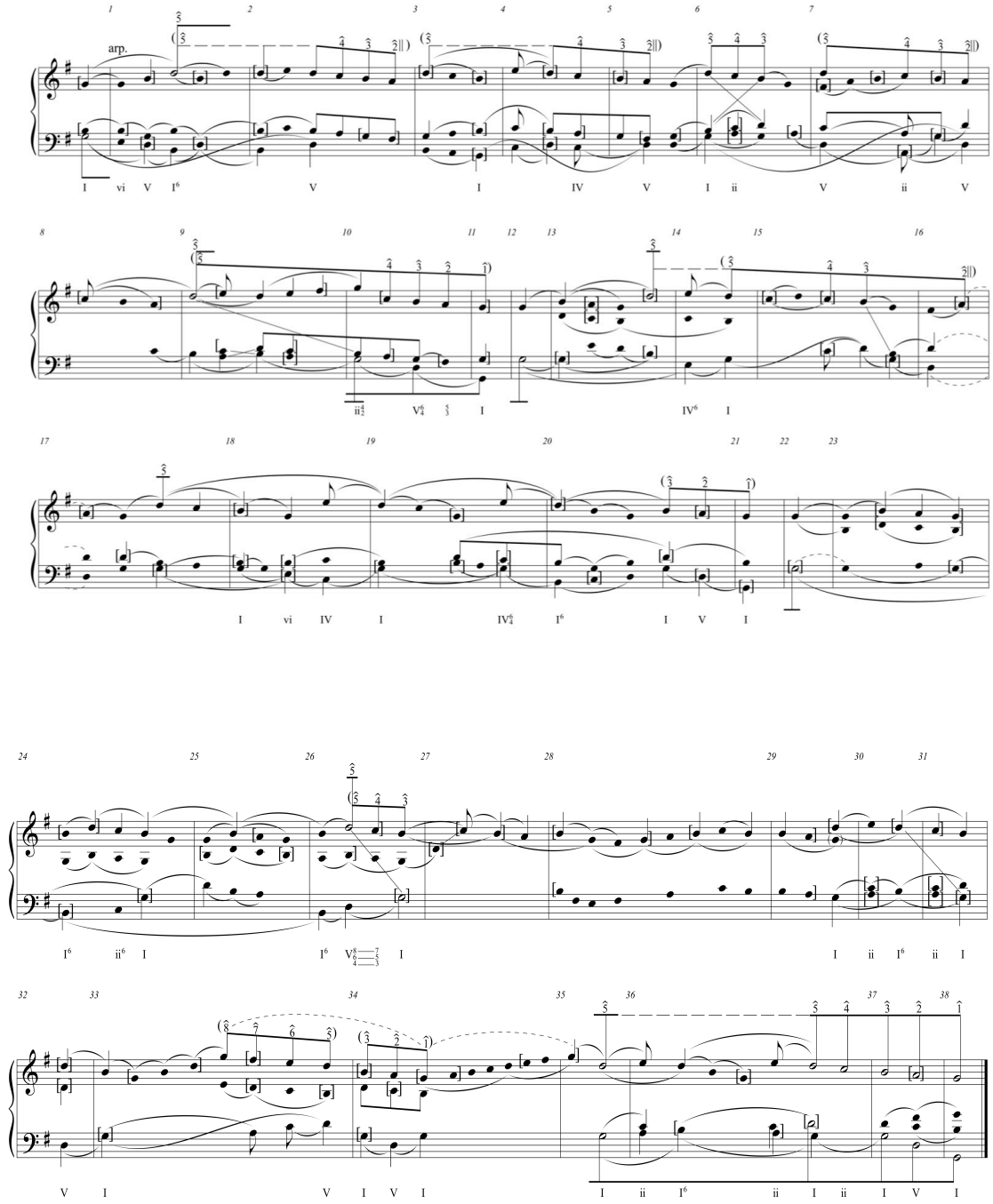


Example 70. Cage's Last Four Measures of "St. John's."



barlines that indicate the individual measures, thus more of the foreground is shown. Within this foreground there are numerous smaller descents--*Urlinie* transferences.

Example 71. The Schenkerian graph of "Invitation."[287]



[287] In "Invitation" and "Transmigration," the brackets indicate the notes that Cage left from the Belcher score, not the subtracted notes as in the other graphs.

Text by Dolce Maniera:[288]
Child of the summer, charming role,
No longer in confinement lie,
Arise to light thy form disclose,
Rival the spangles of the sky.

The rains are gone, the storms are o'er,
Winter retires to make the way.
Come then thou sweetly blush in flow'r,
Come lovely stranger come away.

The sun is drest in beaming smiles,
To give thy beauties to the day,
Young zephers wait with gentlest gales,
To fan thy bosom as they play.

"Invitation," at 38 measures, is certainly one of the longer songs in Belcher's collection. The words, seemingly secular, have been discussed by Linda Davenport in *Divine Song on the Northeast Frontier: Maine's Sacred Tunebooks, 1800-1830*, in which she says that writers either think eight of Belcher's original songs were secular, or only one of them is secular. She agrees with this latter view, and says the one that is secular is not this tune, but another, that Cage does not set, The Power of Music.[289] She says that while these "quasi-secular texts [some from *Song of Solomon*] may not have been completely suitable for worship, they would have been entirely appropriate for singing-school use."[290]

Two sections of music divide Belcher's music after "Rival the spangles of the sky," the first section in common meter of 4/4, the second in compound meter of 6/4.

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[288] Smith, 27.

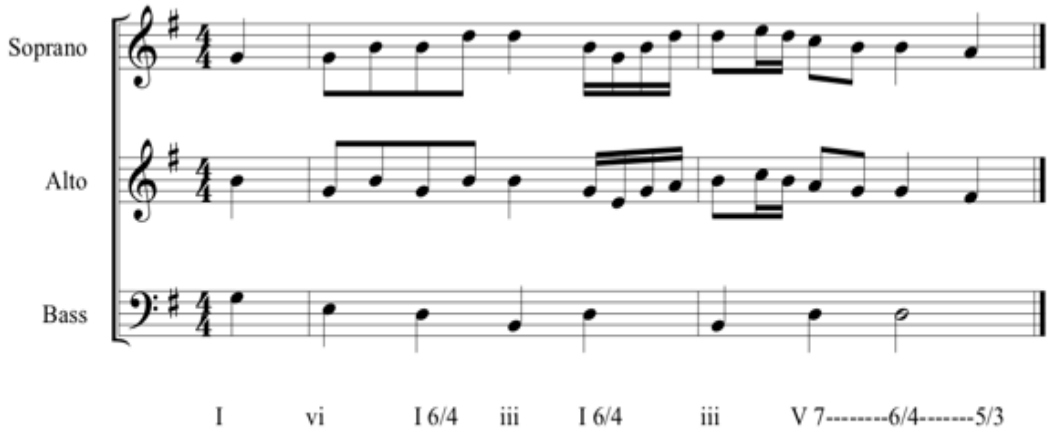
[289] Davenport, *Divine,* 85.

[290] Davenport, *Divine*, 85.

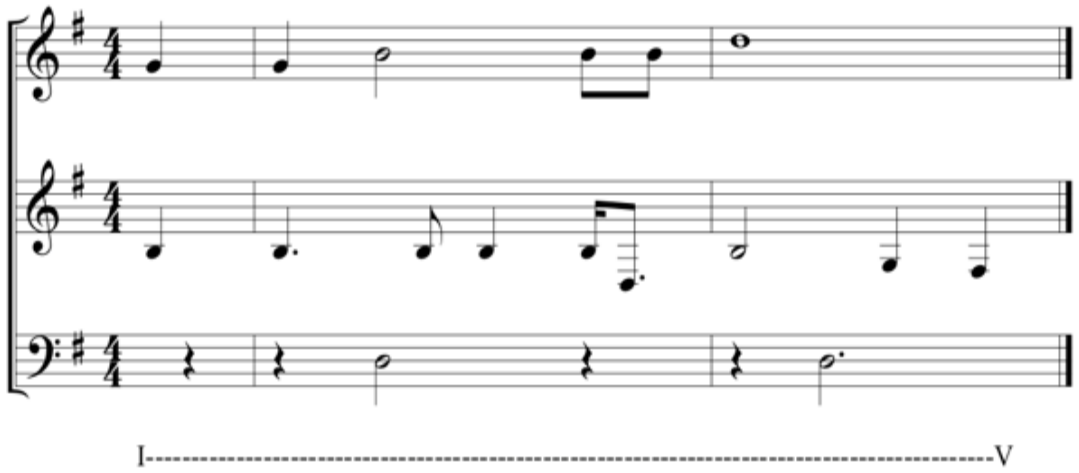
Repetitions of text occur at the ends of each section, the first with the same music, the second with new music.

Examples 72 and 73 show that some of Cage's music preserves the harmonic pillars of Belcher's, as in the first two measures.

Example 72. Belcher's opening two measures of "Invitation."

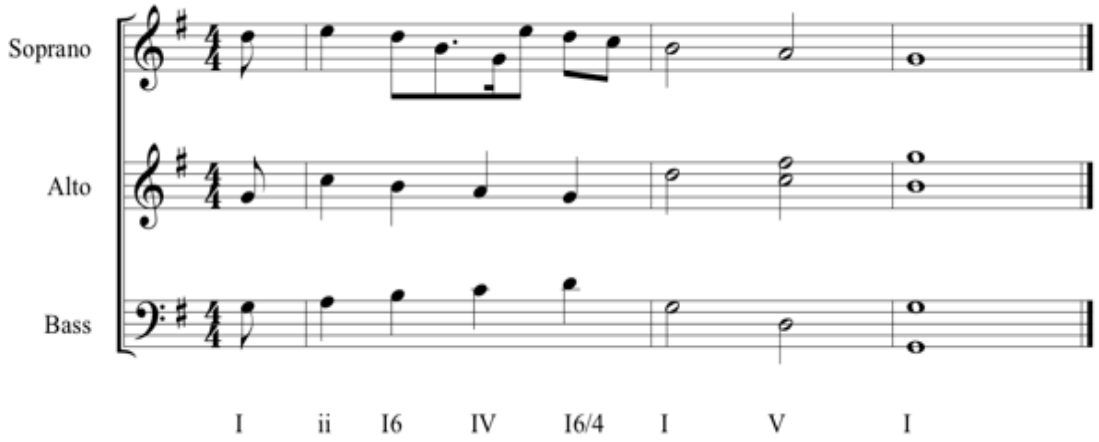


Example 73. Cage's opening two measures of "Invitation."

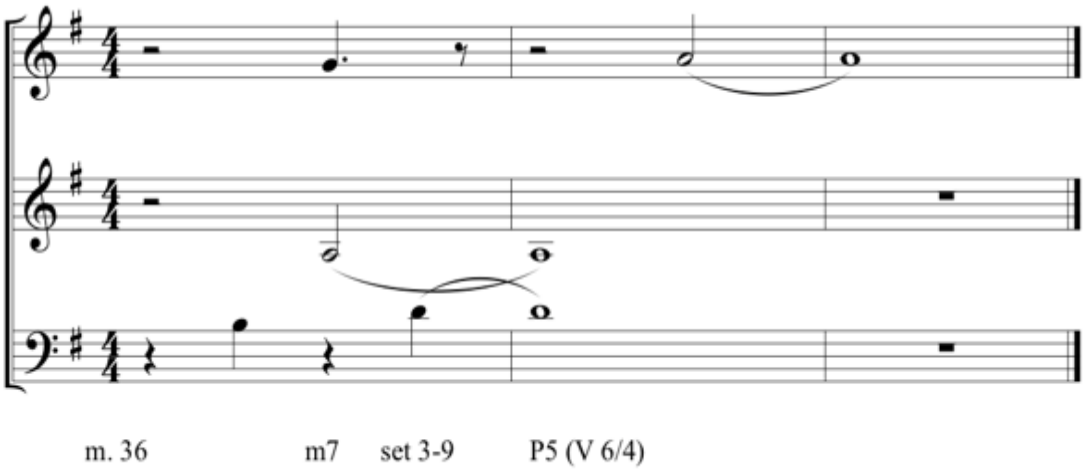


However, examples 74 and 75 show that the final cadence in Cage's version presents a different chord from Belcher's (yet again). In this case, opposite to previous analyses, the brackets in my Schenkerian analysis show the pitches that Cage preserved, not the ones he left out.

Example 74. Belcher, m. 36 and final cadence of "Invitation."



Example 75. Cage, m. 36 and final cadence of "Invitation."

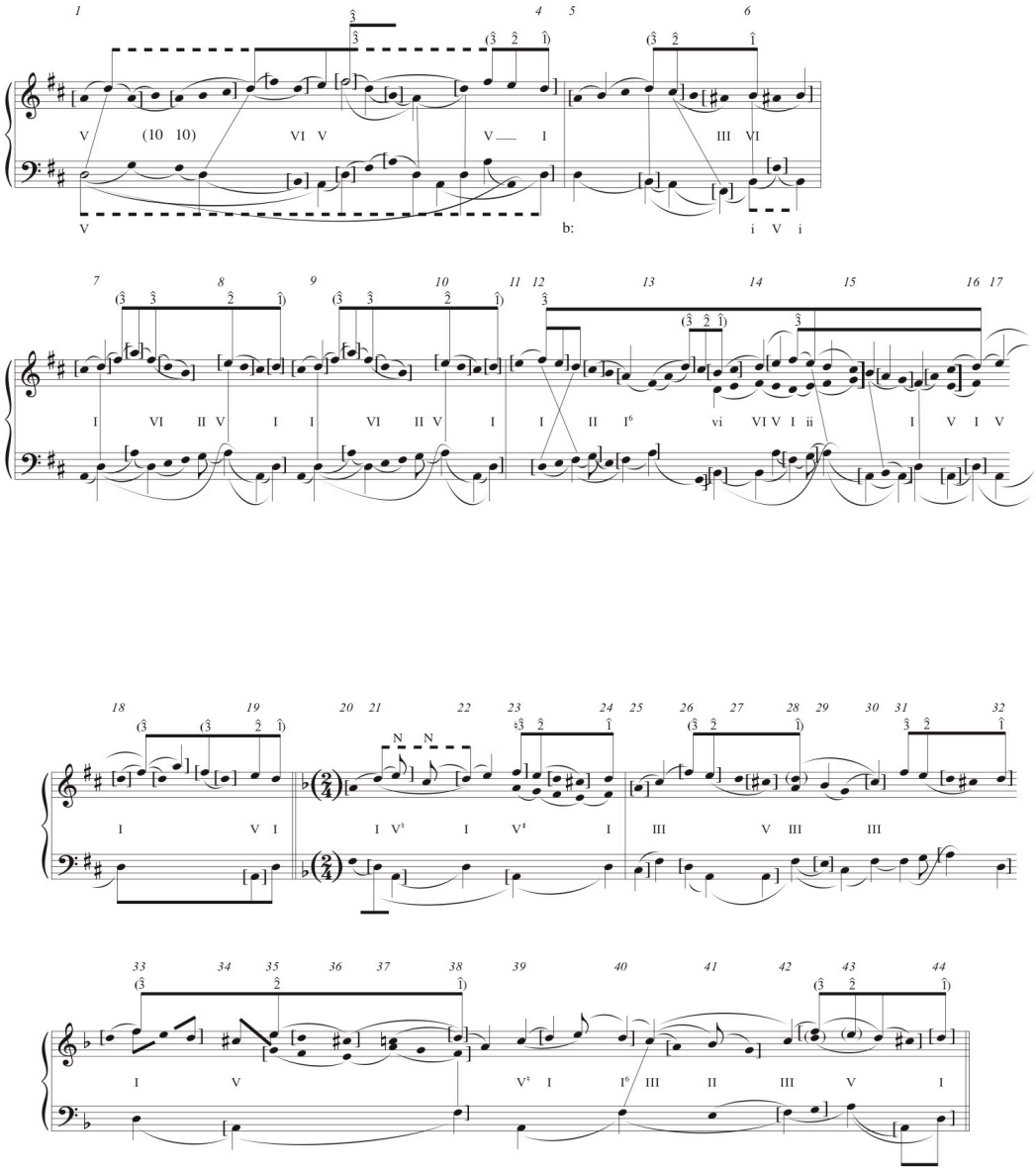


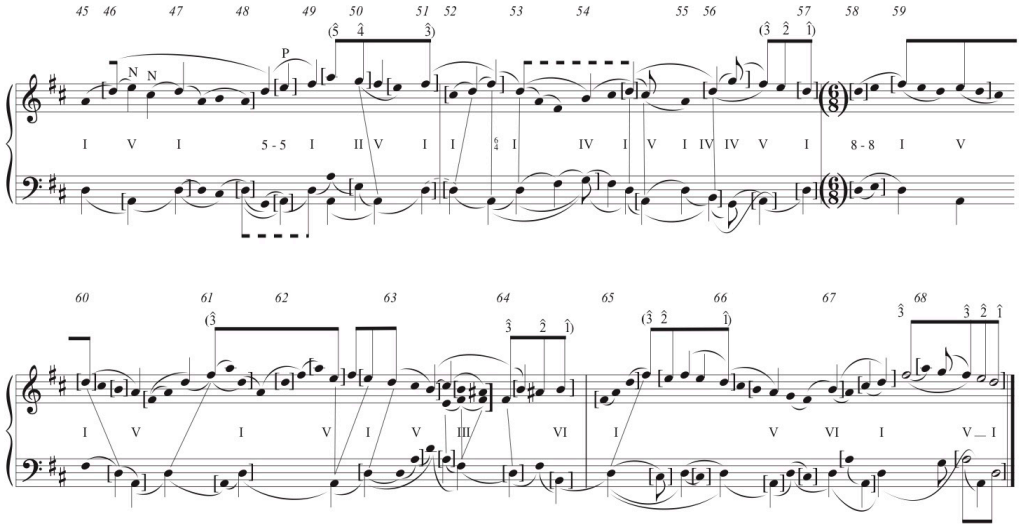
Thus, Cage ends on an interval that signals the dominant, a dominant 6/4 without the third.

Transmigration

Example 76 is the Schenkerian graph of this very long piece, which is the longest that Cage has chosen to rework. My discussion is divided into four parts.

Example 76. Schenkerian graph of “Transmigration.”





Text, probably by Charles Wesley:[291]
Come let us renew,
Our journey pursue,
Roll round with the year,
And never stand still,
Till our master appear.

His adorable will,
Let us gladly fulfil,
And our talents improve,
By the patience of hope,
And the labor of love.

Our life is a dream,
Our time as a dream
Glides swiftly away,
And the fugitive moment
Refuses to stay.
The arrow is flown,
The moment is gone,
The millennial year
Rushes on to our view,

[291] Hymnary.org, "Come Let Us Anew (difference with above), Our Journey Pursue," Charles Wesley, at https://hymnary.org/text/come_let_us_anew_our_journey_pursue_roll (accessed May 24, 2020).

And eternity's here.

O that each on the day,
Of his coming may say
I have fought my way thro',
I have finish'd the work
Thou did'st give me to do.

O that each from the Lord,
May receive the glad word,
Well and faithfully done,
Enter into my joy,
And sit down on my throne.

Part 1

Part One is a standard 16-bar period, in duple compound meter, that has been expanded by one measure in its last phrase. Belcher and Cage's cadences and other characteristics are described in Table 11.

Table 11. Belcher and Cage cadences and other characteristics in "Transmigration," Part 1.

			Belcher	Cage, Descent,
Measure	Cadence	Internal Cadence(s)	Melodic Descent	Cadence Retained
4	I	I	Yes	Somewhat, C=I 6 C=no descent
8	V-I	vi	Yes	No, Cage=V
12	vi-ii	vii diminished	No	C=notes D, E, A
14	I	I	No	C=notes D, G, A
19	V-I	I, V	Yes	Yes, C=not bass

The Schenkerian graph again uses brackets to show the pitches that are left out of Cage's version of "Transmigration." By leaving out the *Urlinie* transferences in the first and third phrases, and by changing the cadence to the dominant in the second phrase, the

final cadence of the section on the tonic with a melodic descent is quite strong; however, he does not support the dominant (although the low A it is present two measures earlier). The third cadence, on the notes D, E, and A, becomes a tonic chord at the last beat of m. 12—the upbeat to the sixth phrase and a tonic in first inversion, thus, the cadence's resolution is across the phrase. This is similar to the end of the second phrase, which Cage has changed to a dominant. The tonic chord follows at the beginning of the next measure, m. 9. Thus, his cadences in the first three phrases either are incomplete, when compared with Belcher's, or the necessary resolution is in the following phrase. This is one element of Cage's writing that could be understood as making the writing appear random., but at the same time could signify intention to obscure the tonal hierarchy. Another element that leads to the feeling of randomness is the change of organ registration once or many times in a measure. Table 12 is the list of the first section of changes of registration.

The strongest rhythmic pulses on beats 1 and 4 have 53-58% of possible changes of registration, but it is the weakest beats of the measure, beats 3 and 6, (and especially 3), that change the most often, 74% and 60%. The registration changes help to obscure continuity in the section.

But it is the rhythm that most effectively obscures meter and continuity. The beats on which Cage places attacks are marked in Table 13. These statistics indicate that Cage wrote the registration changes separately from the rhythm. All these statistics describe the notes that are left after the *I Ching* chance procedures Cage employed. It is these two elements, rhythm and registration, along with note removals, that make the piece seem random, but they may also be intentional obscuring of the tonality.

Table 12. Changes of Registration in "Transmigration," Part 1.

Measure	Beats	1	2	3	4	5	6	
Upbeat						X		
1				x	x (between 4-6)			
2			x		x		x	
3		x	x		x	x (between 5-6)		
4			x	x	x (4-6)		x	
5		x		x	x(3-6)		x	
6				x(3-5)			x	
7		x		x	x			
8		x					x	(mm. 7-8 repeat)
7		x		x	x			
8		x						
9		x					x (1/2)	
10				x		x	x	
11		x		x			x	
12		x	x(2-6)	x(3-5)	x			
13		x		x		x	x	
14		x		x (3-6)			x	
15				x (3-5)	x(4-6)		xx (second=1/2)	
16			x(2-3)	x(3-5)		x (5-6)		
17			x	x(3-6)	x			
Totals		11/19	6/19	14/19	10/19	4/19	10/20	2/20 (for 6 ½)
		58%	32%	74%	53%	21%	50%	20%
		(6 together+60%)						

However, Cage's contrasts with Belcher's original rhythm (Table 14) are enlightening in that they seem to indicate intentionality to a greater degree. 47.5% is half of 95%, so the first two beats, and even the third beat of the measures, show that Cage preserved 50% of Belcher's notes, and this may indicate chance procedures of "yes," or "no" notes. However, the other statistics are quite different. Beat 4 of each measure is written 74% of the time by Cage compared with Belcher. Beat 5 is the same between the composers, and all but one of the notes is in the same place in the measures of both

composers.

Table 13. Cage's note attacks in "Transmigration," Part 1.

Measure Beat	1	2	3	4	5	6
Upbeat					x	
1			x			
2	x			x		x
3		x	x	x		
4	x			x		x
5		x		x		
6	x	x		x		x
7		x		x	x	x
8			x			x (7 and 8 repeat)
7		x		x	x	x
8			x			
9						x
10		x		x	x	
11	x			x		x (1/2)
12	x	x				x
13	x		x	x	x	x
14		x		x		x
15	x	x		x	x	x (1/2)
16	x			x		x
17	x		x	x		
Totals	9/19	9/19	8/19	14/19	5/19	13/20, 6 1/2 = 2/20
	47%	47%	32%	74%	26%	60% (+) 10%, (70%)

Comparing these two statistics, the largest differences are on the emphasis on beat four of the rhythm and beat three of the registration changes:

Registration:	58%	32%	74%	53%	21%	50%	20%, (6 together+60%)
Rhythm:	47%	47%	42%	74%	26%	65%	10%, (6 together=70%)

On beats 6, Cage wrote notes 76% of the time that Belcher used, and 40% of the time on beats 6 and a half. Belcher basically used two different rhythms in most of his measures: three eighth-notes followed by a quarter, followed by either two sixteenth-notes or one

eighth-note (13 measures) or a note on every eighth-note (5 measures). Only his main

Table 14. Belcher's rhythmic attacks in "Transmigration," Part 1.

Measure	1	2	3	4	5	6	6 1/2	
Upbeat					x			
1	x	x	x	x		x	x	
2	x	x	x	x		x		
3	x	x	x	x		x		
4	x	x	x	x		x		cadence on 4
5	x	x	x	x		x		
6	x	x	x	x		x		
7	x	x	x	x	x	x		
8	x	x	x	x				cadence on 4 repeats 7 and 8
7	x	x	x	x	x	x		
8	x	x	x	x				
9						x	x	
10	x	x	x	x	x	x		
11	x	x	x	x		x	x	
12	x	x	x	x		x	x	cadence on 4
13	x	x	x	x	x	x		
14	x	x	x	x		x		
15	x	x	x	x		x	x	
16	x	x	x	x	x	x		
17	x	x	x	x				cadence on 4
	18/19	18/19	18/19	18/19	5/19	17/20	5/20	
Belcher's rhythm:	95%	95%	95%	95%	21%	85%	25%	
Cage's rhythm:	47%	47%	42%	74%	21%	65%	10%	

cadences, in mm. 8 and 17, are different and use notes on the first four beats of the measures. Cage's rhythms are much more varied, and even the cadential measures are not the same. But he does tend to emphasize fourth and sixth beats, which could signify an intention to bolster the meter.

Table 15 is a simple list of the prominent chords in each measure that Cage retains which indicates that his changes in the harmonies are not as distinctive, but they

add to the overall obscuring of Belcher's tonal structure. Some of Cage's harmonies below in the graph are assumed by different length notes, or notes retained over barlines.

Table 15. Principle Harmonies in "Transmigration," Part 1.

Measure	Belcher's Harmonies	Cage's Harmonies
1	I, IV	IV
2	I-iv-V	I, notes E, F#, A
3	I-vi-I	I
4	I-V-I	I-V
5	vi, iii, III	I
6	vi, III, vi	vi
7	I	I, repeat of 7 is the same
8	V, I	V, repeat of 8 is the same
9	I	Notes D and A
10	I, V	ii
11	I, vii-dim.	Note F#, then V
12	vi, ii	Notes D, E, A, then F#, A
13	IV, I	Notes B, E, A, then I
14	I	I
15	V	V
16	I	I
17	I	I

The above chart shows that in many measures, Cage's harmonies simplify those of Belcher, by leaving out one or more chords (for example, mm. 3, 4, 5, 6, and more), but some of the measures form incomplete chords, or chords that do not form triads (for example, mm. 2, 9, and 11). When the chords are incomplete, the feeling of randomness is increased, but at the same time the tonal anchors of Belcher's music are not observed, or felt. Added to the quick changes of rhythm and registrations within each bar, the piece seems very different from the original borrowed material.

Part 2

This section consists of mm. 18-42. It is in the key of D minor and in simple duple meter. Table 16 presents the main harmonies of each measure and whether Belcher or Cage's versions contain a melodic descent, along with other characteristics as noted.

Table 16. Belcher and Cage harmonies in "Transmigration," Part 2.

Measure	Belcher Chords--descent	Cage Chords—descent	Other
18	I	III	
19	I, V	notes F, C, G	
20	I	D alone	
21	I, V—3-2-1-7 descent	E alone (has 2 of descent)	
22	d, cadence on soprano 1	D, A (has 1 of descent)	Belcher has cadence
23	III	III	
24	III-I, begins descent, 3	III	
25	V, finishes descent, 2-1-7	Notes B-flat, D	
26	I, but not 1 in soprano	III	Belcher has cadence
27	vii dim/v, V/III	Notes B-flat, F to V/III	Cage has melody from B
28	III	Notes C, F, G	
29	I,V, 3-2-1-7 descent	III, notes E,F,G, v (F,E descent)	
30	i, finishes descent on 1	v (doesn't finish descent)	Both have cadence
31	I, descent 3-2-1	i	
32	V, i, soprano 7-8	Notes D, F, C#	Cage begins pedalpoint
33	V	Notes D, E	Belcher partial sequence
34	V	Notes, D, G, then I	Belcher C# to C
35	III	v	
36	I	I	Belcher has cadence
37	v (minor)	v	
38	I, III	III	
39	vii-dim/III	Notes E, G	
40	Iii	v	
41	I, V	Notes, D, E, A	
42	I	Note E	Both have cadence

Cage does not retain very many of Belcher's original notes. He uses none of the melodic descents from Belcher, whether small or large ones. Cage retains two of Belcher's cadences, mm. 30 and 42, but they are changed. M. 30 has a minor dominant chord, and m. 42 simply ends with the note, D. Some of Cage's measures have incomplete chords (for example. mm. 25, 27, 32, 33, 34, 41, and others). Some of these measures have three

notes that do not form triads, such as mm. 19, 28, 29, 32, and 41. Some of these three-note sonorities are not dissonant, such as mm. 19 and 41, which each have sonorities that form combinations of perfect-fifth intervals (both 3-9 set classes). The three notes in m. 32 are more dissonant (SC 3-3) as is m. 29 (SC 3-2). These sonorities add small dissonances to the fabric from Belcher, which uses only tonic, major mediant, and dominant chords. The major mediant, the relative triad is used by both composers, although Cage does not always keep it intact (mm. 28, 35, 40), but then he uses it when Belcher does not (mm. 26, 29). Rhythmically, Cage has a few measures with eighth-notes on most beats, but generally simplifies Belcher's rhythms. Some of Cage's measures only have one sonority that holds, or is played once, where Belcher has many repeated notes. The registration changes are fewer in this section, going from one or two in the early and later parts of the section to a span of measures, mm. 37-40 without any. The changes of chords, lack of melodic descents, and absence of most of the repetitious notes from Belcher, makes Cage's version the more obscure.

Table 17 is the rhythmic chart of this part of Cage's piece, where Cage is not consistent. Belcher's also uses differing rhythms. The chart shows that Belcher writes a downbeat note in every measure after the upbeat. He uses the rhythm of a quarter note followed by two eighth-notes in thirteen measures (52%), and is particularly stable in this rhythm in mm. 33-39. Cage also uses a similar rhythm of two quarter notes in mm. 34-37, and 39 (20%), which also has a stabilizing effect. Mm. 22, 23, 26, 29, and 30 (20%) have the same rhythms for both composers. Between the two composers, Cage retains 71% of Belcher's downbeats, the second half of beats 1 are the same, Cage's retains 63% of Belcher's beats 2 and 52% of the second half of beats 2. The strong beats 1 and 2 in

Table 17. Belcher and Cage rhythmic chart of "Transmigration," Part 2.

Cage						Belcher			
Measure	Beat 1	1.5	2	2.5		Beat 1	1.5	2	2.5
18			x		upbeat			x	
19				x		x		x	x
20	x					x			x
21		x		x		x	x	x	x
22	x			x		x			x
23	x		x	x		x		x	x
24	x					x		x	
25			x			x		x	x
26	x		x	x		x		x	x
27	x	x	x			x	x	x	
28	x			x		x		x	x
29	x	x	x	x		x	x	x	x
30	x			x	cadence	x			x
31				x		x		x	x
32	x					x			x
33				x		x		x	x
34	x		x			x		x	x
35	x		x			x		x	x
36	x		x			x		x	x
37	x		x			x		x	x
38			x			x		x	x
39	x		x			x		x	x
40	x					x			x
41	x			x		x		x	x
42 none					cadence	x			
Totals	68%	12%	48%	44%		96%	12%	76%	84%

Cage, but his preserving less than half of the second half of beats 2, may indicate that Cage favored motion by quarter note.

Part 3

The third part of Transmigration is only 13 measures, the first one, m. 43, basically just an upbeat to m. 44. The key returns to D major, and the meter is common

time, simple quadruple. As Table 18 shows, Belcher only writes one descent to tonic in this section, at the end in mm. 54-55. There is a partial descent, however, from the high soprano A5 to F#5 in mm. 47 to 49. Cage retains neither of these, although he does begin the final descent, in m. 54, but it is not finished.

Table 18. Belcher and Cage harmonies in "Transmigration," Part 3.

Measure	Belcher chords--descent	Cage chords—descent--Other
43	I	I
44	I-V	I
45	I, vii-dim.	I, rest
46	I, IV, V	Notes G, D, A (3-9)
47	I—5, 4 descent	I
48	ii, I, V—end (3) of descent	I
49	I	I--Belcher has cadence
50	I	Note D
51	I	I-- Cage preserves melody from Belcher
52	IV, iii, I	Note B, then F#, B, C# (3-9)
53	V, I	F#, B, C#, then I
54	IV, V—3,2 descent	I, IV, descent of 3-2
55	I---ends 1, descent	ii--Both have cadence

This section continues the simplification Cage has done in the previous sections, with chords eliminated in mm. 44, 45, 48, 52, 53, and others, single notes replacing chords in m. 50, and lack of descents, mentioned above. But there are further changes that Cage incorporates in his work: the SC 3-9 sonorities in mm. 46 and 52 replace triads (seen previously in other parts of this piece), the final cadence is not on tonic or dominant (unseen previously in this piece), and there is a melodic fragment in the soprano in m. 51, which is the exact repetition of the soprano motive in Belcher (seen once before in part 2 of this piece). Cage's lack of a full- or half-cadence may propel his music forward to the next section, but it also continues to obscure Belcher's tonal hierarchy. Belcher's rhythm is also obscured by Cage's attacks on many notes on beats 3 and 4 in the first part of this section (Shown in Table 19), which becomes more stable at the end.

Table 19. Cage's rhythmic attacks in "Transmigration," part 3.

Measure	Beat 1	2	3	4
43			x	
44				x
45				x
46			x	x
47	x		x	x
48			x	
49				x
50				x
51	x		x	x
52	x		x	x
53	x		x	
54	x	x	x	x
55 none				
Totals	5/13	1/13	8/13	9/13
	38%	8%	61%	69%

Cage's rhythmic attacks contrast with Belchers, as shown in Table 20.

Table 20. Belcher's rhythmic attacks in "Transmigration," Part 3.
Belcher's rhythm (Belcher is marked cut time, but, for this graph, in common time),

Measure	1	2	3	4
43			x	x (on and)
44	x		x	x
45	x		x	x
46	x		x	x
47	x		x	x
48	x		x	x
49	x			x
50	x		x	x
51	x		x	x
52	x		x	x
53	x		x	x
54	x	x	x	x
55	x			
	12/13	1/13	11/13	12/13 (including "and")
Belcher:	92%	8%	85%	92%
Cage:	38%	8%	61%	69%

The first significant feature is Cage's lack of notes on the downbeats of 62% of the measures. His larger percentages at the ends of measures, particularly for beat 4 of many measures, reflect Belcher's. With mostly half- and quarter-note motion in both scores (only one eighth-note in Belcher), this section is an area of reduced motion, even though both versions have the most motion at the ends of measures—although Cage has more, he preserves 72% of the Belcher's notes on beat 3 of each measure, and 75% of Belcher's notes on beat 4. Cage's heavier use of notes toward the ends of measures indicates a motion toward downbeats, or a motion to continue, much as the lack of his authentic cadences in his version indicates a motion to continue to the next section.

Cage's registration changes are less frequent in this section by Cage, similar to part 2 of the piece, reduced to one or two per measure, and measures 52-55 have no registration changes. This reinforces the lessening of motion, a quieter time before the next section.

Part 4

This section is a return to faster notes written in 6/8 time. Smaller melodic descents (m. 57-soprano, 58-alto, 60-soprano, 63-soprano, 64-alto) return, in fact m. 63's descent displaces the "F#" to an octave lower; and the final descent of the whole piece is in m. 66, along with a closing cadential progression. Belcher divides this section of the piece into four phrases, mm. 56-58, with a cadence on A major, the dominant in mm. 56-58, another on the dominant in mm. 58-60, a cadence on B minor, the submediant, in mm. 61-62, and the final cadence on D major, the tonic, in mm. 63-66. Cage's cadences are located in the same measures as Belchers, but are different tonally, m. 58's cadence is

on the notes F# and A—the preceding soprano note is a C#, so the chord is the minor mediant; m. 60's notes are D, E, and F#, following an A in the previous measure, a tonic-ninth chord including the A, a (3-6) whole-tone set without. M. 62 has a F# and C#, a perfect-fifth interval, which may signal a major or minor mediant chord. And the last cadence is the most interesting. Following a D, C#, E, A, sonority, a dominant chord or a tonic pedal point in the penultimate measure, the piece closes on a bass G, with a fast F# in the soprano, which moves to a C#, and adds a D in the alto (3-5)—there are no *Urlinie* thirds-descents anywhere. This is not a strong ending, but it is the eleventh piece in the collection, and meant to continue.

Cage's rhythm also does not make a strong ending, although he does stop on the second compound beat of the last measure, as does Belcher's. As Tables 21 and 22 show, to the rhythm of every measure of Belcher (except the last), three eighth-notes, a quarter-note, and two sixteenths, Cage adds ties, rests, and a single note on many of the last sixteenth-note spaces in his measures.

Since it is impossible to divide 11 into two equal parts, Cage's 5/11 and 6/11 are the result of the notes of either being articulated or not, and 7/11 is not as far from 50% as are the two results of 8/11 and 0/11. The location of the 8/11 results show quite different rhythmical emphases in the various measures in which they appear--the first on beat 4 (the second compound beat of a 6/8 measure) stresses the second half of the measures—in fact, the lack of motion on beat 5 of each measure adds to the emphasis on beat four as the strong pulse, and the other stress on the last half of beat 6 in the measures points out the end of that large beat strongly. This emphasis on the ending motion of each measure was seen in parts 1 and 3. For Belcher, except for m. 56, which is an

Table 21: Cage's Rhythmic Attacks in "Transmigration," Part 4.

Cage's rhythmic attacks								
Measure	Beat	1	2	3	4	5	6	Second half of 6
56							x	x
57		x	x		x			x
58		x	x		x		x	
59					x			x
60			x	x			x	x
61		x	x	x	x			x
62				x	x		x	x
63		x	x		x		x	
64			x	x			x	x
65			x		x			x
66		x		x	x			
		5/11	7/11	5/11	8/11	0/11	6/11	8/11
		45%	64%	45%	73%	0%	55%	73%

Table 22. Belcher's rhythmic attacks in "Transmigration," part 4.

Measures	Beat	1	2	3	4	5	6	Second half of 6
56							x	x
57		x	x	x	x		x	x
58		x	x	x	x		x	x
59		x	x	x	x		x	x
60		x	x	x	x		x	x (cadence on 4)
61		x	x	x	x		x	x
62		x	x	x	x		x	x (cadence on 4)
63		x	x	x	x		x	x
64		x	x	x	x		x	x
65		x	x	x	x		x	x
66		x	x	x	x			(cadence on 4)

upbeat to the rest of the piece, notes are present on beats 1, 2, 3, 4 in every measure, and only lacking in m. 66, which is the cadence to the whole piece. Belcher's notes come on

nearly 100% of the possible beats, and the contrast with Cage's percentages is intriguing. Why did Cage write notes on 73% of the beats that Belcher used in some of his measures? Is 73% random, found by chance using "Yes" or "No?"

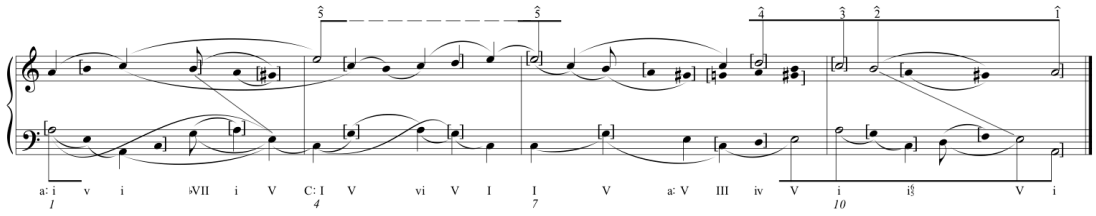
Most of Cage's measures have 4 or more registration changes, mm. 60 and 63 have 6, for example. The end of the piece is wild, with rhythms favoring the last parts of the measures, frequent registration changes, and no tonal resolution.

Chester

This leads to the quiet, short Chester in Example 77.

Text by Isaac Watts:[292]
How shall the young secure their hears,
And guard their lives from sin?
Thy word the choicest rules impart,
To keep the conscious clean.

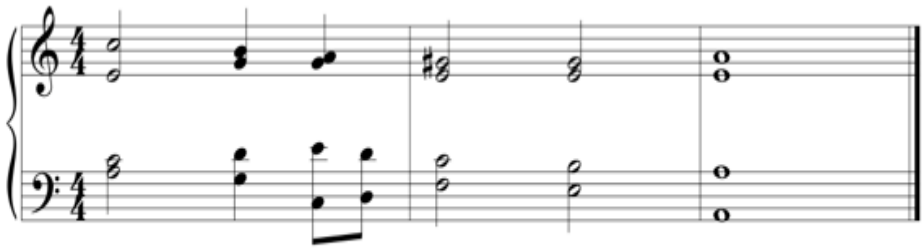
Example 77. Schenkerian graph of "Chester."



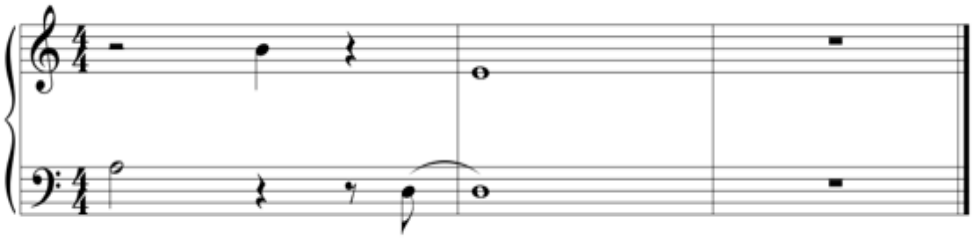
[292] Smith, 31.

Belcher's "Chester" exhibits an *Urlinie* that attains the fifth scale degree, E, after an initial arpeggiation, and returns to it after a following descent and ascent. Cage does repeat these two E notes in his variation, but does not include the final descent to the tonic note, A, instead finishing on B4. In the bass, Cage emphasizes E, A, and C over the span of the piece, but ends on the note, "D," with a major-ninth interval above it. This piece is a short one, and Cage frequently emphasizes the tonic or dominant chords—until the end. Examples 78 and 79 show that he does not end, though, with the final sonority, but with a blank measure (the three measures are the last phrase).

Example 78. Belcher's ending of "Chester."



Example 79. Cage's ending of "Chester."

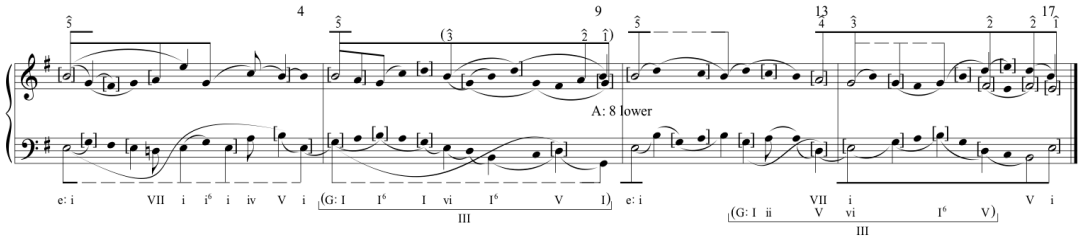


Cage's removal of the tonic chord gives the outlines of the dominant chord in second inversion an open ending--a half-cadence that does not end the piece.

The Lilly

The Lilly is unusual, although the Schenkerian graph in example 80 shows clearly that Belcher ends in the same key that begins the piece.

Example 80. Schenkerian graph of "The Lilly."



Text by Matthew Prior:[293]
Peaceful and lowly in their native soil,
They neither know to spin nor care to toil.
Yet with confess'd magnificence deride
Our meanest nature, and impotence of pride.

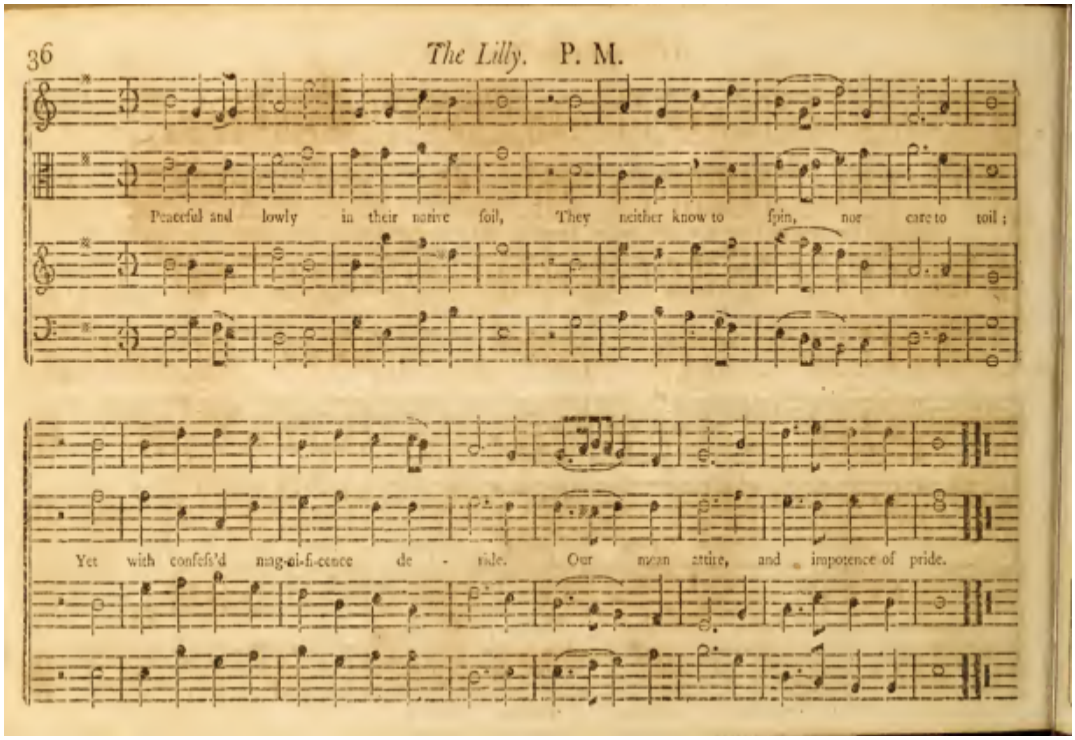
"The Lilly" is unusual in several ways. First, it is a piece in E minor, that modulates to G major in the middle (m. 5). But Belcher almost forgets to modulate back at the end—he repeats the E-minor tonality in mm. 10-11, but then G major takes over again. There is a G major cadence in m. 15, followed by a measure of B minor chords (not major for a dominant sound), and then an E-minor chord to end. Perhaps his strange ending captures the "impotence of pride." The piece is unusual also in that the *Urlinie* descends in the alto voice. As can be seen in example 81, the bass line supports the

[293] Smith, 39-40.

soprano's jumping from E minor to G major with appropriate chords, even cadencing on a D chord in m. 12, the V of G, which leads to the G cadence mentioned above in m. 15.

Cage does something quite different. His cadence in m. 4 is a single note, A, which had been tied from the previous measure, where a B, G, D#, and this A (SC 4-24) were present. This is almost a dominant B 4/2 chord, A, B, D#, and F#, but not quite.

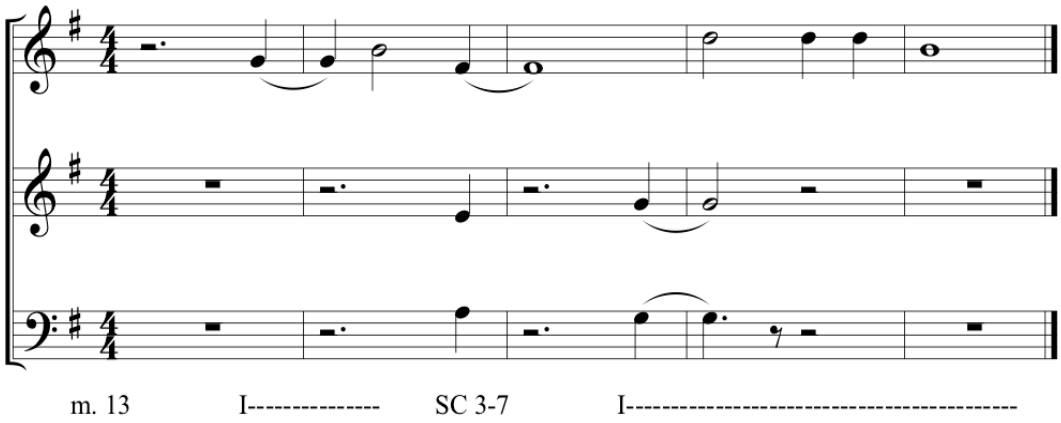
Example 81. The score of "The Lilly."



Cage's second cadence (m. 9) is a G major chord, as is Belcher's. In m. 13, where Belcher has a D-major chord, Cage only has notes B and G (I) in the soprano, after sounds of A, E, and B in the previous measure. And Cage's ending, Example 82, stays with the G major chord, written in separate notes over several beats. This is an incredible ending to the whole collection—a G major chord!

While some measures in Cage's score have two or three register changes, there are spans of measures that do not change at all, such as mm. 5-9, and 15-17. This static sound makes the music more calm, similar to the way many pieces in traditional classical music end. Contrary to the last phrase of the text, the rest of the words are also calm and Cage's music seems to reflect that.

Example 82. Cage's ending of "The Lilly," and the collection.



Another Word about Timbre

The stop changes contribute greatly to the feeling of randomness in the music. When playing these pieces, I have found the following features worthy of discussion:

1. Without the stop changes, the pieces I played, "Turner," "The Lily," "Harmony," Hallowell," "Majesty," and "Alpha," sound reminiscent of the Belcher pieces. Most of the harmonies are similar to Belcher's. Those that are not are sometimes quick moments of dissonance, and do not stand out, or

are at cadence points, and definitely do change the sound from Belcher's world. However, even these, when played on a single mezzo-forte stop, do not seem random or too different in character.

2. When the compositions are played with the stop changes, numbers assigned by the organist, the pieces exhibit great randomness in sound. Suddenly there may be a loud, or high pitch; there may be a special effect stop, such as a zimbelstern (bells), there may be an exceptionally low or quiet sound. When these stop changes happen, the pieces do not seem, to this organist, to have a coherent plan—the phrases are not audible, the cadences seem abrupt, individual lines are not followed when listening.
3. Two pieces that end in major chords, "Alpha," and "The Lilly," do have resolutions at their final cadences, even within the stop changes. For both of these, Cage does not change the stops near the final cadence. The other pieces, with more changes toward the ends of the pieces, such as "Majesty" and "Turner," still feel "random," perhaps, more so.
4. With modern combination action and engineering, an organist with a multi-level solid state instrument can program the organ so that six, or any, assistants are not needed. In 1980, and on tracker organs of today, this was, and is, impossible.

The feeling of randomness is greatly enhanced by the numerous stop changes, but, the rhythmic and note changes that Cage has written into his score, taking the borrowed material from Belcher, often preserves a higher percentage of music than one might expect from exploring his method of composition, based on chance methods from the *I*

Ching. The possibility of Cage using creative decisions in some of his music that was brought up at the beginning of this chapter seems to be more of a certainty. It is enough to decide that he is a composer, not only a philosopher. But the question remains why he would not follow the chance procedures he set up in a consistent way.

Conclusion

With many changes to Belcher's harmony and rhythm, but with many of those features not changed, Cage has not changed the basic formal structures of the work at all. And, yet his versions seem different enough, with subtractions to the harmonies and rhythms, added to many changes of registrations, that they seem to be new pieces. After a discussion of the poetry that Cage wrote, crossing out some of his words, Joan Retallack says the poems' changes destabilize them, thwarting any "correct" reading of the poems, or a sense of the author's prior intentions. She says that it makes sense "to notice what we find on the page and experience the multiple directions . . . it takes us."[294] She continues that in Cage's poems there is not less structure for his elimination of words, but that the structure is one of greater complexity "in a richly dynamic relationship with larger areas of indeterminacy."[295] She also says that it is not the case with indeterminacy that there is no meaning, but that the meaning has changed:

> . . .the range of meaning (e.g. the connections we can notice and construct)

[294] Joan Retallack, "Poethics of a Complex Realism," *John Cage: Composed in America*, ed. Marjorie Perloff and Charles Junkerman (Chicago: The University of Chicago Press, 1994), 267.

[295] Retallack, 267.

> undergoes transformation as we rise to the occasion of the gently prickly, oddly engaging text. The scope and focus and force of our attentive engagement is altered as we take on the discipline of more active noticing/inventing that the unfinished, irregular surfaces of indeterminacy invite.[296]

Thus, the bulk of my chapter on Cage's pieces has not focused on the compositional process that he used--although it was important, and hard to recreate—but on what notes and rhythms have been changed, with added organ registrations, to a create a new composition. For it is new. To play the notes that Cage has written with a single sound is to emphasize the "holes" in the compositions modelled on Belcher. To play the pieces with indeterminant registration changes is to create a new experience. By so changing his model into pieces that are so different in experience, Cage has eliminated their tonal hierarchy, harmonies, rhythms, text effects, timbre, number of voices (usually), and overall effect He has used the models to both be part of his music, and to change them into something else—or to destroy them. While the Baroque composers I have studied and will study, and Brahms, may have written their new compositions in a respectful manner toward the borrowed material, and Ives may have taken a more playful or experimental route, Cage has annihilated Belcher's tunes.

Certainly, Cage was always seeking silence,[297] but his *Some of "The Harmony of Maine"* is different. Instead, it is a change, a putting-aside of harmony, and perhaps tonality, for a different vision. Cage himself has said that after he had been studying with Schoenberg for two years, Schoenberg said "In order to write music, you must have a

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[296] Retallack, 267.

[297] Christopher Shultis, "Silencing the Sounded Self: John Cage and the Intentionality of Nonintention," *The Musical Quarterly* 79, no. 2 (Summer, 1995), 312.

feeling for harmony." When Cage explained he had no feeling for harmony, Schoenberg then said Cage would always encounter an obstacle, that it would be as though he "came to a wall through which he could not pass." Cage said, "In that case I will devote my life to beating my head against that wall."[298]

Christopher Shultis has written that duration became the fundamental element of music for Cage, taking over from other elements, but particularly harmony. Cage himself said, in a lecture at Black Mountain College in 1948:

> With Beethoven, the parts of a composition were defined by means of harmony. With Satie and Webern they are defined by means of time lengths. . .Was Beethoven right or are Webern and Satie right? I answer immediately and unequivocally, Beethoven was in error and his influence, which has been as extensive as it is lamentable, has been deadening to the art of music.[299]

Some of The Harmony of Maine does present new harmony in place of the old, and the durations, suposedly, were found by use of Cage's system of "yes" or "no" notes. Marc Jensen says that in all of Cage's work with chance, he sought a balance between the rational and the irrational by allowing random events to function within the context of a controlled system.[300] *Some of the Harmony of Maine* uses the control of the original composition, and of all the notes Cage preserved. The random ideas come from the assignment of the stop knobs of the organ, according to his numerical directions. In both of these dichotomies, random and controlled, harmony of Belcher or not, Cage uses the borrowed material to further his own ideals—to focus the listener's attention on the

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[298] John Cage, *Silence*, 261 and quoted in Shultis.

[299] Richard Kostelanetz, *John Cage*, 81.

[300] Marc G. Jensen, "John Cage, Chance Operations, and the Chaos Game: Cage and the I Ching," *The Musical Times* 150, issue 1907 (Summer 2009), 97.

individual sounds themselves. As Rob Haskins has written, Cage often "disregarded their possible relations to each other" to get to the sounds themselves, in accordance with the Zen Buddhism claim that each individual phenomenon in the universe is equally important.[301] He certainly does get "to the sounds themselves" through his method. And despite all the analysis as we can do to see what of Belcher is left, it is the randomness of the registration that permits the culmination of Cage's method of composition.

[301] Rob Haskins, "Aspects of Zen Buddhism as an Analytical Context for John Cage's Chance Music," *Contemporary Music Review* 33, no. 5-6 (2014), 616.

CHAPTER V

WORKS OF BRAHMS, ALAIN, AND COUPERIN

Three composers are discussed in this chapter in order to broaden this dissertation's story of borrowed material in organ music: Brahms, Alain and Couperin. There is less analysis of these works, but even brief discussions lend information to my study. Each composer's work shows different methods of using borrowed material. Brahms ornaments the melody as well as the inner voices of *Es ist ein Ros' entsprungen* within traditional tonality. Alain writes a meditative piece, *Postlude pour l'Office de Complies*, on ancient plainchants, but accompanies them with modern sonorities that retain some aspects of traditional tonality, and, at the same time, move beyond traditional tonality. Couperin, in two *Kyries* from the *Mass for the Parishes*, returns this dissertation to the Baroque period, but his works are even earlier than the Bach BWV 686 of Chapter 2. Couperin mixes modality and tonality in a composition that preserves more of the historic style of his borrowed material.

Es ist ein Ros' entsprungen by Johannes Brahms

Johannes Brahms (1833-1897) ornamented a melodic line in his re-working of the chorale tune, *Es ist ein Ros' entsprungen*. Kennan calls this a Type 2 chorale prelude, and he says that in a Type 2, the ornamented melody is usually in the top voice of a prelude, while the other parts "remain relatively simple."[302] In *Es ist ein Ros*

[302] Kennan, 125.

entsprungen, from Op. 122, Brahms added non-harmonic tones and shifted rhythms in the melody, but he also embellished the accompanying voices with both added harmonic and non-harmonic notes. The prelude is included in this dissertation as an example of an ornamented melody, which is a different method of using borrowed material from the other examples in the dissertation. It is also an example of a relatively conservative use of tonality in borrowed music, but this prelude includes other elements that are not conservative at all. This combination of conservative, but more forward-looking elements, is different from the other composers I have discussed. Brahms only changes a few harmonies throughout the repetitions in the chorale, and except for secondary dominants, does not push at the bonds of tonality at all. But the accented non-harmonic tones tell a different story.

Brahms was probably thinking of death around 1896 after many of his close friends died: Robert Keller (1891), his sister Elise (1892), Elisabet von Herzogenberg (1892), Hermine Spies (1893), Philipp Spitta (1894), Theodor Bilroth (1894), Hans von Bulow (1894), and Clara Schumann (1896). There is speculation whether Brahms wrote the *Eleven Chorale Preludes* (published posthumously in 1902) at the time of these deaths, or revised them then from earlier works. Max Kalbeck, Brahms' friend, thought that several of the chorale preludes were from 1855-56.[303] The chorales may well have been written at separate times, for scholars say that Brahms performed some of his *Choralespiele* at the time he performed his *Vier ernste Gesänge*, Op. 12, in the home of friends on 25 May 1896, after the funeral of Clara Schumann.[304] Frances Heusinkveld, in

[303] Barbara Owen, *The Organ Music of Johannes Brahms* (Oxford: Oxford University Press, 2007), 86.

"Brahms Chorale Preludes," says that, according to the organist Heuberger of Bad Ischl, Brahms played the first seven chorales on 24 June 1896.[305] But scholars Walter E. Buszin and Paul G. Bunjes say that the suggestion that all or part of the chorales may be based on 1850s or earlier sketches is "pure conjecture," and they all show "the mastery of the late Brahms."[306]

Organ scholar Barbara Owen does think that there are differences between the first seven and last four of the chorales that are significant, and that may indicate their different composition times: there is less contrapuntal work in the last four, and there is a different type of final cadence between the first seven and the last four—in the earlier group, prolongation of the final chord is employed more often. Also, the use in the manuscript of alto clefs occurs in the first seven, but not in the latter four. The first seven were in a "fair copy" and in the autograph manuscript they were numbered differently than in the 1902 publication: They were in the order of 1, 5, 2, 6, 7, 3, 4 (of the publication numbering).[307] The last four chorales were found on Brahms' desk after he

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[304] Many scholars mention this, some say it is a possibility, some are more certain, of Brahms' performing some of the chorale preludes. One who is more certain is Imogen Fellinger, "Cyclic Tendencies in Brahms's Song Collections," in *Brahms Studies: Analytical and Historical Perspectives,* ed. George S. Bozarth (Oxford: Clarendon Press, 1990), 379.

[305] Frances Heusinkveld, "Brahms Chorale Preludes," *American Music Teacher* 21, No. 6 (June-July,1972), 26.

[306] Walter E. Buszin and Paul G. Bunges, ed., "Foreword," *Complete Organ Works II: Opus 122*, *Eleven Chorale Preludes* (New York: C. F. Peters Corporation, 6333b, n.d.), [ii].

[307] Owen, 83. Owen says that this manuscript was examined by George S. Bozarth for his Henle edition of the works.

died, but numbers 9-11 were found together and no. 8 was found by itself, on older, hand-ruled paper.[308]

Adding to the discussion is George S. Bozarth, who says that Brahms sent the first seven chorale preludes to his copyist William Kupfer (they were marked "Ischl/Mai 96" in his pocket calendar book), and proofread and corrected the manuscript. [309] But, he adds that the last four preludes, which he says were composed in June 1896 at Bad Ischl, according to the inscription at the end of no. 11, were added to the manuscript by Eusebius Mandyczewski and do not contain evidence that they were proofed by Brahms. In fact, he says, these chorale preludes may have only been prepared for publication in 1902.[310]

Whenever *Es ist ein Ros' entsprungen* was written or included in Op. 122, the choral preludes of the set were written on Lutheran melodies of the sixteenth and seventeenth centuries. Some authors think the *Eleven Chorale Preludes* are similar to those in the *Orgelbüchlein* of J. S. Bach. Analyst Andreas Schröder calls them "an *Orgelbüchlein* in the language of the late romantic." [311] Many authors have written of the "funereal" nature of the chorales--Karl Geiringer says that "The whole atmosphere of this

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[308] Owen, 87.

[309] George S. Bozarth, "Brahms's Posthumous Compositions and Arrangements: Editorial Problems and Questions of Authenticity," *Brahms 2: Biographical, Documentary and Analytical Studies*, ed. Michael Musgrave (Cambridge: Cambridge University Press, 1987), 67.

[310] Bozarth, 67.

[311] Owen, 88.

collection is that of profoundest grief.," but Owen, along with others, does not see all the chorales as sad.[312]

First, the chorales are the following:

1. Mein Jesu, der du mich (My Jesus Leadeth Me)
2. Herzliebster Jesu (Ah, Jesus, Dear)
3. O Welt, ich muss dich lassen (O World, I Now Must Leave Thee)
4. Herzlich thut mich erfreuen (My Heart Abounds with Pleasure)
5. Schmücke dich, o liebe Seele (Deck Thyself, My Soul, with Gladness)
6. O wie selig seid ihr doch, ihr Frommen (Blessed Ye Who Live in Faith Unswerving)
7. O Gott, du frommer Gott (O God, Thou Faithful God)
8. Es is ein Ros' entsprungen (Behold, A Rose Breaks into Bloom)
9. Herzlich tut mich verlangen (My Heart is Ever Yearning)
10. Herzlich tut mich verlangen (My Heart is Ever Yearning)
11. O Welt, ich muss dich lassen (O World, I Now Must Leave Thee)

Table 23 shows how the techniques of Brahms' chorale preludes are similar to those of Bach's *Orgelbüchlein* as each prelude exhibits features of the genre, as can be easily seen in perusing the score (all are in four voices, except where noted).

Table 23. Techniques in Each Choral Prelude of Brahms' Op. 122.

1. The first chorale has fugal imitative entries of each phrase ahead of the chorale in the pedals of the organ in slower-moving notes. It has a two-measure final cadence with a tonic pedal point.
2. The second chorale is an ornamented melody chorale with alto, tenor, and bass motivically embellished. It has a three-measure final cadence with tonic pedal point.
3. The third chorale includes a melodically embellished soprano part with imitative voices before the soprano melody. It has a two-measure final cadence with tonic pedal point.
4. The fourth chorale has similar techniques to number 3.
5. Number five is in three parts with an unelaborated melody in the soprano and motivically embellished faster moving lines in the other voices. It has a two-measure final cadence with soprano tonic pedal.

[312] Karl Geiringer, *Brahms, His Life and Work*, (New York: Oxford University Press, 1947), 223.

6. Number six has similar techniques to number 5, with a slightly ornamented melody in the soprano and a measure and a half double pedal point cadence.
7. Number seven combines techniques of imitative entries ahead of a chorale tune—often in three voices, which is in long notes in the soprano which moves to a middle-range voice (sounding as the lowest voice) in the middle of the chorale. Interruptive chords, reminiscent of the four-part chorale, and in 4 voices, invade the texture at times. A final cadence has a tonic pedal point with moving chords of two measures.
8. Number eight is a melody chorale, with a soprano melody of passing and neighbor tones that obscures the original melody. The melody is present in the tenor in phrases that echo the soprano melody. The cadence is two measures on two tonic pedal points—in soprano and bass, split in half for the tenor figuration to echo the soprano one step lower.
9. Number 9 is a highly-ornamented soprano melody chorale with the other parts in motivically-embellished in faster-moving notes. The cadence is one measure, with a soprano pedal point.
10. Number 10 has the choral tune in the pedal part with elaborate motives in the other parts, and a repeated bass of ever-present eighth-notes. The cadence is only one measure, but does have two pedal points.
11. Number eleven is in three planes of music, the first the chorale in the soprano, slightly ornamented, followed by two echos, the second more quiet than the first, and the second not containing as many melody notes. Five voice parts are sometimes present, and six at the end. The final cadence is of one measure with a suspension and tonic chords over a tonic pedal point.

Brahms may have been thinking of the death of those dear to him when he decided to use *cantus firmus* technique in Op. 122. Further thoughts on the motivations behind this technique come from Ann Bond and Russel Stinson.

Ann Bond in *The Musical Times* suggests the use of *cantus firmus* technique might indicate that Brahms was thinking of reviving a historic form often used in the Baroque.[313] After all, he had been a signatory to the Preface *of Denkmäler deutscher Tonkunst* (1892), a volume that contained music of Scheidt, Pachelbel, and Walther.

[313] Ann Bond, "The Organist's Repertory: Brahms Chorale Preludes, Op. 122," *The Musical Times* 112, No. 1543 (Sept., 1971), 899.

Bond also suggests he might have just wanted to write a group of pieces based on hymn tunes, similar to his use of folk songs in other repertory.[314]

Perhaps Bond is correct in her suggestion that Brahms wanted to revive a historic form. After all, he was acquainted with Bach. It is known that he studied the music of earlier composers throughout his life. When he was 15 years old, in 1848, he played a Bach fugue in his first piano recital and wrote his name and date in a copy of David Kellner's 1743 treatise, *Treulicher Unterricht in General-Bass*, which was bound with Mattheson's *Die Kunst das Clavier zu spielen*.[315] He continued to study older composers, making many manuscript copies, and when he died, his library contained many items from the Renaissance and Baroque.[316] Writer Russell Stinson, in his book, *The Reception of Bach's Organ Works from Mendelssohn to Brahms*, illuminates the Bach connection when he says the following:

> Music history has never known a greater Bachian than Johannes Brahms. As a performer, Brahms championed Bach's music his entire life. As a composer, he regularly assimilated Bach's style into his own works, irrespective of medium or genre. And he made no secret that Bach was the composer he exalted above all others. . . . the multitudinous inscriptions found in [Brahms'] personal copies of the organ music volumes of the *Bachgesellschaft* edition attest to his diligent study of this repertory.[317]

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[314] Bond, 899.

[315] Virginia L. Hancock, "The Growth of Brahms's Interest in Early Choral Music and Its Effect on His Own Chorale Compositions," in *Brahms: Biographical, Documentary, and Analytical Studies*, ed. Robert Pascall (Cambridge: Cambridge University Press, 1983), 27.

[316] Hancock, 27.

[317] Russell Stinson, *The Reception of Bach's Organ Works: From Mendelssohn to Brahms* (New York: Oxford University Press, 2006), 170.

So, perhaps, he was sad following all the deaths of his friends, or perhaps he was reviving a Baroque form in order to honor Bach, or even to place himself in the tradition of the Renaissance and the Baroque. We can only speculate, but the *Eleven Chorale Preludes* are preludes in a long line of this form in history, and *Es ist ein Ros' entsprungen,* specifically, is an example of the ornamented melody chorale.

Since Brahms may have been reviving a form from the Baroque, this may have led him to write this chorale in a traditional tonal style, not veering far from the borrowed melody that he chose. His work is the most tonally conservative in this dissertation, a piece examined in opposition to those other works that push and pull tonality into their own eras. Brahms in *Es ist ein Ros' entsprungen* reaches back to an older tradition.

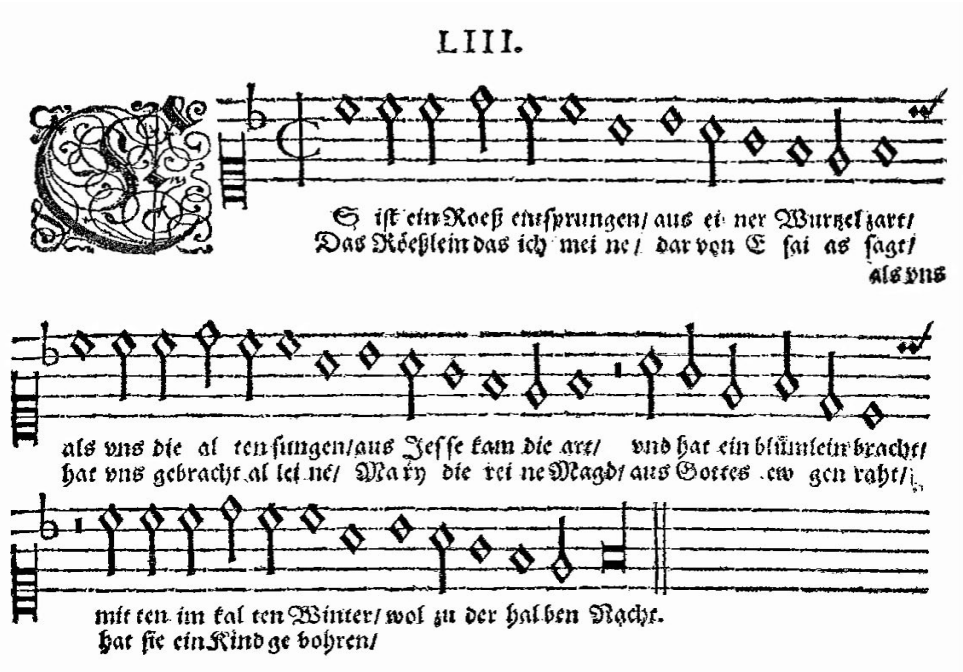
The Melody

The melodies of many of the chorales, as well as their form, come from the ages-old German tradition. Example 83 shows the melody of *Es ist ein Ros' entsprungen* that Michael Praetorius set in his *Musae Sioniae, 6*, Theil (No. 53) in 1609. Example 84 is the transcription that Johannes Riedel has published in *The Lutheran Chorale: Its Basic Traditions.*

The translation of this Advent chorale is from Theodore Baker and is as follows:

Lo, how a rose e'er blooming
From tender stem hath sprung!
Of Jesse's linage coming
As men of old have sung.
It came, a floweret bright,
Amid the cold of winter,
When half-spent was the night.[318]

Example 83. Michael Praetorius, *Es ist ein Ros' entsprungen*, 1609.[319]



Riedel says that this chorale is a "reversed case of a repeat barform in triple meter with a hemiola at the end of the *Stollen* and *Abgesang*."[320] The repeated barform refers to the first section of the chorale, and the reversed idea refers to the return of the opening phrase after a short phrase in the middle. He also notes the beginning of the *Abgesang* in duple meter, is "stated delicately" for the words, "It came a floweret bright."[321] For the purposes of my study, the changes of meter should be noted, as well as the different

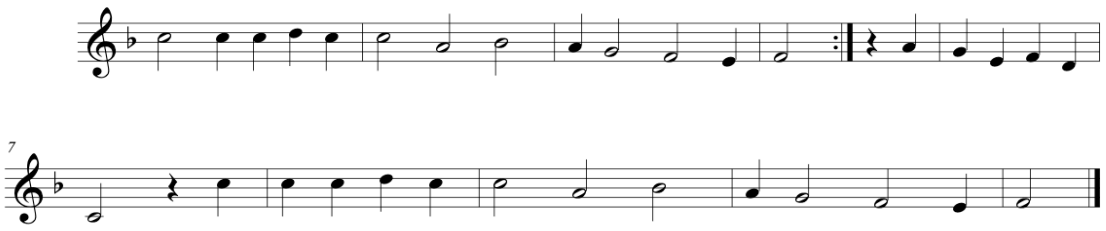
[318] Riedel, 47.

[319] Michael Praetorius, *Es ist ein Ros', Musiae Sioniea 6,* Theil (No. 53), IMSLP, at http://imslp.simssa.ca/files/imglnks/usimg/c/c8/IMSLP29879-PMLP67213-Praetorius-Es_ist_ein_Ros_(1609).pdf (accessed 09/23/2019).

[320] Riedel, 46.

[321] Riedel, 46.

Example 84. Transcription by Johannes Riedel, *Es ist ein Ros' entsprungen*.[322]



rhythm of the opening phrase with its repetition.

In example 85, Brahms' varied melody is contrasted with the chorale melody:[323] The top line is the melody written by Brahms, the middle line is the original tune. The bottom score is that of the melody with the most important notes shown by Schenkerian notation. The first four measures show Brahms' use of neighbor- and double-neighbor tones. For instance, in m. 1, the upbeat and first dotted-quarter pulse, have a double neighbor, but the second dotted-quarter note includes an appoggiatura, and a passing tone, and the fourth includes a neighbor tone. This measure also should be noted for Brahms' change of rhythm from the original melody. The notes there were quarter-notes

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[322] Johannes Riedel, *The Lutheran Chorale: Its Basic Traditions* (Minneapolis: Augsburg Publishing House, 1967), 47.

[323] The original chorale melody is in various meters, and has been changed to be notated in the meter of Brahms' chorale here for the purpose of demonstrating the variation that Brahms' has written.

with no upbeat.[324] Hymnals still use quarter-notes in this place.[325] Thus, one of Brahms' changes is the addition of eighth-notes to the original quarter notes in mm. 1, 5, 9, 11, 15, and 17, but he does not change the underlying rhythm in the rest of phrase one, or in the repetition (mm. 5-8). M. 2 continues the neighbor motion, with an escape tone on the second half-note, and mm. 3 and 4 continue the use of appoggiaturas. The line in Schenkerian notation shows that the phrase, both in the original, and in Brahms' score, is a simple descent from the dominant note, C5, to F4.

After the repetition, m. 9 continues the non-harmonic note motion of the earlier phrases, but now, on the second dotted-quarter note of the measure, Brahms uses a chord tone in his melody. C4 and E4 move to G4 on the third dotted-quarter note, and make up the dominant chord, an early hint at the half cadence in m. 10. The melody of the opening returns in m. 11, but Brahms changes the figuration, using a F5 as a chord tone of F major on the second dotted-quarter. This is followed by a chromatic tone, a C#5. This C# was heard in the opening phrase, but is more poignant in m. 11 since it is now an accented-passing tone that points the resolution upward to D5. Mm. 12-13 are a repetition of the opening phrase's notes, but mm. 15-16, although the same notes as mm. 9-10, descend into the tenor range. Writing the melody an octave lower is an echo effect. The phrase is then repeated, with the echo in the tenor line at the end of the piece. Tonally, the return to the opening melody in m. 11 initiates another dominant to tonic descent,

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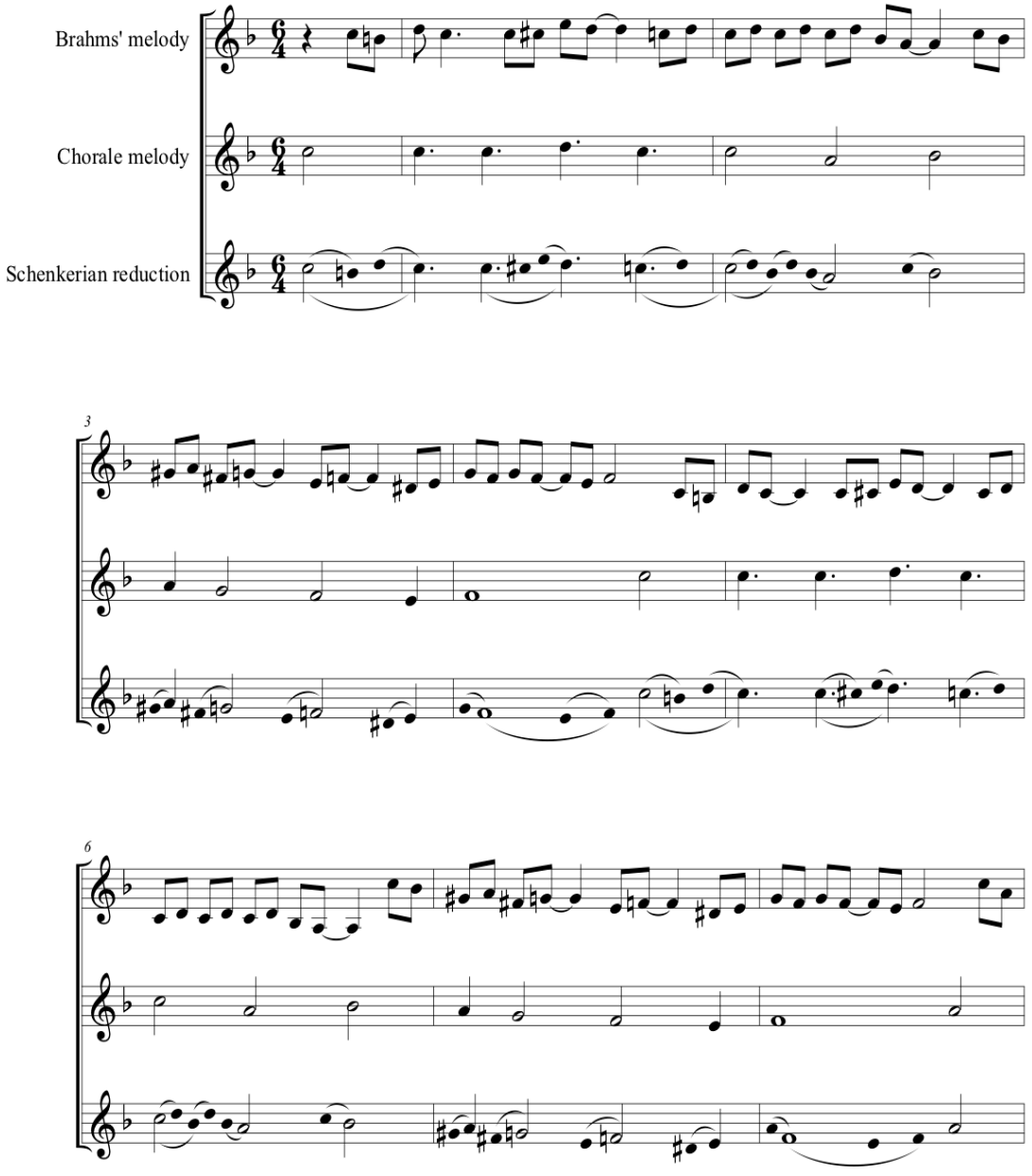
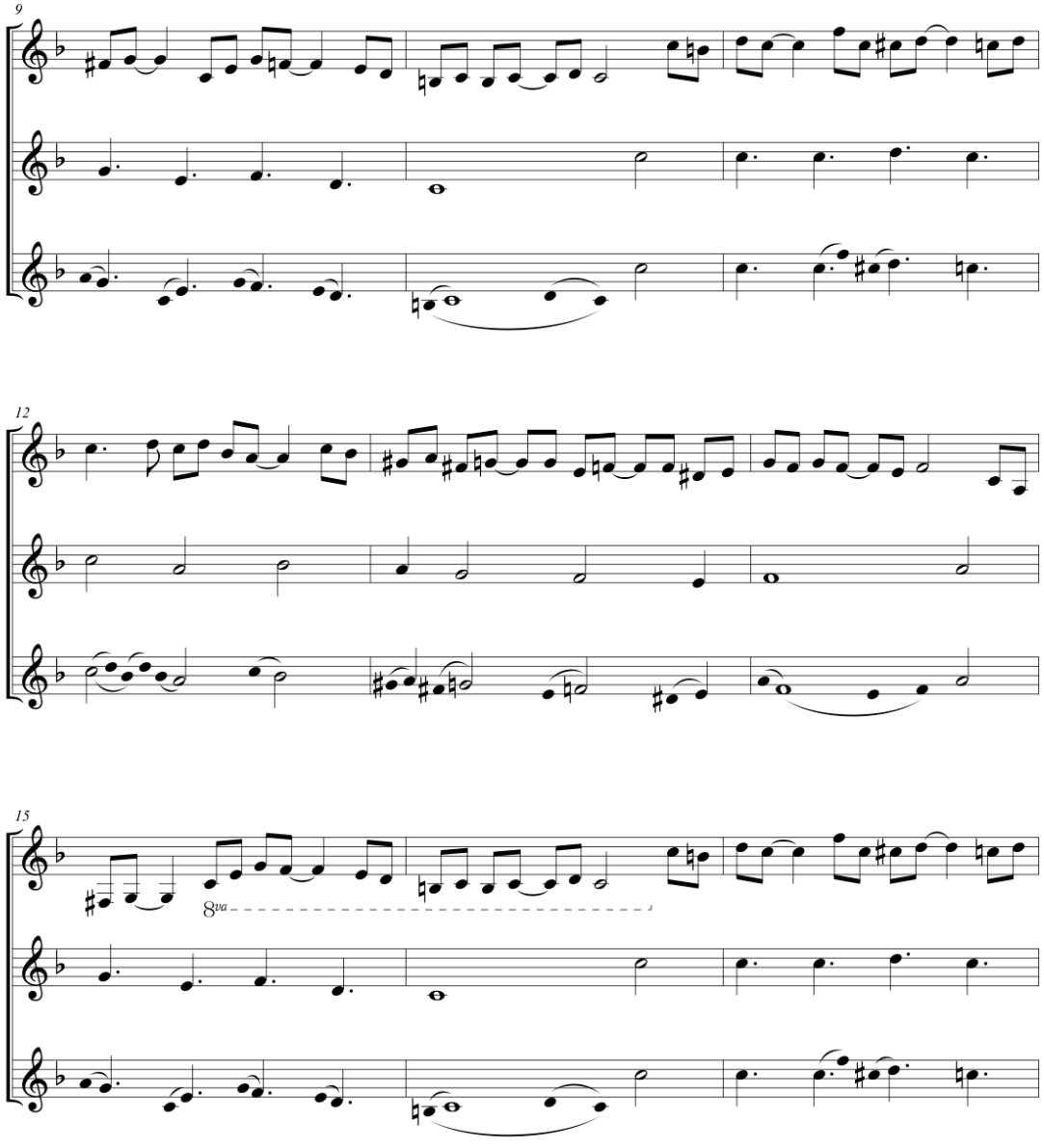
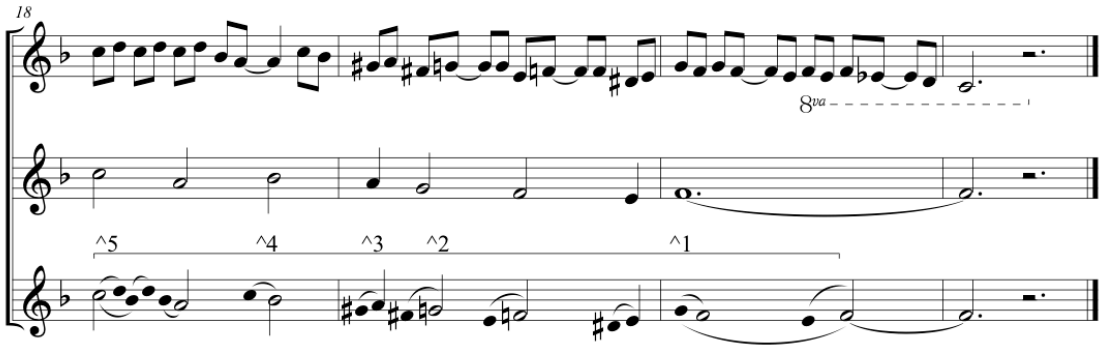
[324] The graph needed to show dotted-quarter notes in order to compare the melody with Brahms' variation.

[325] For instance, see the Baptist Hymnal of 2008, number 177, available with many other hymnals with this chorale, at https://hymnary.org/text/lo_how_a_rose_eer_blooming#authority_media_flexscores (accessed 03/25/2020).

Example 85. Comparison of Brahms' Setting with the Original and a Schenkerian Graph Highlighting the Ornaments.



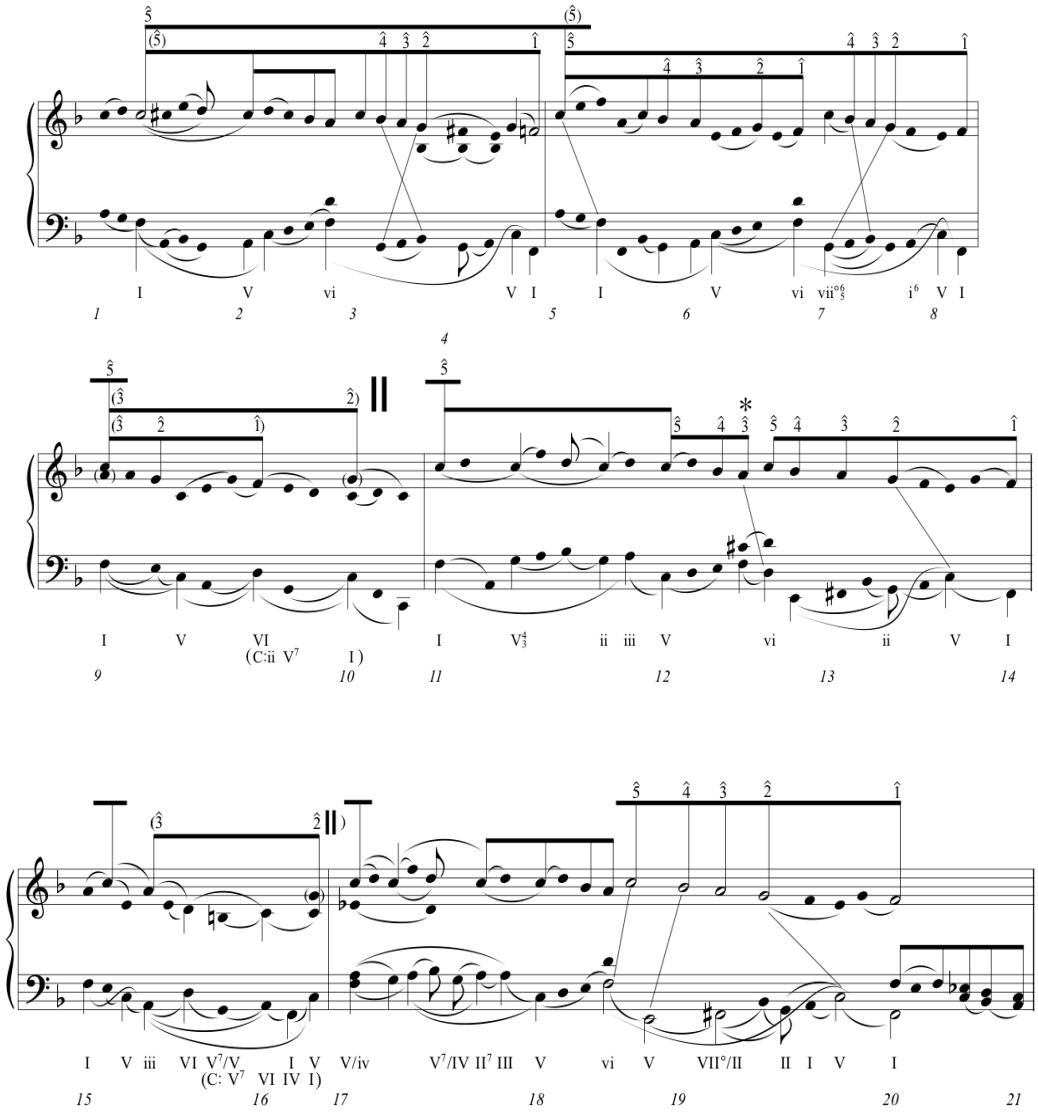

9
12
15
8va



followed by a dominant cadence (m. 15), and the final descent at the end of the piece. The Schenkerian graph, Example 86, of Brahms' chorale prelude shows other relationships. First, it shows the number of times the *Urlinie* descends from dominant to tonic throughout the piece (4). Even within the phrases there are smaller descents, for instance, mm. 2, 12, and 18 have incomplete descents, and mm. 5-6 include a total descent nested inside the larger phrase motion. Two phrases move to the dominant, cadencing on an interruption in the tonal plan (mm. 10 and 16). But, even with these interruptions, the tonic note, F, is present—as a momentary chord tone in m. 10, and a bass note in m. 16. This shows how closely this piece is tied to F major.

Brahms' attention to detail is apparent in this chorale prelude. The F#s in the bass in mm. 13 and 19 are striking moments of adding a diminished chord to the texture of the music. The diminished chord, of course, applies to the supertonic, momentarily moving the music from the key of F major to G minor. This begins a circle –of-fifths harmonic descent from G minor to C major, the dominant, to the tonic, or it can also be seen as ii-V-I, a tonal cadence often used in music. My analyses have shown that though Brahms adds multiple neighbors and chromatic diminutions to each voice of the texture,

Example 86. Schenkerian Graph of *Es ist ein Ros' entsprungen.*



particularly the melody, his adjustments to the harmony in his version of *Es ist ein Ros' entsprungen* are minimal, principally adding secondary-seventh chords to propel the harmony forward. This is a relatively conservative approach to ornamenting tonality, preserving nearly all of the original material intact and not pushing much past the

boundaries of the of the original melody. However, tonality is only one aspect of the piece. The use of all the passing and neighbor tones, particularly accented ones, creates a new texture and new rhythms. First of all, these added non-harmonic tones obscure the original melody and tonal plan, making the piece quite different from many of Bach's and other composers' chorale preludes that plainly state their melodies. Secondly, the non-harmonic tones assure that many resolutions of dissonances occur between beats or on weak beats of the piece (for example, m. 3), moving the onsets of where the tonal chords occur to unusual places in the measures. This challenge a feeling of definite rhythmic pulse. Adding this lack of clear rhythmic pulse to the use of a different meter (m. 1 and repetitions) from the original chorale, creates an atmospheric work that does not reflect the text's description of a rose springing up, but seems to hover above the earth and reflects the ending words, "cold of winter, when half-spent was the night." And thus, the ever-descending lines of both Brahms' prelude makes the original chorale melody difficult to perceive and reflect the same, not the floweret springing up, but God's son coming down to earth in the middle of the cold night.

Postlude pour l'Office de Complies by Jehan Alain

Jehan Alain (1911-1940) was killed in WWII while serving as a soldier in the French army. Much of his music was written for his family's house organ, but the *Postlude pour l'Office de Complies* was written after a visit to the eighteenth-century Abbey of Valloires and its organ there. He wrote about the visit to his classmate Denise Billard:

> Here is a magnificent organ of three manuals which I found has a phenomenal acoustic. Old registrations from 200-300 years ago; what a sound. Unfortunately, the whole organ has suffered abuse. It is not in the right tuning! And it is awful! . . . The only secure thing is to improvise. But it is still wonderful to play about 11:00 in the evening, when an absolute calmness is over the land, and the plainchant is played by the deep tones of the pedal, the atmosphere makes one tremble. This is real, and exciting![326]

Unlike some of the other pieces in my study, those by Couperin, Bach, and Ives, Alain's work was not written to be used in a worship service, even though it contains chants of the liturgy. Instead, it is a reaction to the service,[327] and a reflection upon it.[328] My analyses will reinforce these purposes by showing how the plainchant is set in an evocative but entirely unconventional way, enabling us to hear the Alain piece (with Ives and Cage) as another example of a borrowing that pushes past traditional tonality.

The piece has many elements: the chants, the accompanying chords of continuous quarter-note motion and quiet dissonances (these are possibly methods to represent the Abbey's acoustic, which may have had reverberation), the descending tonal lines, and the rocking of the opening section, all the while evoking the senses in a remembrance of the nightly worship service. Schauerte describes the opening section as a *Wiegenlied* from the alternation of hands[329]—another image to add to the mixture. Schauerte speaks of the opening sound of bells from the falling perfect fifths in the right hand of the organist[330]

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[326] From an unpublished manuscript, quoted in Helga Schauerte, *Jehan Alain (1911-1940): Ein monographische Studie* (Regensburg: Gustav Bosse Verlag, 1983), 29.

[327] Richard Travis Bouchett, "The Organ Music of Jehan Alain (1911-1940)," PhD diss., Union Theological Seminary, 1971, 27.

[328] Schauerte, 29.

[329] Schauerte, 29.

[330] Schauerte, 29.

and Norbert Dufourcq says that the free themes and free rhythms indicate "the presence of the holy mysteries."[331]

These "holy mysteries" are not only represented by the chords and notes representing acoustics of the church, but they are also evoked by several chants in the piece. These begin in measure 17 and then continue throughout the rest of the work. Placed in counterpoint with these chants is a layer of quarter-note motion, which is ever present and the background against which the chants sound. Alain says that the chants are not to be played exactly together. Thus, the piece is also one of layers—one of more continuous and equal rhythm against one of flexibility, sounding improvised.

The chants in the work are found in the *Liber Usualis*.[332] Table 24 shows their location in the 1934 *Liber Usualis* and in Alain's piece. Measures 1-14 of Alain's piece encompass a descending sixth-span in the soprano voice, with an alto voice forming perfect-fifth intervals below the soprano, over extended-thirds harmonies. A modified graph (Example 87) of these measures follows, with the sets included, both with prime form numbers and Forte classifications. A second graph (Example 88) shows the repetitions of sets, with explanation below. The arrows indicate motion from one sonority to another. 4-23 (0257) is pentatonic and is part of 5-35. 4-27 (0258) is

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[331] Norbert Dufourcq, *La Musique d'orgue Française de Johan Titelouze a Jehan Alain, Les Instruments, les Artistes et les Œuvres, les Forms et les Styles* (Paris: Librairie Floury, 1941), 236.

[332] The Benedictines of Solesmes, *The Liber Usualis, with Introduction and Rubrics in English* (Tournai: Desclée & Co., 1953, republished with additional material, Great Falls: St. Bonaventure Publications, 1997). The chants are identified in Schuaerte, 29-33.

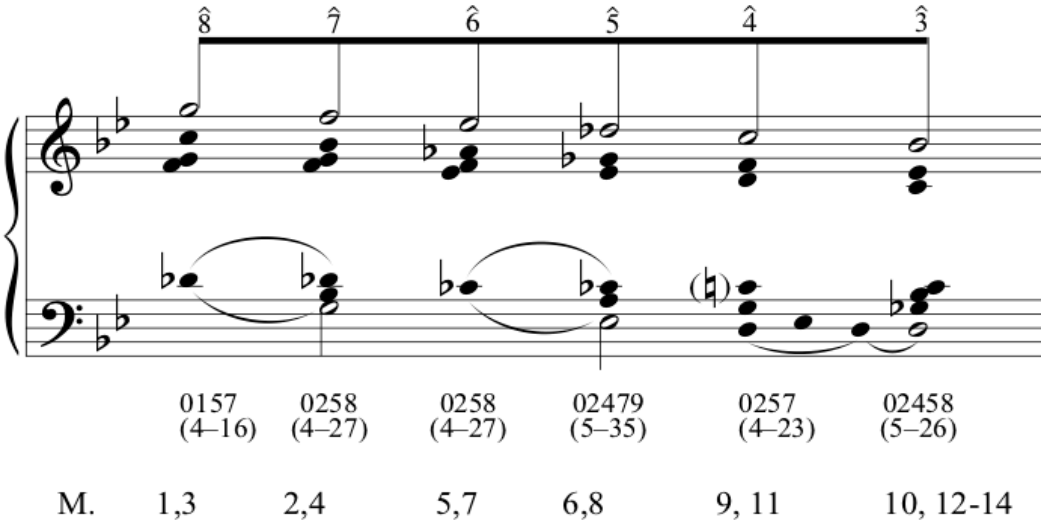
Table 24. Placement of plainchants in the *Liber Usualis* and in Alain's *Postlude*.

Chant	In 1934 *Liber*	Measure in Alain Postlude
Miserere mei, Domine	P. 518, Vespers antiphon on Tuesday after Quinquagesima	17
Te lucis ante terminum	P. 270, antiphon for Advent	26
In manus tuas	P. 266, Ordinary hymn	30
Salve nos, Domine	P. 271, antiphon for compline on Sundays	37
Gloria Patri	P. 1155, at Sext, None, for Common of two or more martyrs	38
Amen	From Gloria, P. 16, #8, first 3 notes	39

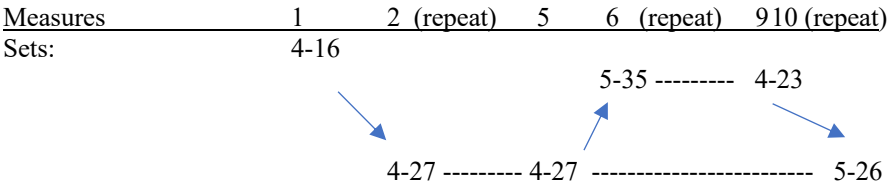
octatonic and is part of 5-26. Thus, the alternation of chords between the two hands of the organist in the opening measures of this piece alternate large collections, but imperfectly. It is more useful to think that the sets return, helping form the aural image of reverberation in a large church. And the sets are quite similar, 4-23 (0257) and 4-28 (0258) are only a half-step apart, as are 4-16 (0157) and 4-23 (0257).

Of course, the chords may be identified in more conventional ways: Measures 1-2 contain a G half-diminished chord; measures 5-6 include a F half-diminished chord which proceeds to an A-flat minor eleventh chord; and measures 9-10 prolong a G minor-eleventh chord which proceeds to a C half-diminished chord.

Example 87. Schenkerian graph of Measures 1-14 of Alain's *Postlude pour l'Office de Complies.*

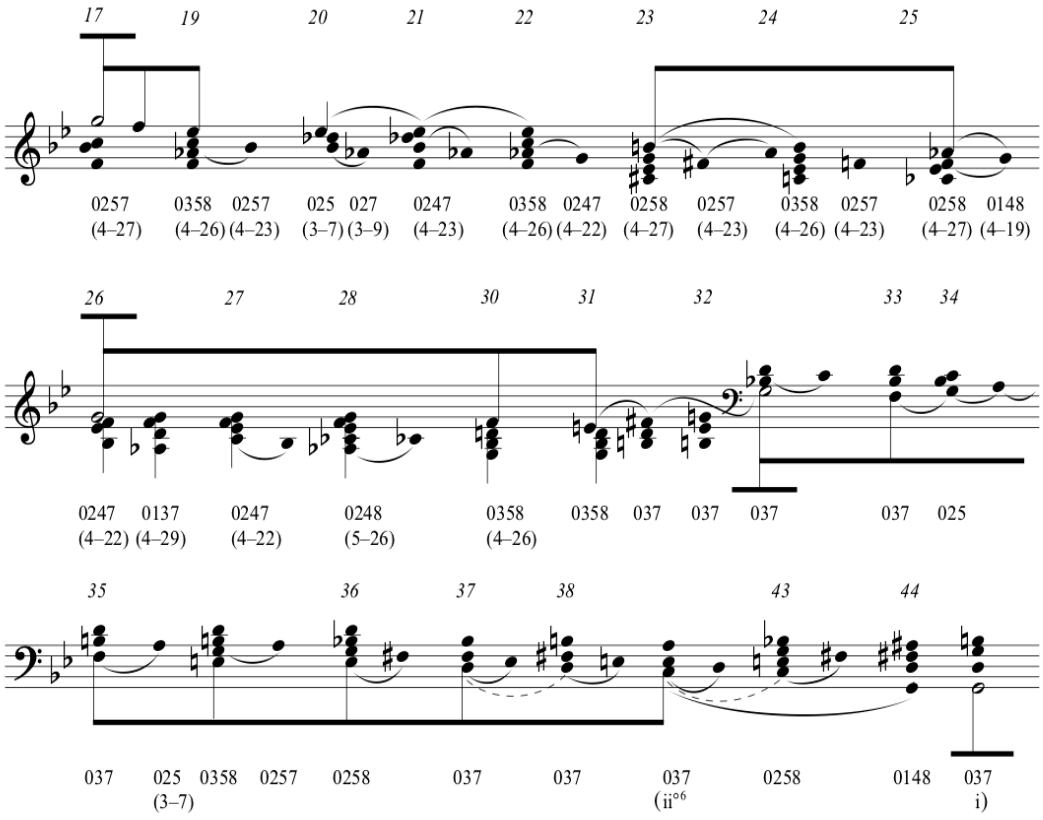


Example 88. Graph of sets in Measures 1-14 in Alain's *Postlude pour l'Office de Complies.*



After two measures, mm. 15-16, which begin the opening chords and motion again, the texture changes with the addition of the various chants mentioned above. A modified Schenkerian graph (Example 89), with pitch-class sets, for the rest of the piece follows.

Example 89. Modified Schenkerian graph with Pitch-Class Sets for Mm. 17-44 of Alain's *Postlude pour l'Office de Complies.*



Set theory, the study of relationships and networks formed by transpositional and inversional equivalence classes in post-tonal music, is a useful tool in analyzing this piece, and sets are listed on the above example. The sets group into recognizable larger collections, for instance, (0257), (0358), and (0247) are all diatonic sets and (0358) and (0258) are octatonic. (0148), (02479), and (02458) are harmonic minor. Also, (037), the

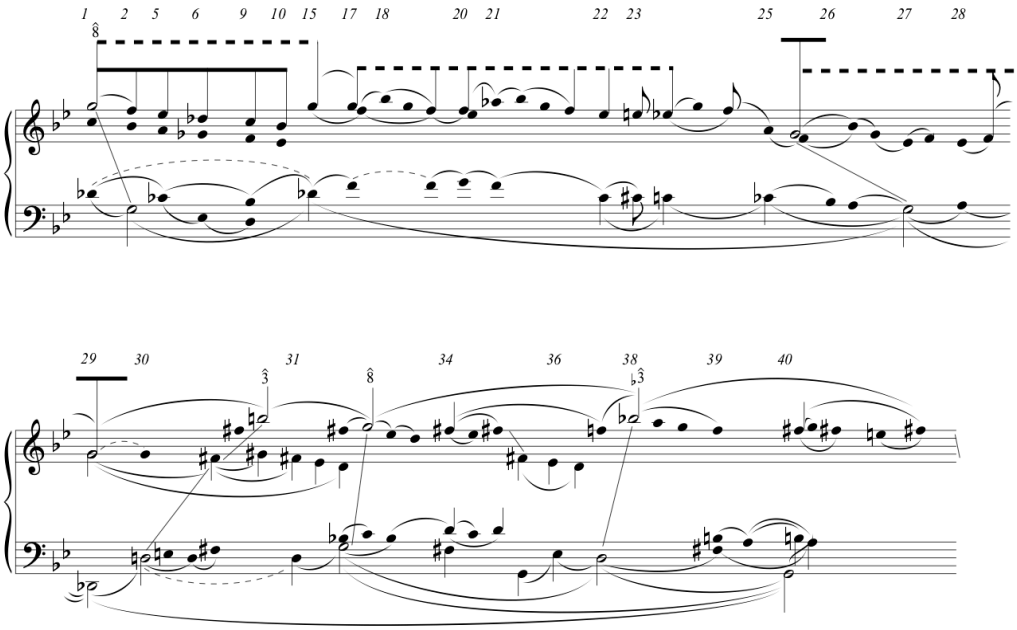
major or minor triad, at the end of the piece is a subset of all these categories (with the F-sharp, the tetrachord is (0158]). (0137) and (0146) have the same interval class vector {111111}, making them "all interval" tetrachords. And (0358) and (0247) have similar interval vectors (a listing of the numbers of each interval, the first is the number of minor seconds, the next, major seconds, through the fourths and tritones), {012120} and {021120} with two pitch classes changing place—this is a similarity relationship (R1) according to Allen Forte.[333] However, the sets are not placed on downbeats, or in cadences, or in the same places in particular phrases in a systematic order. Rather, this piece seems to be more atmospheric in that it uses chords that can be analyzed by set theory, but the sets do not progress or combine according to recognizable patterns (although 4-26, 4-23 and 4-22 are often used), and the interspersed triads between four-note chords become more prominent at the end (see Example 5-8). What does seem to contribute to another kind of structure is that traditional Schenkerian middleground motions are present in the soprano and bass, harmonized by all these pitch-class sets.

Example 90 is a graph of the entire piece. The G3 in the bass at the beginning of the postlude is teamed with the G5 in the first measure. Both G3 and G5 sustain for much of the work. The soprano G moves down an octave at m. 25, but then returns to the higher range, with major- and minor-thirds for the last half of the piece. The bass G also goes downward, a long way, to D-flat 2 in m. 29. This is an important cadence of the first half of the piece, and the D-flat was first seen as D-flat 4 in m. 1. The first half of the piece is dominated by soprano chant melodies plus accompaniment. But the second

[333] Similarity relationships are discussed by Allen Forte in *The Structure of Atonal Music* (New Haven, Yale University Press, 1973), 46-59.

half of the piece, mm 30-44, becomes more variable, with broken motives from the chants in all voices, and D-flat turns into D-natural, with a G major area at the end of the

Example 90. Schenkerian Graph of Alain's *Postlude pour l'Office de Complies.*



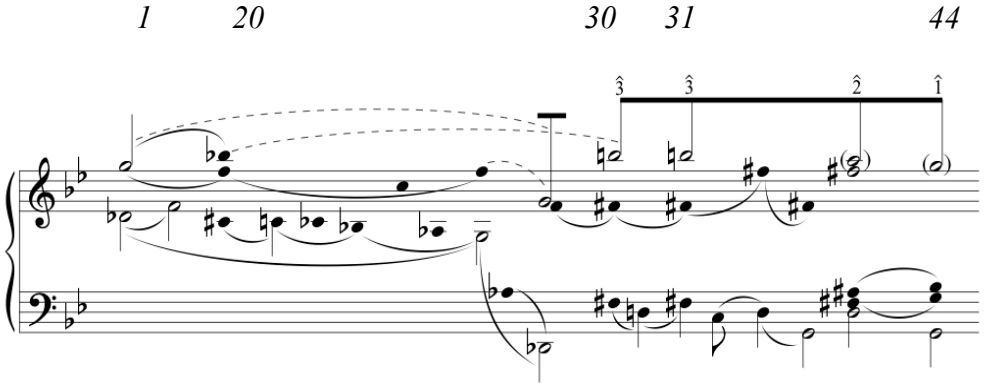
piece. There is a brief reminiscence of the earlier flats of the piece in m. 38, but then the major area of the last part of the piece takes over. The second half of the piece, m. 30 and on, has many more broken chant melodies and looks more active on the graph, but with the esoteric nature of this work, the motion is muted.

Formally, the piece is based on variation and combination. The first section of the piece, mm. 1-14, spans a downward-moving line of a major-sixth interval in the soprano. The "variation," beginning in m. 15 (using chant tunes beginning in m. 17 and losing the alternating left- and right-hand rhythm of the opening measures), repeats the downward line, but goes further. In fact, the G5 to G2 is three octaves, and finishes at the end of the

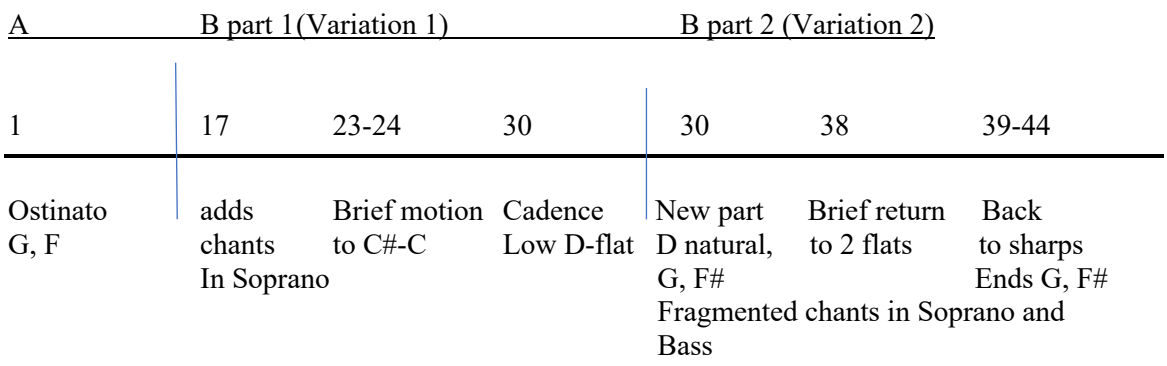
piece. The form is binary, with the second half beginning at m. 17 with the addition of the chant tunes.

This second half of the piece is itself written in two parts, and each has its own pitch collections. The first is mm. 17-30, and the second 30 (beat 3)-44. The note D-flat is prominent in the first part of the variation, and it is replaced by D in the latter. (The D-flat is equally distant from two G notes an octave apart, as a tritone from G. The D is, of course, the important fifth of the scale of G, the dominant.) It is also true that F-natural and F# are prominent in the first and second halves of the second part of the piece, respectively. Without the G pedal point through much of the work, F and F-sharp might be the main notes of the soprano. As it is the F, F-sharp and G share prominence. Example 91, a more background graph of the whole piece, shows the importance of F and F-sharp, especially in inner voices, and the eventual dominating G at the end and Example 92 is a line graph of the piece.

Example 91. Further Middleground Graph of Alain's *Postlude pour l'Office de Complies.*



Example 92. Line Graph of Sections of Alain's *Postlude pour l'Office de Complies.*



The variation section, mm. 17-29, first includes chants in consecutive order. Then in mm. 31-38, chants and fragments alternate between soprano and bass voices, never quite overlapping, but appearing to flow together as one voice, even when they do not. The octave differences create alternation, even with the 8' pedal registration. The music is denser—two voices alternate and display one line of chant. The voices are combined with the background chords. But the background chords have motion as well. Even though this piece depends on relatively dissonant chords, third-spans are still present in the soprano line of mm. 18-19, 23-26, and 26-31. The chords in mm. 32 and following are increasingly built from three-note sonorities, usually the set 3-11 (037) which is a major or minor triad. Both of these uses of the interval of a third, melodic and harmonic, root the piece in traditional tonality, even if all the other sets are more dissonant. They also lessen any previously-built tension so that the ending is more "peaceful." The very

last bass span, from mm. 32-43, moves downward by a perfect-fifth interval from the tenor note D to the low G, another traditional tonal motion. Finally, the main notes over the entire piece progress downward, conventional motion in much tonal music, and the typical means to approach a cadence, a point of rest.

Alternation of voices in the variation is one way that Alain creates motion in this piece. But it is the downward-moving background lines, and the note G, that hold the work together. In a piece that seems static—it cannot be played quickly due to the chants' repeated notes, and also their solemnity, a fair amount of motion is included--so much so, that the ending must slow down, hence, the written "*rit,*" both by the instruction and by the notes of the melody doubled in length. The ending includes repetition of the chant melody at different octaves, finally returning to the exact pitches as the opening measure. Perhaps it is due to the motive. The F-sharp, G, and F-sharp are from the beginning of the *Gloria Patri* previously mentioned (transposed). The motive does include an "Amen" with these last two notes by circling around F-sharp, and by the *ritard*.

Texturally, this piece by Alain has used borrowed material differently than the music of the other composers in my study. In the first part of the second section of the piece, mm. 17 and on, Alain writes the chant melodies on top of the descending chords. The chords could have been in the piece without the melodies, and indeed, did start the piece. The melodies seem as if they are just plastered on the walls of the background, which forms a free ostinato. After the low D-flat, in the second part of the variation section of the piece, the borrowed material is interspersed, and also seems more integral to the tonality, perhaps from its presence in all voice parts. This makes it less of a plaster on the background, but more like an integral part of the building blocks that end the

piece. Thus, the sections of the piece are quite different, but the last grows out of the other sections, texturally. And, the tonality changes from the area of flats and four-note chords, to G major, and other triads—a moving through chaos to light, perhaps, or at least, density to clarity. A density portrayed in the last two chords, D augmented, with an A#, rising to a G chord, with a B-natural, a very clear major chord.

Not only does this piece expand the boundaries of tonality through its unique harmonic additions to (or subtractions from) the borrowed material, like the Ives and Cage pieces we considered earlier, but it changes the tonal relationships between original material that was not completely tonal in the first place and the dissonant, then consonant, accompaniment—the chant seems simply layered over the accompaniment to begin, but becomes more integral as the piece comes to its close.

François Couperin, *Kyries* from the *Mass for the Parishes*

François Couperin (1668-1733), known as *le grand*, is the last composer for consideration in this chapter. Two *Kyries* from the *Mass for the Parishes* recall Medieval compositions by (1) the tenor presenting the borrowed melody of a chant in long notes in the first *Kyrie*, and (2) the borrowed melody moving to the bass voice, also in long notes, in the second. These pieces are included in this study, mostly due to the second point, as much organ music includes a bass borrowed melody, played by an organist on the pedals. Due to the retrospective nature of these piece, Couperin may be the most backward-looking composer in this study, perhaps a predecessor stylistically to the Bach setting considered at the beginning of the dissertation, but his setting of plainchant shows an abundance of contrapuntal devices, and a few touches of the Baroque period. *Le grand*

was born into the musical Couperin family, son of Charles (1639-1679), an organist, and nephew of Louis (1626-1661), a harpsichord and organ composer and organist. Indeed, both elder Couperins were organists at St. Gervais, Paris, where François would take up the duties when he turned eighteen years of age. Edward Higginbottom in *Oxford Music Online*, calls François "the most important member of the Couperin dynasty,"[334] a dynasty that continued after his death.

In 1690, Couperin published a collection of *Pieces d'orgue*, which consisted of two organ masses—the first organ music we know of from him, and, also, as far as we know, the last.[335] He would continue to perform organ music for masses, but music at this time was usually improvised in church, the reason perhaps, that he did not compose more in this genre.[336]

The masses are short pieces designed to be used in *alternatim* with the singing of plainchant. This is one way that Couperin's masses reflect the past. In *alternatim*, the organ took over the responsorial singing by the choir, alternating with the priest, in the worship service.[337] This tradition was also present after Couperin's time. As late as June 18, 1770, Charles Burney, the traveler who commented on music he heard in various countries, recounted as hearing "M. Couperin [Armand Louis Couperin (1725-89)],

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[334] Edward Higginbottom, Couperin [*le grand*], François (ii), *Grove Music Online, Oxford Music Online* at https://www-oxfordmusiconline-com.libproxy.uoregon.edu/grovemusic/view/10.1093/gmo/9781561592630.001.0001/omo-9781561592630-e-6002278203?rskey=Aq6kWT(accessed October 13, 2019).

[335] Higginbottom.

[336] Higginbottom.

[337] David Tunley, *Couperin, BBC Music Guides* (London: British Broadcasting Corporation, 1982), 28.

nephew of the famous Couperin, organist to Louis XIV, and to the regent Duke of Orleans" at the vigil of the Feast of the Dedication:

> M. Couperin accompanied the *Te Deum*, which was only chanted, with great abilities. The interludes between each verse were admirable. Great variety of stops and style, with much learning and knowledge of the instrument, were shewn, and a finger equal in strength and rapidity to every difficulty. Many things of effect were produced by the two hands, up in the treble, while the bass was played on the pedals.[338]

François Couperin's first mass, "à l'usage ordinaire des paroisses pour les fêtes solemnelles," is written to be used with the chant *Cunctipotens genitor Deus*, where the first versets of the *Kyrie*, *Gloria*, *Sanctus*, and *Agnus Dei*, along with the last verset of the *Kyrie*, use the chant tune as a *cantus firmus*. The distribution of the mass versets for the worship service was regulated by the manuscript, *Ceremoniae parisiense ad usum omnium collegiatarum*, *parochialium et aliarum Urbis et diocesis parisiensis*—or simply called the *Cérémonial des églises de Paris*.[339] The other mass, "proper pour les couvents de religieux et religiouses," has no *cantus firmus* settings. Both masses include 5 pieces for the *Kyrie*, 9 for the *Gloria*, 3 for the *Sanctus*, 2 for the *Agnus Dei*, an *Offertoire* and a *Deo gratias.*

The versets for this study are two that have clear *cantus firmi*, clarity being required by the *Cérémonial*:

> . . . même dans les versets où la liberté d'invention était laisse au musician, il était demandé que les mots du texte soient reconnaissables au passage. . .[340]

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[338] Charles Burney, *The Present State of Music in France and Italy*, quoted in Carol MacClintock, *Readings in the History of Music in Performance*, trans. and ed. Carol MacClintock (Bloomington: Indiana University Press, 1979), 364.

[339] Phillippe Beaussant, *François Couperin* (Paris: Librarie Arthème Fayard, 1980), 109.

The two versets in this study are both from the *Kyrie* of the Mass for the Parishes, and are the beginning and last versets of the plan:

Priemier verset:	Plein jeu
Troisième verset:	Fugue sur les anches
Cinquième verset:	Récit (généralement au cromorne en taille)
Septième verset:	Dialogue, duo ou trio
Dernier verset:	Dialogue sur les grands jeux.[341]

The versets not listed were sung in plainchant. The titles of the organ versets often contain its registration requirements, for example, "Plein Jeu." David Tunley says of the *plein jeu*:

> The *plein jeu*, which was the most characteristic sound of the classical French organ, was the result of combination of stops from both *grand orgue* and *positif,* producing rich, brilliant and dynamic tone to which composers turned for strong, direct utterances, like the opening *Kyrie* of the *Messe pour les convents*.[342]

Corliss Arnold defines *plein jeu* as "a bright ensemble, full sound, on Grand Orgue and Positif choruses combined with mixtures. . ."[343] But Fenner Douglass goes even further in his description of the *plein jeu*: "Among the many attributes which differentiate the sounds of classical French organs from other instruments built during the same period, the most singular is the *plein jeu*."[344] He lists the stops for a *plein jeu* built upon a

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[340] Beaussant, 110. "Even if the versets were at the liberty, left to the musician, it was demanded that the words of the text be recognizable in the passage." Translation by JS.

[341] Beaussant, 111.

[342] Tunley, 26.

[343] Arnold, 125.

[344] Fenner Douglass, *The Language of the Classical French Organ: A Musical Tradition Before 1800* (New Haven: Yale University Press,1969, expanded, 1995), 73.

sixteen-foot principal as follows:[345]

Grand Orgue	+	Positif
16 Montre		8 Montre
16 Bourdon		8 Bourdon
8 Montre		4 Prestant
8 Bourdon		2 Doublette
4 Prestant		2 Doublette
		Fourniture
2 Doublette		Cymbale
Fourniture		
Cymbale		

A much smaller one-manual organ might have a *plein jeu* of the following:[346]

8 Bourdon
4 Prestant
2 Doublette
Cymbal

Douglas also includes a description of the St Gervais organ having a tierce in the plein jeu:

> Fault faire un Jeu de tierce en la place du flageolet Laquelle sera facte destain etqui sera ouverte pour server a metre dans le plein Jeu.[347]

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[345] Douglass, 73-4.

[346] Douglass, 74.

[347] (One has a tierce stop in the place of a flute which is made open to serve a meter within the plein jeu.) From *Minutier Central Fonds XXVI*, No. 53, 23 Janvier 1628, quoted in P. Brunold, *Le Grand Orgue de Saint-Cervais de Paris* (Paris, 1934), and quoted in Douglas, 75. According to Edward Stauff, A tierce is a mutation stop emphasizing the pitch on the harmonic series which is 17 steps higher than the fundamental. This is a major third plus two octaves above the fundamental. Edward Stauff, *Encyclopedia of Organ stops*, 1999-2008, at http://www.organstops.org/s/Seventeenth.html (accessed November 2, 2019).

The Melody of *Cunctipotens genitor deus*

The chant melody, *Cunctipotens genitor deus*, is extremely old. *Kyries* were first sung in the beginning of the Mass, after the *Introit*, in Carolingian manuscripts.[348] The *Kyrie*, Couperin borrowed in movement one, appeared in a manuscript possibly from Limoges in the 10th-11th centuries, and the *Kyrie* for movement V is in a manuscript from Saint Yrieix, also in the 11th century and in another manuscript from St.-Martial of the 12th century.[349] David Bjork in *The Aquitanian Kyrie Repertory of the Tenth and Eleventh Centuries* says the chant is an "oddity," as it is 'clearly built on D, yet ends on a," and does not resemble many other D melodies.[350] The chant is the *cantus firmus* of Guillaume de Machaut's *Messe Nostre Dame*. *Cunctipotens genitor deus* was included in the *Codex Calixtinus*, c. 1160, from the Cathedral of Santiago de Compostela in Spain, and, example 93 shows the chant in the *Liber Usualis*.

The first movement of the *Kyrie* of the *paroisses mass* has the chant tune in the tenor voice. The organ mass movement itself moves between major and minor versions of D and G chords. Of this approach, David Tunley has written:

> Harmonies such as these seem to belong more to the old viol fantasias of late Renaissance times. . . .The constant fluctuation between major and minor versions of a chord produces a chromaticism very different in its feel from that practiced by contemporary German and Italians.[351]

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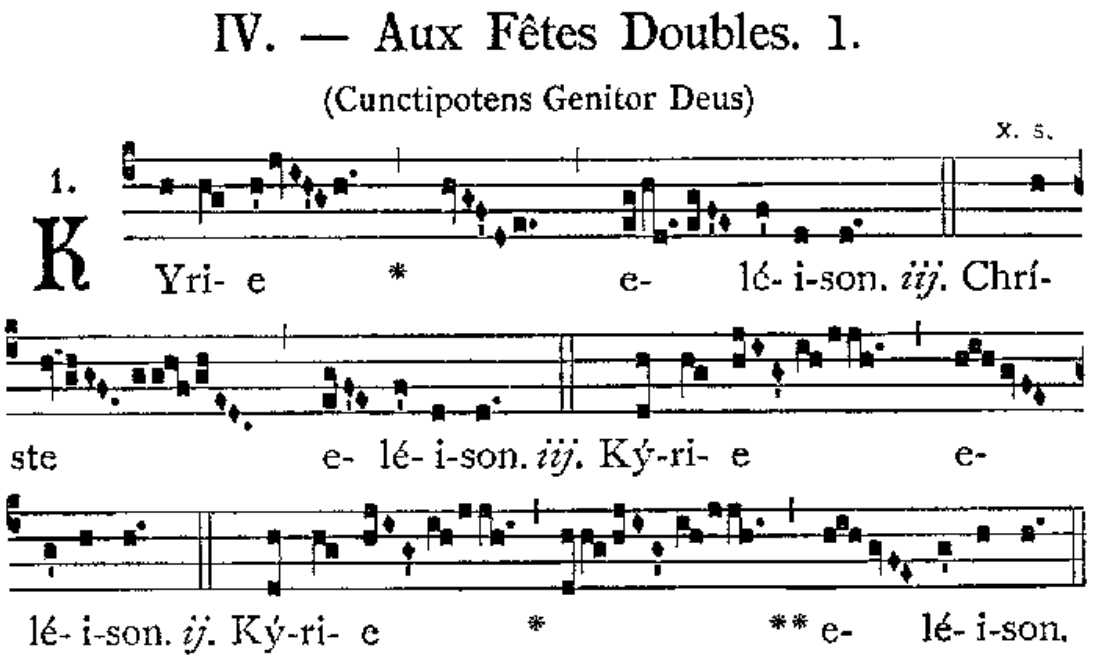
[348] David A. Bjork, *The Aquitanian Kyrie Repertory of the Tenth and Eleventh Centuries*, (Burlington: Ashgate, 3002), 1.

[349] Bjork., 7; Pa. 887 lists Limoges? And pa 903 at Saint-Yrielx.

[350] Bjork, 59.

[351] Tunley, 31.

Example 93. *Cunctipotens genitor deus.*[352]



He continues that James Anthony, in *French Baroque Music from Beaujoyeulx to Rameau* describes harpsichord music as operating in a "pre-tonal shadow zone" that both "irritates and delights those who are tonally oriented."[353] This is a reference to the use of both major and minor triads above the same root note. The Schenkerian graph of the first *Kyrie* verset, below, contains F# and F-naturals, C# and C-naturals, and B-natural and B-flats helping to indicate the major and minor tonic, dominant, and subdominant chords. These chords are tonal, but the constant changing from, and to, sharps, naturals, and flats continues the "pre-tonal shadow" elements of the music. In this sense, also, Couperin's

[352] The Benedictines of Solesmes, *The Liber Usualis,* 25.

[353] Tunley, 31.

setting of his borrowed melody can be heard as a precursor to Bach's, which tended to remain with one version of the primary chords.

The texture of this first *Kyrie* verset, and the last, is commented on by Edward Higginbottom, after he writes of the polyphony in many *Plein Jeu* movements that have "dashes of brilliance on the Pos(itif).[354] David Ponsford, however, says that the style of Couperin's versets is different than many in French organ composition. He notes that the typical French organ piece is characterized by a strict four-part texture which does not have imitative counterpoint, but is continuous, mostly made up of conjunct motion, with quarter-notes accompanying the plainchant.[355] This typical style is similar to *Kyries* found in Charpentier's *Messe pour plusieurs instrumental au lieu des orgues*, H. 513 (even if the Mass is for instruments), and Lebègue's continuous quarter-notes in the last *Plein Jeu* of his *Suite du 8 ton* of 1676.[356] Higginbottom speculates that Couperin may have heard Lebègue's mass, but it is unknown if Charpentier was imitating Lebèque's improvisations, or if they were a precedent for his writing (and, it is unknown if Couperin heard these).

Mellers discusses the "polyphonic-harmonic aspect of Titelouze's technique" which, he says, is further developed by Couperin.[357] He says that Couperin's technique

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[354] Edward Higginbottom, "Ecclesiastical Prescription and Music Style in French Classical Organ Music," *The Organ Yearbook* 12 (1981), 36, in David Ponsford, *French Organ Music in the Reign of Louis XIV* (Cambridge: Cambridge University Press, 2011), 140.

[355] Ponsford, 140.

[356] Ponsford, 140-1.

[357] Mellers, 83.

in the organ music is half-way between polyphony and harmonic thought.[358] In polyphonic linear thought, he speaks of the sequences in Couperin (not in the *Plein Jeu* movements in this piece), and the upper motion of the diminished-fourth interval in one of the movements (also not in the *Plein Jeu* pieces, but there is significant upward movement). [359] He also speaks of harmonic passages with chromaticism and dissonant suspensions as the product of fluent part-writing (in both of the *Plein Jeu* movements in this study, four-part linear counterpoint is found in the quarter-note writing).[360]

The second movement included in this study is the fifth, or last, organ movement of the *Kyrie* (the ninth movement in the liturgical setting due to the plainchant interspersed). The reason for its inclusion in this study is that it is an example of a technique used often in organ compositions. The bass carries the chant tune, the main melody of the music. Much of organ music throughout history uses this technique—the bass voice (here, the pedals of the organ) uses a strong, loud registration to make the melody heard, and the upper voices include descants and other chordal notes that augment the bass melody.

Example 94 is a transcription of the texted *Kyrie* of *Cunctipotens genitor Deus* from the Middle Ages:[361]

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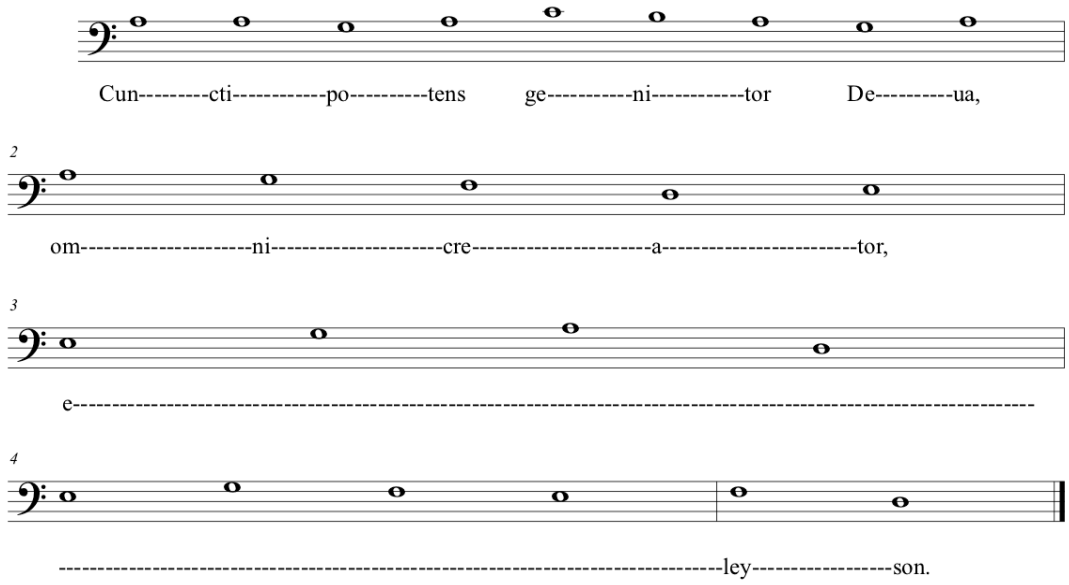
[358] Mellers, 85.

[359] Mellers, 83.

[360] Mellers, 85.

[361] David Fenwick Wilson, *Music of the Middle Ages: An Anthology for Performance and Study*, trans. Robert Crouse and Hans T. Runte (New York: Schirmer Books, 1990), 46. The editors write that the texted *Kyrie* is from "Milan. Bib. Anb. M17sup (*Ad organum faciendum*)."

Example 94. Texted *Kyrie* (1) of *Cunctipotens genitor Deus.*



There are unusual features of this *Kyrie* melody. First of all, the melody is in Dorian, with D as the lowest tone, and the notes ranging up a minor-seventh to C. The melody does not have an initial ascent of notes F-G-A to the typical reciting tone of A in Dorian modes (initial ascents as listed by Vanneus in 1553, and described by Cristle Collins Judd, in *The Cambridge History of Western Music Theory*).[362] It also ends a sub-phrase on an E, (*omnicreator*), not one of the cadence notes for Mode 1, according to Adriano

[362] S. Vanneus, *Recanetum de musica aurea* (Rome: Vorico, 1533) in Cristle Collins Judd, "Renaissance Modal Theory: Theoretical, Compositional, and Editorial Perspectives," in *The Cambridge History of Western Music Theory*, ed. Thomas Christensen (Cambridge: Cambridge University Press, 2002), 373.

Banchieri (the A, (*Deus*) and D, (*eleyson*) are).[363] Example 95 shows the instances of minor-third intervals, with one perfect fifth, within the step-wise motion of the chant. It is not as unusual for chants to contain a few major- or minor-thirds and perfect fifths, but the discussion that follows is of the use Couperin makes of these intervals, and other changes he makes in the chant in his *Kyrie*. Example 96 shows that he only makes two changes in the chant melody in his mass setting: (1) the use of G#3 in the penultimate note of the first phrase, which adds the leading tone to the dominant in the key of D minor, a signal that this part of the music has now moved more toward a later style, tonality, from the older modal setting; and (2) the filled-in minor third at the end of the Kyrie—instead of the notes, F3 and D3, the phrase ends D3-E3-F3-E3-D3.

Other than these changes, Couperin uses the minor thirds from the original chant, especially the notes D and F in the first voice exchange, m. 1, seen in Example 97 below, to signal that the chord of F major, the mediant of the key of D minor, is an important chord in the *Kyrie*. F major is present in mm. 12, 21 and 23, both with voice exchange, and the use of F, and not F-sharp, keeps the music in D minor—until the end with the Picardy third. The other F-sharps are part of the dominant of G major and minor, a secondary dominant, and their use is a tonal characteristic of this piece (mm. 2, 13, and 23). The minor third A and C from the original chant appears in the minor-dominant chord present in mm. 5 and 15 (the graph shows the perfect-fifth interval of this chord). The added C#s in mm. 2, 7, 9, and 26 indicate the dominant of the key, another tonal feature. The minor third of E and G turns into the root and third of the

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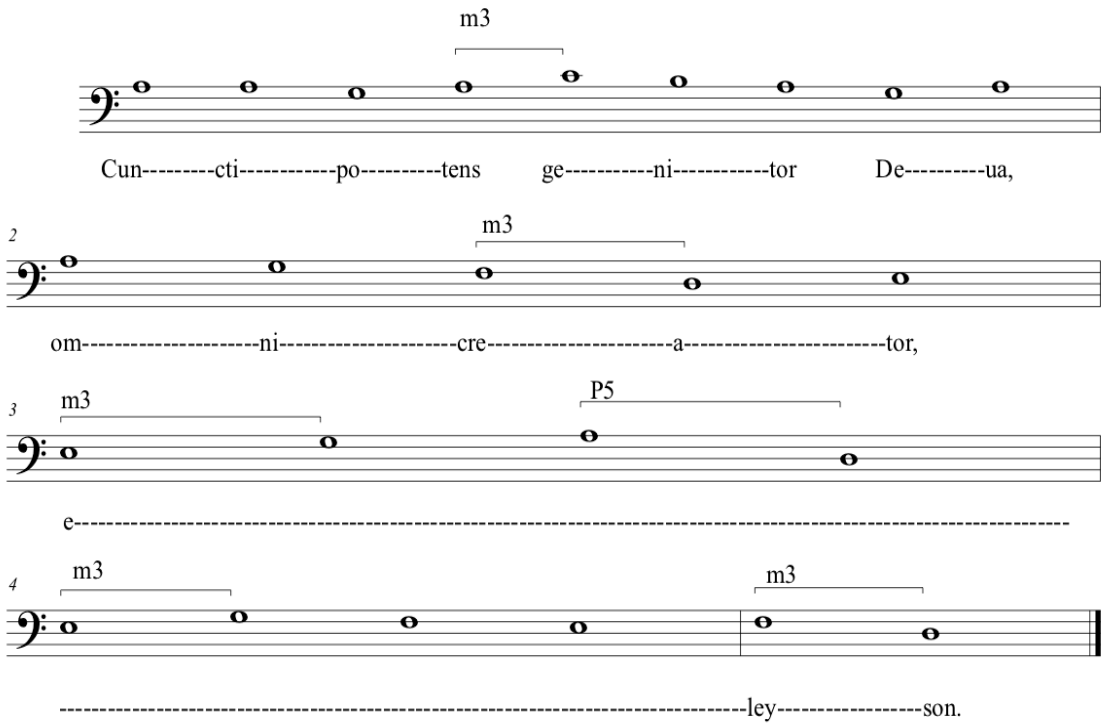
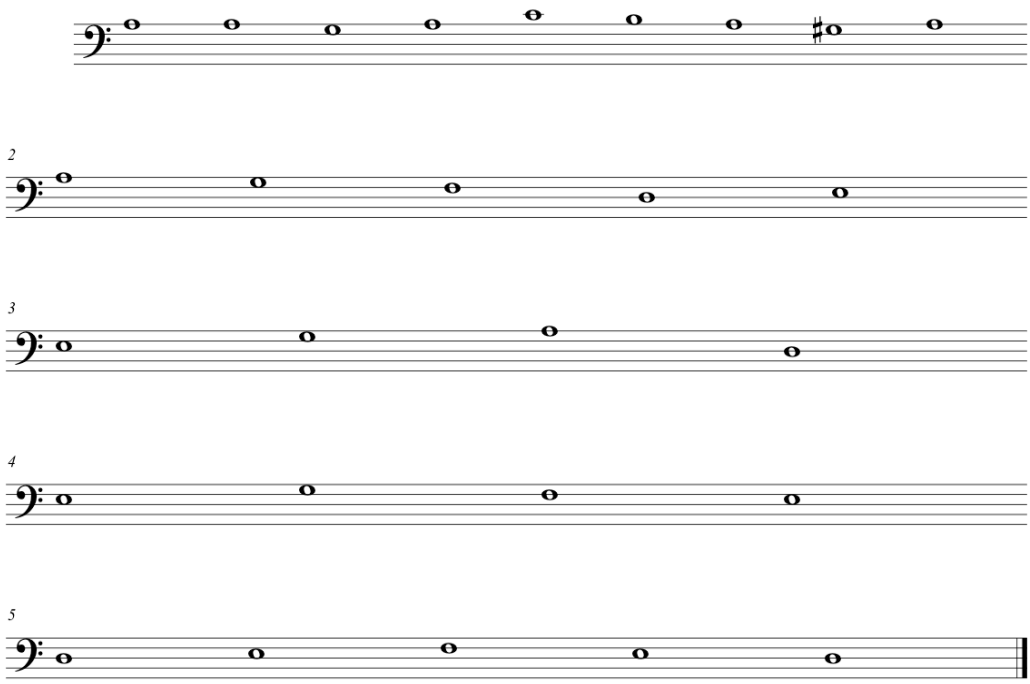
[363] Adriano Banchieri, *Cartella musicale* (1614) in Gregory Barnett, "Tonal Organization in Seventh-Century Music Theory," in *The Cambridge History of Western Music Theory*, ed. Thomas Christensen (Cambridge: Cambridge University Press, 2002), 422.

Example 95. Texted *Kyrie* (1) of *Cunctipotens genitor Deus* with Intervals.



supertonic chord (minor ii), used in mm. 14 and 24, and the third and fifth of a C major chord, used in mm. 11 and 19-20. These C major chords, unusual in D minor, are part of applied dominants of the F major chords mentioned previously. Finally, the perfect fifth of D to A from the original chant forms the outside notes of the D-minor triad, and it also signals the dominant to tonic cadences, present in mm. 7, 9, 22-3, and 26. But this perfect fifth also leads to a circle of fifths motion: G in m. 18, C in m. 19-20. These C major chords, unusual in D minor, are part of applied dominants of the F major chords mentioned previously. Finally, the perfect fifth of D to A from the original chant forms the outside notes of the D-minor triad, and it also signals the dominant to tonic cadences, present in mm. 7, 9, 22-3, and 26. But this perfect fifth also leads to a circle of fifths

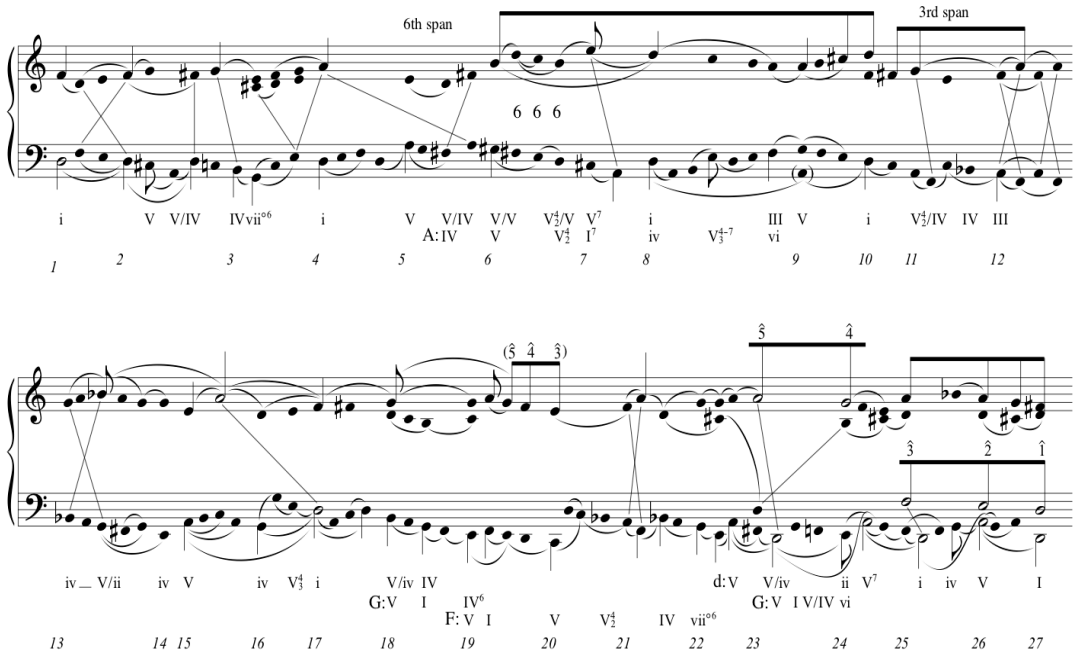
Example 96. Couperin's Melody in *Kyrie* (1) of the *Mass for the Parishes*.



motion: G in m. 18, C in m. 19-20, F in m. 21, B-flat in m. 21, E, with a B-flat, a diminished fifth, in m. 22; A in m. 22, bringing the music back to D in m. 23.

The Schenkerian graph focuses on these tonal elements. The final cadence is definitely subdominant-dominant-tonic, a tonal cadence often heard in music. Contrapuntal elements are the use of the soprano and bass lines moving in opposite directions, in the voice exchanges in mm. 1 and 13, and also in m. 9, the parallel major- and minor sixths moving in the same direction in m. 6, and by major- and minor-tenths in mm. 18, and 19. But there are still modal residues. The C2 is the lowest note of the piece in m. 20. It forms a C-major chord, which is unusual in tonal music in either D

Example 97. Schenkerian Graph of Couperin's *Kyrie* (1) from the *Mass for the Parishes.*

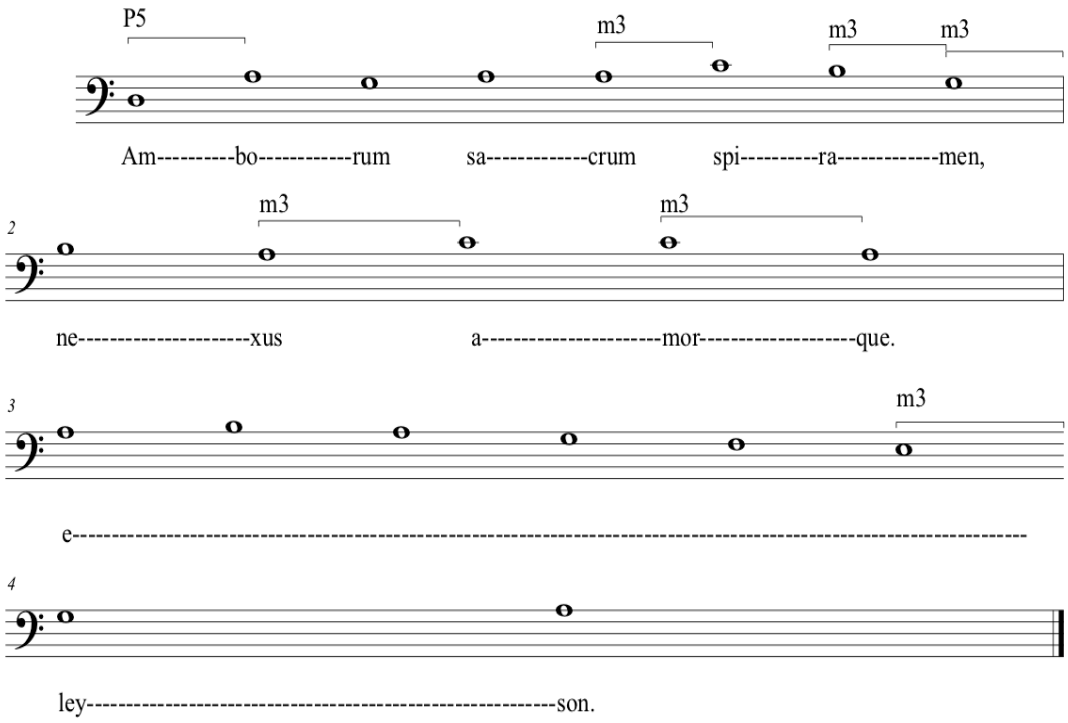


minor or major, but present in D Dorian. And the insistence on G harmonies is reminiscent of the first transposition location of the D Dorian chant in music history. In this one verset, Couperin combines elements from the modality of his past—the placement of the chant in the tenor voice confirms this, similar to Renaissance motets; and elements from his present in tonality—confirmed by the cadence in D major.

The fifth *Kyrie* movement is similar, but there are some difference. Example 98 is of the texted chant. This chant segment has three minor thirds and one perfect fifth. The A to C minor thirds (of which there are three) definitely signal the importance of the note A. This looks forward to the final cadence on A. Example 99 is Couperin's melody for this *Kyrie.*

Besides altering the rhythm, Couperin has added notes to fill in the minor-third intervals, and he adds an upward motion to C4 in the third line, which may be a feature of

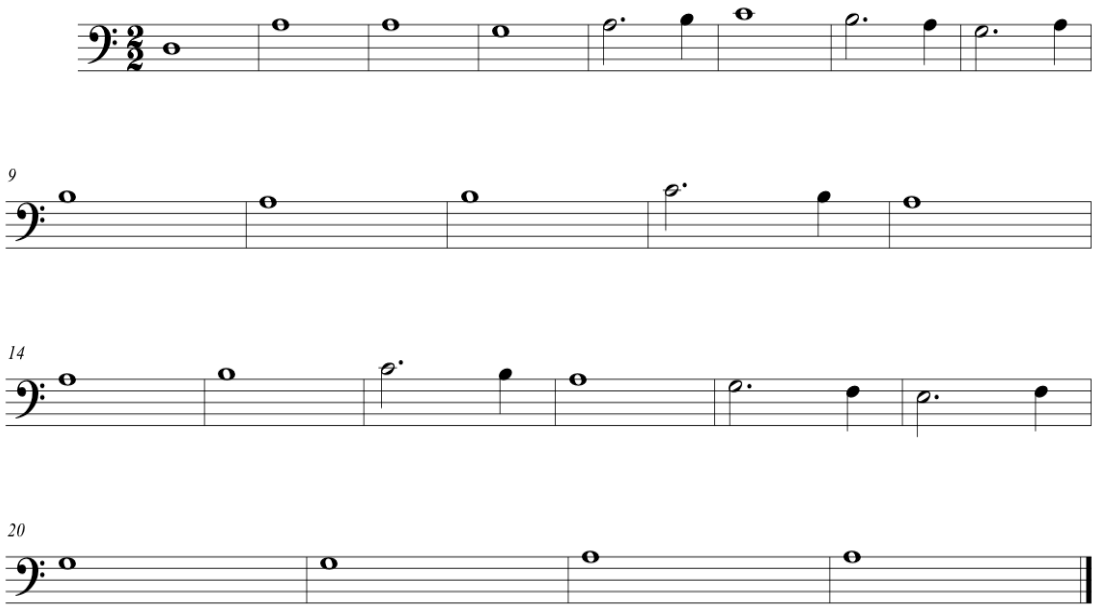
Example 98. Texted *Kyrie (5)* of *Cunctipotens genitor Deus* with Intervals.



the version of the plainchant used in Paris at this time. Example 100, the Schenkerian graph, shows the importance of the note A3, for it ends the movement in the bass. The D, tonic of D major and minor, appears at the beginning of the movement but does not appear again in the bass.

Some of the characteristics from the first movement are repeated in this *Kyrie*, including a voice exchange in m. 1, the upward-ascending soprano line, this time to A5, but only from D5, contrapuntal lines in mm. 1-4, and the note G, seen in the soprano and bass in mm. 15-18 (the bass has inversions until m. 18). These features, many of them the same as in the first *Kyrie,* exist even with the change of the *cantus firmus* from the tenor

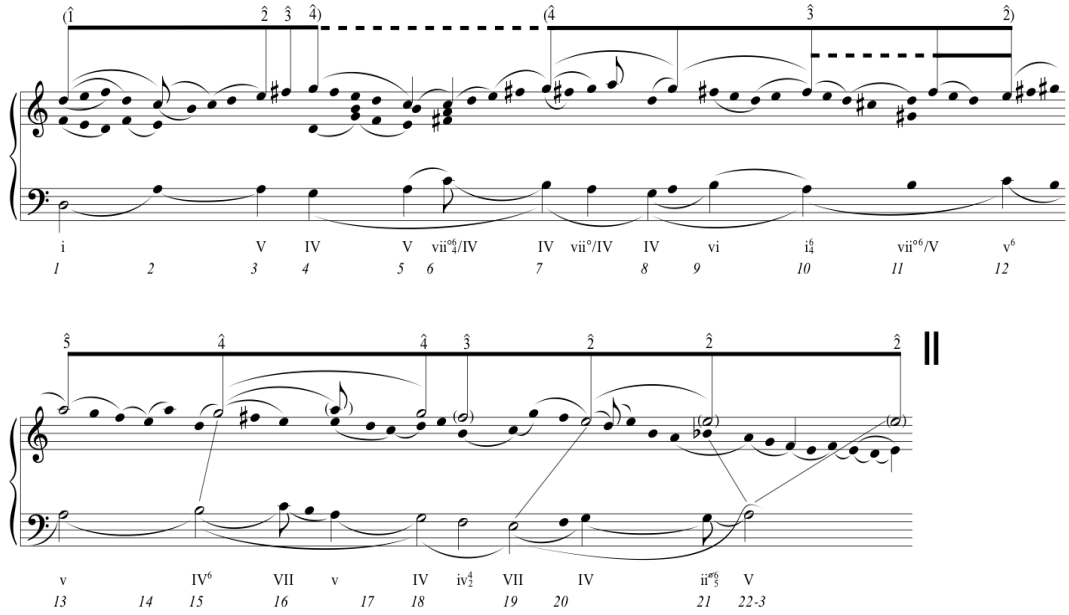
Example. 99. Couperin's Melody in *Kyrie* (5) of the *Mass for the Parishes.*



to the bass voice. The note F# is present in the early part of this *Kyrie*, moving to the note G, in the soprano in mm. 3 and 7. The half-cadence on A3 is foreshadowed by the small portion of the A-major scale in the soprano in m. 12 which leads to a strong A in both lines in m. 13. A strong parallel motion occurs in mm. 18-19, perhaps written to approach the unusual cadence of an E diminished chord in m. 21 to the dominant at the end of the piece, making a Phrygian half-cadential move of the B-flat and G (in inversion) to the octave A interval in m. 22. Therefore, this movement contains modal characteristics as well as tonal. Its ending on a half-cadence is, of course, a feature it shares with the Bach chorale prelude examined earlier.

In most tonal pieces, a half-cadence is not present at the end of the work, but rather the music returns to tonic. If it does not, then it often signals a motion to tonic in

Example 100. Schenkerian Graph of Couperin's *Kyrie* (5) from the *Mass for the Parishes.*



the beginning of the next piece or movement. However, in Couperin's mass, the following *Gloria* movement begins with the initial notes C, D, F, with F as a short recitation tone in the intonation, and E as the final. The first *Gloria* verset does have a fugal texture in three voices, the entries emphasize the notes and chords of G and D, with a small cadence upon the third entry with the dyad C# and A leading to a D major chord, but the piece's first authentic cadence, in m. 13, is in G major. The piece ends on an E-major chord, so Couperin writes hints of D major or minor, but quickly leaves them for other harmonies. The half cadence at the end of the *Kyrie* is not provided with a satisfactory resolution with all these various notes and chords in the *Gloria*, or anywhere else. In this way, Couperin's second *Kyrie* is surprisingly similar to the Bach chorale prelude studied in Chapter 2.

This short section on two *Kyrie* movements from Couperin have illustrated his use of *cantus firmus* technique, first in the tenor line, and then in the bass. He has taken the

elements of the chant and included many of them in his music in a continuous fabric of modal and tonal chords, vertical and horizontal outgrowths of the chant. The other movements of the *Kyrie* are not tied as closely to the borrowed material as these, so these are the best examples of a precise and clear *cantus firmus* technique. In general, we can understand Couperin's approaches to his borrowed melody as similar in many ways to those used by Bach in the chorale prelude studied in Chapter 2 of this dissertation, but within a more archaic harmonic language balanced more precariously between modality and tonality.

CHAPTER VI

CONCLUSION

Organ music has been studied little. It does, however, contain much material for discussion. In this dissertation, I have researched and analyzed six works by composers of several countries to show that borrowed material in each has been reworked into new compositions in an impressive variety of ways. In every case, the new compositions reflect the values, the historical context, the styles, and the unique voice of each composer. It is commonly known that Bach's music does not sound like Ives' or Cage's, or that of any other composer in this study, and all these composers have written music that is unique stylistically. Yet, in their own unique ways, they have all looked to the past and brought forward material to use in the compositions of their new pieces.

I quoted J. Peter Burkholder in the Introduction, with respect to his categories of musical borrowing. Adding to his thoughts, my conclusion will consider how the pieces I've studied illustrate his categories, going beyond his concise statements to elaborate some of the details:

1. "The significance of the borrowed material depends in part on who or what it is borrowed from." *In the works of my study, all the pieces were borrowed from earlier music, including chorale melodies, plainchants, and four-part harmony. Only one composition has a possible relationship to an earlier work by the same composer: J. S. Bach had written a cantata using the same melody as his chorale prelude, Aus tiefer Not, many years earlier.*

All of the pieces in this study are based on religious and historical models. The Ives and Cage pieces transform the borrowed material from the religious, historic background into works that represent their growth as composers; Ives will eventually develop the idea of cumulative form, and Cage takes the music into new areas tonally. The other pieces by Couperin, Alain, and Brahms use the borrowed religious music either to accompany another religious service, or evoke the memory of one.

2. "Listeners respond differently to pieces that borrow the full texture of a piece, or a melody, texture, or instrumental color". *In my study, only the four-part texture of Supply Belcher's work was borrowed by John Cage as a full texture. However, it was reworked with subtracted notes and voice parts. The listener's response to the Cagean version is consistent with the composer's ideals of emphasizing the individuality of the notes and sounds helped by organ registration, prescribed by Cage as numbers, but the performer must decide the application of each number to a sound. The result, though, is a piece that sounds random, but is not quite.*
3. "The process of composition is vastly different if a borrowed tune forms the basis of a new interpolated music*." In Brahms' Es ist ein Ros' entsprungen, the melody is ornamented with new harmonies supporting it. The ornamented melody is one method of changing borrowed material. Building contrapuntal structures above an existing plainchant is another. François Couperin wrote the unornamented Dernier Kyrie, the second Kyrie discussed in this dissertation, above a bass line taken from an existing chant. It is much more plain than Brahms', allowing the upper voices freedom of motivic development and chordal structures.*

4. "The recognizability, character and effect of the borrowed material varies according to how it is adapted." *Alain's Postlude pour l'office de complies adapts several plainchants by writing fragments onto a chordal landscape that is already sounding before the chant enters. The chants then grow into something larger in the last section of the piece, and change the tonality of the work. But, even surrounded by other notes, the effect of the new work is the same as the original chant. It is quiet, introspective, meditative. Cage's piece, though, differs from the original four-voice material. His work can be bombastic, or quiet, or high- and low-pitched at a sudden change, depending on the organ registration chosen by the performer. This is quite different from the early-American hymnody of the 18th-century.*

5. "The relative importance of a borrowed element corresponds to whether it has a structural role or a passing gesture." *The plainchant in Couperin's first Kyrie, en Taille, is structural. It is necessary, all the music has been built from surrounding it with triads. Ives' Adeste Fidelis is also structural, as the melody inverts itself singly and in combination with the original tune. However, the beginning of the Alain Postlude adds the chant to the existing ostinato structure. It is not "passing," for it is constantly present once entered into the fabric, but the accompanying voices could be a musical composition alone. Brahms is structural, as his chorale prelude is a melody chorale. Bach's borrowed material is also structural, it is made into a chorale motet.*

6. "Extra-musical associations vary greatly." *As stated in the Introduction, most of the music in my study is religious, and if not, then based on religious models. But*

Ives' Adeste Fidelis is more than a Christmas song. Because Ives wrote the tune into Decoration Day, it is also a "construction of memory on several different levels."[364] *Ives said in the Postface to the score that Decoration Day recalls the march to Wooster Cemetery, it "is a thing a boy never forgets. The role of muffled drums and Adeste Fidelis answer for the dirge."*[365] *Ives not only recalls the dirge, but his father (and he, eventually) was buried in this cemetery and the earlier, organ version of Adeste Fidelis, was written with George Ives' encouragement. As an elder Charles Ives, he probably also remembered the march to the cemetery for his father's funeral, or other funerals where he played in the band.*[366]

Burkholder further explained his characteristics of borrowing points as proofs that borrowing has occurred. That is not a question in all of the works in my study. Clearly, each new piece is built on the old. However, Burkholder's point five tells us that proof of borrowing is incomplete until a purpose can be demonstrated. This point might be similar to asking a question about the reason that composers borrow material from others. In the *Grove Music Online* article on "Borrowing," Burkholder said of nineteenth-century music, that composers emulated works in the same genre in order to learn from their predecessors, as an act of homage, or out of rivalry.[367] Composers also have adopted

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[364] Stuart Feder, *Charles Ives: 'My Father's Song,' A Psychoanalytic Biography* (New Haven: Yale University Press, 1992), 238.

[365] Feder, 239.

[366] Feder, 239.

models from earlier generations in order to forge a connection with the past. References to other music may create meanings, as when a person may remember a text when hearing an instrumental melody.[368] I believe these reasons for using pre-existing material in later compositions are true for all eras and across genres of music history. Certainly, today's jazz artists add extended harmonies to existing melodies, and some digital compositions sample older sounds. In my study, Bach knew the music of his ancestors and used variations of earlier music in his own job in the worship service. Brahms may have wanted a connection with past composers by using older chorale prelude techniques. Couperin is somewhat like Bach in needing working music for his church position. Alain's music creates meanings by invoking the spirit, and possibly known words, of chant melodies. However, Ives and Cage are different. They may have been part of writing music, not quite "out of rivalry," but to take the music in new directions and clear a creative space for themselves. Ives was experimenting with sounds not often heard in worship services, therefore, perhaps he was being somewhat rebellious to the old *status quo*, and Cage was demolishing his model and leaving behind a few essential notes in order to emphasize the uniqueness of each sound. It would seem that Cage's music in particular might fulfill Harold Bloom's theory of "the anxiety of influence," (applied to

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[367] J. Peter Burkholder, "Borrowing," *Grove Music Online, Oxford Music Online* at http://www.oxfordmusiconline.com.libproxy.uoregon.edu/grovemusic/view/10.1093/gmo/9781561592630.001.0001/omo-9781561592630-e-0000052918?rskey=aqlzUL&result=1 (accessed 03/18/2018).

[368] Feder, 239.

twentieth-century music by Joseph Straus),[369] which describes creation as an oedipal struggle against the impact of an artistic forefather, creating space for the art of each composer. Cage's music does destroy his predecessor's, leaving room for Cage's own individual expression. But another category discussed by Straus in *Remaking the Past* is that of the anxiety of style.[370] By subtracting notes from Belcher, Cage not only rebels against one composer, but against all common-practice harmony and progressions. This rebellion fulfills Straus' explanation of this influence when he says that when twentieth-century composers use triads, the central sonority of traditional tonal music, they are responding to a widely shared musical element, not to some specific work or individual composer."[371] Therefore, I believe that Cage, by his destruction of functional tonality, is exhibiting both the anxieties of influence and style.

However, there is another theory which may apply to other composers in this study, it is called generosity theory.[372] This influence values tradition and assimilates it, creating *within* a tradition, "and their work—including the most individual works of their maturity—reflect the shaping impact of that tradition."[373] Straus quotes T. S. Eliot that "poets pass their work along as part of a shared tradition. Later poets generously receive

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[369] Written with discussion of music by Joseph N. Straus in Chapter 1 of *Remaking the Past: Musical Modernism and the Influence of the Tonal Tradition* (Cambridge, MA: Harvard University Press, 2014), 1-20.

[370] Straus, 18.

[371] Straus, 18.

[372] Straus, 10.

[373] Straus, 10.

the tradition into their own work, and its presence is beneficial to them."[374] This is obviously true of all the composers in my study in some way, since we are talking about music with borrowings, but particularly so of Bach and Couperin. The borrowed material was beneficial to them. Straus continues, however, that composers select the features of the music from the past upon which they write their new works, and only these features are influences from the past.[375] Thus, Bach selected the *stile antico* chorale motet upon which to base his new work and Couperin selected ancient plainchants. However, Bach did more. He received the ancient style, but changed the ancient modality to modern tonality. Of course, the borrowed material was beneficial, but Bach changed it, thereby asserting himself in his music and reworking a style from the past. Was there anxiety of style? It is difficult to speculate, but the result of Bach's reworking is quite a change—from modality to tonality—and makes plain Bach's push of his music into a new realm.

These theories of generosity, style, and influence seem to overlap at times, and one or another can prevail in each composer's music. Bach and Couperin reused material received from their past traditions not only to meet the demands of their jobs, but changed it in small ways to match the characteristics of tonality in the mid-eighteenth and late seventeenth centuries. They did not destroy the music of the past in order to make their compositions become part of tradition; yet, they added to the traditions to make their own pieces. Peter Williams, mentioned in the Introduction, did not think Bach exhibited an anxiety of influence, for he studied and revered the works of previous composers.[376]

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[374] Straus, 11.

[375] Straus, 11.

[376] Williams, "Anxiety," 140.

However, Williams says that Bach had to "misread" Vivaldi's concertos, Op. 3, when he transcribes them for organ and "feels obliged to fill in the rhetorical gaps or add contrapuntal detail."[377] Williams continues that Bach "swerves" away from the earlier pieces even further in his own concertos, where he writes ritornelli with thoroughbass that results in a "genre obviously different from Vivaldi's."[378] And Williams says about Bach:

> One can imagine that in such swerving away from precedent, going along with it to a certain point but then developing it out of sight, such a composer would be self-driving, single-minded, ambitious, imaginative—in a word. anxious—to go beyond his predecessors as fully as he could.[379]

So, which is it? Did Bach exhibit influence of anxiety? Williams seems to say that Bach was not anxious in the sense of being disturbed or worried, but he was enthusiastic and energetic to show what could be done,[380] and, as he said above, ambitious, imaginative—to go beyond his predecessors.[381] As I have said above, he did more than just inherit tradition. The theories of generosity and influence certainly seem to combine in his work. Brahms and Alain did not need to present their music in worship services as Bach and Couperin did, but they also connected with their past religious heritages and made a place for themselves in it. Alain, especially, created a new context

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[377] Williams, Anxiety, 141.

[378] Williams, Anxiety, 141.

[379] William, Anxiety, 141.

[380] Williams, Anxiety, 140.

[381] After this, Williams continues discussing the theory of anxiety in reference to Clavierübung I.

for his plainchant quotations that enabled him to express his own individual voice. Brahms, even with his knowledge of Bach's *Orgelbüchlein*, did not just write in its style, but made the chorale prelude form his own. These composers inherited generous traditions, but changed their music to reflect their individualistic and newer styles. They did not just accept the inherited tradition, they worked to change that tradition into their own. Brahms definitely received the borrowed material in a generous way, whether he felt the need to go beyond his heritage, or to only be a part of it. He did change the chorale prelude in my study into an atmospheric work that makes the original melody hard to find. Alain did also, although he pushed his music further, leaving the traditional tonality of earlier times by writing seventh chords that glide over the keyboard. It is unknown if he had an anxiety of style, but the music certainly pushes against the older chordal styles of tonality.

And the Americans, rebelling from European or others' influence as we always have, made a place for themselves in a quite obvious and direct way. Cage did destroy the tonality of Supply Belcher, so his music is definitely in the category of the theory of anxiety of style. But Ives? Ives may be more in the middle of all these theories, a generous recipient of both the tradition of his time, and of the experimentalism of his father, although he took this experimentation and pushed against the tradition of tonal chords in a Christmas carol and created such a new polychordal sound as to displease many listeners. He exhibits, then, an anxiety against the style of the straight-forward carol, but he also pushes against a specific carol, the *Adeste Fidelis*. Straus says that the

anxiety of influence is about a relationship between a piece and an earlier piece.[382] It seems this definition can apply to the Ives piece in this dissertation.

All these composers used particular techniques to both incorporate their traditions and to push and pull away from them. Straus has included a list of the ways that composers may use material differently than the compositions or composers they use as models. One of the methods he cites that composers use to distance themselves from earlier music is one of "marginalization," [383] which is when musical elements central to the earlier work are relegated to the periphery of the new work. In the works of Bach, Alain, Brahms, and Couperin in my study, the borrowed music is changed to present new techniques in new settings. For instance, Bach and Couperin often ignore the modal and tonal cadences at the ends of the models' phrases in order to continue the textures of the pieces. Brahms relegates the four-part chorale writing to the sidelines so his melody can dominate the texture, and Alain mixes together chants so it is sometimes difficult to see where one begins and another ends. What was important in the original material seems not to be as important to each composer as its new setting. In the same list supplied by Straus is the mention of "neutralization," when traditional elements are stripped of their customary function, of their tonal progressional impulse.[384] Certainly, both Ives and Cage exhibit this technique. Ives strips the Christmas carol of its function by writing it in counterpoint with its own inversion. Cage eliminates so many notes that his music just obliterates Belcher's harmonic functions.

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[382] Straus, 18.

[383] Straus, 17.

[384] Straus, 17.

All of this has been thoroughly discussed in the individual chapters on each composer. The source in every case was research into each composer's organ works, as well as the use of modern music theory techniques, such as Schenkerian and pitch-class set analysis, which were invented or modified after the composition of most of the pieces in my study. That this study has concentrated on organ music does not suggest that organ music alone is amenable to such analysis, however, I believe, all music benefits from modern theoretical techniques. Eventually, I would like to expand my repertoire, to look at borrowed music from the earliest times to the music of the twenty-first century, and I encourage others to do so too. I also hope to return to the pieces in this dissertation and continue to explore them—particularly the pieces by Ives and Cage. Ives' seventh chords could be further illuminated through Neo-Riemannian analysis. Cage's "yes" or "no" method could be assessed by the analysis of other pieces using this technique.

The main consideration of this dissertation has been to explore the uses that each composer has made of his received world of tonality (or pre-tonality), made through changing the borrowed materials into pieces reflecting the composers' own times and ideas. Bach received modal centricity, but changed a modal chorale into his own, more modern, world of tonality. Couperin, earlier than Bach, retained more of modality, with his variable qualities of primary chords, but was beginning to push into a tonal realm. Brahms, probably the most conservative composer of this study, added non-harmonic tones to his borrowed material, engaging a bit of chromaticism in his melody. Alain used various seventh chords to accompany ages-old plainchants to move into a non-functional tonal world, however, his piece ends on a major triad. Ives ventured forth into

polychords and unusual dissonances. And Cage just wanted to get away from tonality altogether, though his subtractive texture still ends up reinforcing it at times.

This dissertation has focused on organ music, a genre not often written about, to augment and illustrate Burkholder's work on musical borrowing, giving specific details about a few pieces, and to take several steps beyond it by exploring various perspectives on tonality as the chief means to understand how musical borrowing changed over time, as composers transitioned from reinforcing the tonal context to pushing back against it. Organ music is a genre that needs more exploration, as the borrowed material is often in the foreground of the music. Many pieces have been written with chant or hymn melodies prominent in pedal or melody lines. These pieces are often ubiquitous in worship services, and they deserve further theoretical analysis. This dissertation has explored a few pieces from various eras that use borrowed material and ends with the music of the twentieth century--what happens in the twenty-first century remains to be seen.

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