

G: Offprints of Novack's articles

SAUL NOVACK

*Tonal Tendencies in Josquin's
Use of Harmony*

London

OXFORD UNIVERSITY PRESS

1977

Reprinted from

Josquin des Prez

Proceedings of the International Josquin Festival-Conference

Tonal Tendencies in Josquin's Use of Harmony

SAUL NOVACK

The leading-note as a means of intensifying directed tonal motion had fully emerged by the beginning of the Renaissance. The fifteenth century witnessed its enhancement and reinforcement through the fifth relationship, i.e., the dominant-tonic phenomenon. Josquin's use and expansion of this harmonic relationship constitutes an artistic achievement of the highest order. The brief exposition that follows, based on Josquin's sacred music, can only illuminate some of the highlights.

While the problem of the relationship between mode and tonality cannot be considered at this point, even though it is central to the study of harmonic usage, it is significant that Josquin's music already begins to show assimilation of the old modes to modern major and minor. He uses the Ionian mode on both C and F,¹ as well as the related Mixolydian mode, modified through *musica ficta*. There are a number of compositions in Aeolian and many in Dorian on both D and G, modified through both stipulated and unstipulated accidentals to resemble the Aeolian mode. In all of these modes the leading-note punctuates tonal continuity. It is part of the mode in Ionian and is often present through *musica ficta* in the other modes. Only the Phrygian mode remains unaffected. In this mode, which cannot have a dominant on its fifth degree because of the diminished fifth, Josquin relies upon other means to provide tonal continuity. Settings in E Phrygian frequently have extended sections in C and A; sections in C take on the features of C Ionian, and the sections in A, A Aeolian, with frequent use of the appropriate leading-notes.

¹ [Throughout the fifteenth and sixteenth centuries composers set whole Masses, but also motets and other smaller liturgical as well as secular genres, in F with a key signature of one flat in all voices. Theorists called it Lydian, but it was, as Glareanus (*Dodekachordon*, p. 115) rightly insisted, transposed Ionian. This use of Ionian transposed to F was encouraged by such examples of Gregorian chant as the *Kyrie* from the 'Missa VIII (De Angelis)' (L.U., p. 37), in which every B is flattened. And if this example be dismissed, because its origin lies in the fifteenth-sixteenth centuries, as the editors of the *Liber* indicate, then its *Sanctus*, ascribed to the '(XI) XII c.' (L.U., p. 38), or the *Sanctus* and *Agnus Dei* from the 'Missa IX (Cum júbilo)' ascribed to the fourteenth century and '(X) XIII c.', respectively, may serve instead; each of these melodies has many Bs, each one invariably flattened.—Ed.]

While the dominant-tonic relationship was already well established during the fifteenth century, its abundant use by Josquin is neither confined to its position in strategically located cadences nor to the simple V-I progression, which frequently appears in non-cadential situations without the leading-note; it still exercises the force of the relationship of the fifth, but lacks the intensity that the leading-note provides. The V-I progression can dominate the entire setting of a composition.²

Various expansions of the V-I progression occur in Josquin's music:

I-II-V-I³

I-IV-V-I⁴

I-III-V-I

The last progression assumes great importance in Baroque and Classic forms, representing the motion from the minor tonic to the so-called 'relative major', with eventual return, through the dominant, to the tonic. In Josquin's music there are frequent examples in Dorian and Aeolian settings. The Dorian mode, with its modification of *both* the sixth and seventh degrees, comes closest to the later typical character of the minor mode.⁵ A good example of an extended harmonic structure of I-III-V-I is found in 'Vultum tuum deprecabuntur'.⁶ At the outset of Part VI, the tonic, G minor, is clearly established. At measure 431 a long extension in B \flat major begins (Ex. 1).⁷ This is the III chord of G Dorian, and, as shown in the graph,

² See, for example, 'O Virgo virginum' (Motetten, Bundel xxiii, no. 83), in G Dorian. Many other examples may be found in Josquin's works.

³ See 'Descendi in ortum meum' (Supplement, no. 6), where the II chord is prolonged harmonically before moving to V (mm. 61-7).

⁴ For example, measures 187-8 and 190-91 in 'Pater noster' (Motetten, Bundel xii, no. 50), in G Dorian. An E \flat is called for in the IV chord, producing a minor IV, characteristic in the minor mode. This is a good example of the assimilation of the Dorian mode to minor.

⁵ E.g., Ex. 1, in G Dorian, illustrates the presence of E \flat (stipulated, and through *musica ficta*), E \natural , F, and F \sharp (through *musica ficta*). In Aeolian compositions the seventh degree is, of course, frequently raised; but the sixth degree, which in the minor mode appears in both forms, is rarely altered.

⁶ Motetten, Bundel iv, no. 24.

⁷ A brief explanation of the symbols used in the linear analyses in this paper follows: N = neighbouring note; P = passing note; R = neighbouring chord (complete or incomplete), supporting a passing note in the uppermost voice; + = major; - = minor. Arabic numbers have the same significance as in figured bass. The slur () denotes contexts and their subdivisions; the dotted slur (·····) and the dotted beam (·····) indicate the return to or retention of a pitch whose structural significance remains the same; the curved arrow (↷) denotes a leading-note chord which resolves to the chord to which the arrow is directed; the straight arrow (→) shows directed motion from and to chords of structural significance. The beam (—) indicates the structural connection between notes of different pitches; the bracket ([]) is used to indicate the dominance of a single chord, extended through harmonic progressions and/or contrapuntal motions shown above and within the bracket. Notes do not have durational value; unstemmed

Ex. 1 mm. 430-49

black notes are most 'immediate' in their context, stemmed quarter-notes are 'intermediate' in context and subordinate to the half-note, the most 'remote' and primary symbol. These symbols and terms, derived from the graphing techniques of Heinrich Schenker, are explained in detail in *The Music Forum*, i, ed. William J. Mitchell and Felix Salzer (New York, 1967), pp. 260-8.

it is prolonged with its own harmonic progression of IV (m. 439) moving through II with a passing seventh (m. 441) to V (mm. 442-3), to I (mm. 444-6). E \flat is consistently used within the prolongation of B \flat , which acts in effect as the relative major. The tonic, G, is regained at measure 449 through a II \flat -V-I cadence. The shape of the superius, with the same melodic pattern heard once in the dominant and twice in the tonic of B \flat (mm. 442-7), is significant. The first statement of the motive (mm. 442-3) in the dominant

of III is balanced by the succeeding statement in the tonic of III, and the reiteration of this last statement builds a climax moving towards the final cadence in the central key, G Dorian-Aeolian. The structural importance of B \flat in the upper voice is revealed in the movement away from it and toward it. This note is not abandoned until the definitive downward motion to the final cadence of the passage.

A further harmonic extension is the termination of a section or composition by the use of successive fifth relationships in the progression I-VI-II-V-I, with its bass moving down a perfect fifth between VI and II, possible only in Ionian and Mixolydian, in the latter with a leading-note in the cadence.

Harmonic progressions are also intensified by the sophisticated use of applied dominants, not only to V but also to other chords.⁸

The motion V-VI as a deceptive cadence is used as a means of extending the V and delaying the resolution to the tonic, particularly at the end of compositions.⁹ It may also serve to set off a circuitous path taken in the resolution of the V to the final I, particularly against the final sustained note in the upper voice.¹⁰ The achievement of the tonic releases the tension and enhances the finality of the tonal goal.

There are numerous examples of I moving to IV and returning to I underneath the final sustained tonic, the IV chord acting as a consonant contrapuntal chord against the sustained note. The so-called 'plagal' IV extends the I, serving a coda-like function. If the V-I progression with leading-note intensifies the motion toward the tonic, the IV-I progression at the end serves to sustain and confirm it.

The logical extension of the V-I relationship into motion through the circle of fifths is also found in Josquin's music. Although Josquin is by no

⁸ Examples of applied dominants are:

a) to the V chord: 'Benedicite omnia opera Domini Domino' (Motetten, Bundel xiii, no. 53), in F Ionian. This motet contains a number of such examples, e.g. measures 34-5, as well as prolongations of I-V-I in the dominant (mm. 181-7). (For a harmonic analysis of this motet, see Edward E. Lowinsky, *Tonality and Atonality in Sixteenth-Century Music* (Berkeley and Los Angeles, 1962), pp. 20-25).

b) to the III chord: 'Domine, non secundum peccata nostra' (Motetten, Bundel ii, no. 13), measures 213-4, in G Dorian.

c) to the VII chord: *ibid.*, measures 190-92. This applied dominant is possible without *musica ficta* in the Dorian and Mixolydian modes.

⁹ An example of movement from V to VI instead of to I is in the concluding section of 'Descendi in ortum meum' (Supplement, no. 6), in which the final V-I is achieved tellingly with fermata.

¹⁰ In 'Paratum cor meum, Deus' (Motetten, Bundel xvii, no. 67), at measures 322-5, V moves to VI, then to IV (preceded by I \flat) as a further delay before resolving to I. These chords are essentially contrapuntal in function, serving as consonant supports of the sustained note above. The VI or the IV, as *harmonic* functions, would operate as such only within the harmonic progressions, such as I-VI-V-I or I-IV-V-I.

Ex. 5 mm. 1-24 (superius and alto)

tonic (F Ionian) in measures 109-110 is succeeded by II-V (without leading-note) -I of G minor, which is the II chord of F Ionian, and is attained at measure 111. The circle of fifths begins with the B \flat , the III chord in the G prolongation, includes the augmented fourth between E \flat and A—the direct leap avoided by passing notes—and is extended to the B \flat chord in measure 113. The modernity of this example is obvious; it is a convincing and dynamic part of the total harmonic structure in the conclusion of this section of the *Credo*.

The juxtaposition of old and new in the application of harmonic relationships to the *cantus firmus* is a fascinating subject for study. Josquin reveals in his works a whole new view of the *cantus firmus* in its relationship to tonality. The shape and form of the chant melody is exceedingly important. In some motets the Gregorian melody appears in fragments, each of which is treated with harmonic clarity.²³ Josquin's ability to preserve the character of the chant melody while adapting the harmonic treatment to tonality may be shown in a number of cases, among them the two-part opening of 'Mittit ad Virginem',²⁴ a setting of a so-called 'variation-chain' sequence²⁴ (Ex. 5). The stanza consists of five lines whose corresponding musical units suggest harmonization in tonic and dominant. Josquin's setting of the Ionian melody reveals his feeling for tonal form; he organizes the five musical units as follows:

- 1: tonic
- 2: tonic
- 3: tonic
- 4: dominant
- 5: dominant-tonic (C Ionian)

The penultimate position of the V and its ultimate resolution is most significant. The six-part 'Praeter rerum seriem',²⁵ one of the most famous motets of Josquin, is marked by considerable division of the chant melody (in G Dorian) into harmonically supported units. 'Planxit autem David',²⁶ in F Ionian, offers another example of division of text, here separated by rests. The lamentation tone is freely reiterated, sometimes in *cantus firmus* style. Each complete unit of text is prolonged within the tonic. These prolongations appear in various harmonic progressions. Intermediate points are frequently marked by strong cadential figures.

²³ For example, the setting of the *cantus firmus* in 'O Virgo virginum' (Motetten, Bundel xxiii, no. 83), in G Dorian. The small range of the melody, as in the first phrase, G-B \flat -A-B \flat -G-A-G, leads to strong prolongations of the G tonality and consistent use of the V against the passing and neighbouring notes.

²⁴ Motetten, Bundel i, no. 3.

²⁵ On the variation-chain concept, see Oliver Strunk, 'Some Motet-Types of the 16th Century', *Papers Read at the International Congress of Musicology, 1939* (New York, 1944), pp. 155-60.

²⁶ Motetten, Bundel vii, no. 33.

²⁷ Motetten, Bundel iii, no. 20.

The *cantus firmus* melodies have each a specific modal character. But Josquin feels free to acknowledge or ignore the modal identity of a melody; occasionally his polyphonic settings will contradict the nature of the mode, the polyphony absorbing the melody within a different tonal centre. Other times he will transpose a melody from one mode to another. The 'Missa L'homme armé super voces musicales' is a prime example. In the case of the Phrygian mode, which has no dominant chord, and therefore no

Ex. 6 mm. 50-58

Ex. 6 mm. 50-58

(Chri-) - ste Do - mi - ne De - us, A - gnus De - us.

Do - mi - ne De - us, Do - mi - ne De - us, A - gnus De - us.

Chri - ste, Fi -

Do - mi - ne De - us, Do - mi - ne De - us, A - gnus De - us.

10

I

55

- i, Fi - li - us Pa - tris, Pa - tris.

- gnus De - i, Fi - li - us Pa - tris.

- li - us Pa - tris.

- i Fi - li - us Pa - tris.

10

VV I

harmonic motion to its own central note or finalis, Josquin sometimes contradicts the mode of the *cantus firmus* in the polyphonic setting. In the 'Missa Pange lingua', the beginning of the Phrygian hymn melody is realized polyphonically in clear-cut C Ionian, with V-I movements in the setting of the text, 'Et incarnatus est'.²⁷

Parallel motion between the outer voices, a favourite device of Josquin,²⁸ is often used in motion directed towards a V-I cadence as a means of intensifying the drive toward the cadence. Such parallel motions are occasionally strengthened through the use of sequence. In the following example from the *Gloria* of the 'Missa Fortuna desperata',²⁹ measures 50-58, the melodic motion is in descending parallel tenths, while the drive to the cadence is achieved structurally in ascending tenths, as indicated in the graph (Ex. 6). Independent voice-leading is sacrificed to intensify the direction of tonal motion. In such passages the consonant parallel direction terminates on the leading-note, most frequently with a 4-3 suspension, thereby heightening the attainment of the penultimate V.

Clarity of formal design, enhanced by motivic reiterations and contrasts in vocal scoring, is further given depth through renewal of the tonal relationships. An example from 'In exitu Israel de Egypto'³⁰ is given in Ex. 7. The V, prolonged through measures 210-18, now projects the text, 'et omnes qui confidunt in eis' (m. 218 to end), by a descending line via the dominant triad, supported by its own I-V-I. Immediately afterwards the same text is repeated to the same motive, now prolonged through the tonic triad, the top voice beginning the motion on the third of the tonic, moving down to the leading-note and supported by I-V-I of the tonic. Additional intensity is achieved through use of four voices instead of two, and through the motion of parallel tenths alternating with octaves in the outer voices, as shown in the graph. The parallelism is a striking example of the combination of tonal structure and thematic design to create direction and symmetry.

Some aspects of the direction and function of the upper voice have been considered. The significance of the lowest part in the preceding examples is

²⁷ See Novack, 'Fusion of Design and Tonal Order'; the analysis of *Et incarnatus est* is given on pp. 213 and 218-19. A much later example of the contradiction of linear mode and polyphonic tonality is J. S. Bach's treatment of Hassler's Phrygian melody, 'O Haupt voll Blut und Wunden'. In the 'Passion according to St. Matthew' the first four chorale settings of this melody are in the major, corresponding in their various transpositions to the relationship of C Ionian to E Phrygian. The fifth and final setting, appropriately, is in E Phrygian, terminating on E.

²⁸ [Remarked on by Gafurius in his *Practica musicae* of 1496, Book III, Ch. 12; see Clement A. Miller, transl., *Franchinus Gaffurius: Practica Musicae* (American Institute of Musicology, 1968), p. 144.—Ed.]

²⁹ Missen, iv.

³⁰ Motetten, Bundel xii, no. 51, measures 210-26.

Part II

through the bass line in a remarkably forward-looking technique. Noteworthy is the parallelism in some repeated units, e.g. at measure 99 and at measure 103. Exact repetition occurs in the bass only, thereby highlighting the importance of the lower voice in the unfolding of the tonic-dominant relationship. Such parallelisms are striking. The beginning of the bass in Part II is quoted exactly to illustrate how thematic material and harmonic function are combined (Ex. 9).

The preceding examples illuminate another important aspect of Josquin's style: all voices share in the thematic material. This is what is known as 'imitative style'. However, the outer voices assume responsibilities that go far beyond those of the middle voices, especially in Josquin's late works. The highest and the lowest lines assert their functions in tonal structure,

Ex. 9 mm. 107-14 (bass)

Part II

both individually and together, with a strength and purpose that unequivocally point in the direction of 'polarity of the outer voices'. In this sense Josquin is a great innovator.

The foregoing exposition has been directed to only a few aspects of Josquin's concepts of tonality.³² Only chordal forms operating within the framework of the dominant-tonic phenomenon and in the fifth relationship have been considered in this brief study. Chords with contrapuntal, voice-leading function also play vital roles in the projection of tonality and must be examined together with the harmonically functioning phenomena.

Needless to say, Josquin's use of harmony cannot be considered solely by examining chords and cadences or by sending the various simultaneities through the computer. The harmonic factors are related to a number of compositional and aesthetic aspects. It is through a study of these interrelationships that we may realize more exactly the remarkable character of Josquin's concepts of tonality, from which springs a new view not only of musical structure but also of expression of the text.

³² For other aspects, particularly with regard to cadences, the functions of dissonance, harmonic and motivic repetition, see Edward E. Lowinsky's admirable study of the psalm motet, 'Benedicite omnia opera Domini', in his *Tonality and Atonality*, pp. 20-25.

Guillaume Dufay: *Alma redemptoris mater* (II)

SAUL NOVACK

*Ritua*

Time signature:

begins 3/2, begins with a half-note

whenever there are two consecutive notes on different pitches the manu- a ligature; there is no other use of

a reprise occurs here.

Craig writes 2/2, begins with a quarter-note anacrusis.

bar 1; bar 9:

Craig does not have these rests; the punctum is one bar shorter.

bar 3:

The bracket shows the one ligature which is mentioned in the analysis; see the note for bar 1 of the *Lamento*.

bars 15 (second beat) to 19 (first beat) are interpolated by Craig and adopted by McGee.

bars 24-5: These two notes are omitted by Craig; he shortens the preceding D (bars 23-4) to a dotted half-note.

The importance of Guillaume Dufay as the great Burgundian master of the early Renaissance is too well known to require discussion. As a composer of sacred and secular works he exerted a most significant influence on his contemporaneous younger generations, well into the period of Josquin des Prez and beyond.

The changes in the musical styles of the first half of the fifteenth century are pivotal in the transition to Renaissance styles. It is therefore fascinating to examine the 'old' and the 'new' in the works of the composers of this period. Dufay's service in Italy provided him direct contact with the music of the *trecento*, out of which came the flowing, melodic chansons and Italian songs of this period. The treble-dominated style appears as well in his sacred works, combining with the more involved, structurally complex orientation cultivated in the North.

Dufay made two settings of the famous antiphon of Hermannus Contractus (d. 1054), *Alma redemptoris mater*, both of them probably written during Dufay's service in the papal choir during the 1430s.¹ The *cantus firmus*, drawn from the Gregorian melody, is present in each setting, but the compositions are very different in concept and style, as will be discussed. The detailed analysis of the second version is the subject of this study. Although the example is widely known through its appearance in the *Historical Anthology of Music*,² the music for this study has been drawn primarily from the transcription by Heinrich Besseler.³ In the music as it appears in the analytic section of this study, the voices have been distributed on two staves instead of three. Except for some minor changes, and some differences in *musica facta*, there has been no reason to disagree with the transcription by Besseler.

In the first setting, labelled (I), the *cantus firmus* lies in the tenor, a traditional procedure that goes back to the early stages of polyphony. Besseler believes that Dufay was dissatisfied with this process, and in the second version placed the *cantus firmus* in the superius, the uppermost voice.⁴ In the procedure of paraphrase, the course of the model-melody is maintained, the paraphrase adding, substituting or omitting tones. In a general

sense, the added tones can be regarded as ornamentations of the original source-melody. It will be seen, however, that in this example the 'added tones' can be understood only within the context of the compositional process. While there are a few examples of ornamentation, the added tones are intimately linked to the structural conditions in the polyphony. There are many such tones, and they will be discussed throughout the analysis.

The position of the *cantus firmus* in the superius focuses attention on the Gregorian melody, in strong contrast to the setting in the tenor, where the melody generally tends to be lost in the web of the polyphony, further obscured by the similarity of the durational values to the other voices, and by the frequent voice-crossing of the tenor and contratenor. The Gregorian melody, *Alma*, is one of the four Marian antiphons that successively are apportioned and sung throughout the liturgical year at the evening office of Compline, thus very well known to Dufay's audience. In the superius version the antiphon commences monophonically in the uppermost voice with a paraphrase of the chant melody, a procedure not unlike the intonations in polyphonic settings of the Mass, for example, the incipits to the Gloria and Credo. The chant in its paraphrase form, with regularized durational values, was therefore probably recognized immediately, hence preparing the way for the continuity of this path in the succeeding polyphony. The monophonic opening of the superius is compared with the chant in example 5.1 (see p. 94).⁵ The Dufay excerpt has been transposed to the position of the chant in mode V. The added tones, while obvious are few. The opening of the chant immediately identifies its principal ambitus, the octave *F-f*. Within the octave the fifth *F-c* is a primary interval of linear motion. The tone *A* is important both at the outset (*F-A*) and at the end of the monophonic phrase. Dufay's melody asserts these features both in rhythm and the added tones. Bars 1-4 outline the fifth strengthened by the brief phrase-forming rest. The motion *c* is treated similarly, the added tone *c* intensifying, as a quasi leading tone, the arrival at *f*. In bars 10-13 the added tones tend to call attention to the importance of *c*, continued into bar 14.

Example 5.1 Comparison of the chant *Alma redemptoris mater* and the superius of the motet

with added tones *f* and *g*, the emphasis of *g* achieved through these elaborated neighbour-note motions. The above comparison of chant and superius with regard to the role of the added tones throughout the work as a whole will be continued in the analysis to follow.

THE GREGORIAN MELODY

The nature of the *cantus firmus* has a direct effect on the polyphonic composition in which it is involved. In the case of Dufay's setting, the shape and form of the chant determined on a primary level the ultimate structure of the composer's realization. An examination of the chant, therefore, is necessary. In the outline of the chant shown in example 5.2 the division into large-scale phrases, or units, as identified, has been dictated by Dufay's treatment of the structure, as will be shown later.

Each phrase clearly reveals the prime importance of one or more of the tones *f*, *a* or *c*. In some of the phrases all three tones mark the intervallic shape of motion, suggesting the outline of the triad. The force of *f* as a *finalis* is achieved in all the phrases except 2 and 3a. In several of the phrases the octave *f-f* is suggested as a large-scale range, consistent with the span in mode V. Within this octave span a general descent is seen in a few, for example, phrase 4, in which the descent is gradual and by ornamented stepwise motion. The central role of *f*, realized through its identity as the *finalis*, is also established through the generation of motion within the triad *f-a-c*, and through the gravitating motions to *f*. It remains to be seen in the analysis the manner in which Dufay, through paraphrase and polyphonic treatment, absorbs the chant to create a specific tonal structure. The importance of *b-f*, a descending fourth, particularly towards the end of several phrases (indicated by brackets), has been negated as a structural determinant by Dufay, and has been assimilated within the triadic context.

Mode

The chant is designated as mode V in the *Liber Usualis*. The fifth mode, described by contemporaneous theorists as Lydian, became in actuality the Ionian mode (later, the major) through the frequent flattening of B, appearing either as a stipulated

accidental or in the signature. Both forms are found abundantly in Gregorian chant. *Alma redemptoris mater*, as shown in the *Liber Usualis*, has the signature of B \flat . Such cases must be recognized as Ionian, as was acknowledged by later theorists. The melody, therefore, as it appears in transposition in the superius, is in C Ionian, in fact, C major. The two antiphons following *Alma* are closely related.⁶ *Ave regina caelorum* and *Regina caeli lactare* are designated as mode VI, the plagal form of mode V. The first of these two chants has no B \flat signature, though it appears as a stipulated accidental in the first phrase and its repetition. Thereafter, the natural for B is inserted twice to avoid any possible ambiguity. The *finalis* of the chant is on *c*, a variant ending of mode VI. Dufay's three polyphonic settings of this chant are in C Ionian, that is, C major. In the third setting, composed in 1464, Dufay inserted a section with his own words, stipulating in his will that the motet was to be sung at his deathbed. The text in this polyphonic trope (without the chant), *miserere tui labentis Dufay*, received special affective treatment. Throughout the trope (bars 86-96) *c* \sharp is used within a prolongation of the c minor triad, resulting in an early example of the assertion of a single tonality in a major-minor mixture.⁷ There are other such examples in the works of Dufay. The succeeding chant, *Regina caeli lactare*, has the signature of B \flat . While lacking the octave ambitus of mode V, the motion of the fifth *f-c* is emphasized triadically as well. The *finalis*, *f*, terminates every phrase. The chant can be described as being in F major. It is also marked by the appearance of *e* as a quasi-leading tone in the phrases terminating, respectively, with the texts *portare alleluia* and *nobis Deum*.

Partial Signatures and Musica Ficta

Each of the two lower voices has a signature of B \flat , therefore appearing to contradict polyphonically the implicit Ionian character of the superius. The frequent feature of different signatures in the music of this period, referred to as 'partial signatures' or 'conflicting signatures', has been explained by scholars in various ways, but the problem has not been resolved completely.⁸ The view taken in the subsequent analysis is a limited one, confined primarily to the relationship of the 'conflicting' signatures to contrapuntal principles. The use of B \flat in

Example 5.2 The chant *Alma redemptoris mater* (LU p. 273)

* It is to be noted that this melodic motif, outlining the interval of a fourth, which also appears in phrases 3, 4, 5 and 6, in Dufay's polyphonic treatment loses in all of them its motivic identity.

the intervallic relationship to the tone *f*, above, is necessary to avoid the diminished fifth. But B \flat in the tenor and contratenor is far from fixed since the principles of *musica ficta* apply whenever necessary.

There are always editorial differences in the indication of implied accidentals in a vocal composition of this period. In the

ensuing analysis a reason for each such suggested chromatic alteration is given, except when self-evident, such as in a cadence. Some of the *ficta* indications are in agreement with the decisions of Besseler and/or Apel in their respective editions, the suggestions herein tending to be somewhat more frequent than those of Besseler and the more conservative Apel.

ANALYSIS

The linear analysis which follows is based on the principles of Heinrich Schenker. The conditions, however, upon which Schenker formulated his theories are not fully present or realized in the music of the Renaissance. It is hoped that even the reader who is unfamiliar with Schenkerian procedures will be able to follow the method whereby the continuity of the voice-leading is projected beyond the tone-to-tone progression. In addition, the simultaneities of tones are identified in terms of their contrapuntal and harmonic functions. The latter are limited in this composition to I-V-I and I-ii-V-I of the tonic, and in a few cases, of the dominant. VI also appears – as a minor chord (vi) – in harmonic function (vi-V-I) and as a substitute for I. All unidentified chords function contrapuntally. In important positions they are identified as neighbour (N) or passing (P) chords (or individual tones). When the notes of contrapuntal chords are shown as stemmed and unfilled (both!), they function as *contrapuntal-structural* chords (CS) which, together with the similarly indicated *harmonic* chords, individually labelled, form the basic structure of each unit. Perhaps the most immediate feature distinguishing harmonic from contrapuntal chordal motion is the nature of the lowest voice, the linearity of which is shared by contratenor and tenor, sometimes crossing each other. Thus the 'bass' motion, such as C to G, or G to C, provides the roots for the fundamental harmonic progression of the fifth, that is, I-V, or V-I. Any other form of leading-tone chord moving to the tonic, or to the dominant, constitutes a purely linear resolution; hence it is not harmonic in motion.

'Unit' and 'phrase' are used interchangeably to refer to each of the large-scale sections – 'phrase' in the sense of a tonal unity. In all music examples, for each identified unit of the composition the reduction of the music in voice-leading terms is given in the graph immediately below the music, and aligned with it. The hierarchical levels within each graph are indicated by the types of notes. There are no durational values. The highest level, revealing the basic structure of the unit, is identified by the unfilled half-note, the fundamental descending step-progression is given above the relevant tones by numerical symbols which refer to the scale step. Unstemmed filled-in notes are subservient details to stemmed filled-in notes.

The path of paraphrase is shown through the identification of the chant tones by the conventional sign 'x' above each such tone. It is necessary to account for the function of the non-chant tones (the 'added tones') in the superius. While in some cases these added tones may function as ornamentation of the chant, on the whole, however, they are very significant in their relevance to the compositional structure achieved by the composer. In this piece by Dufay their purposes are clear, revealing the intimate relationship to a concept of organic unity quite remarkable in the first half of the fifteenth century.

Phrase 1

In bars 1-8 (see example 5.3) the monophonic intonation immediately reveals the importance of the octave in the ascent and its divisions: the initial outline of the triad, with the passing-tone f' ; the stepwise motion from g' to c'' . The added tone, b' , serves two purposes: as an addition to the three other tones, providing a motivic and parallel repetition of the opening four tones; as an intensification of the tonal importance of c'' through its role as a quasi-leading tone. The rest in bar 3 divides the ascent from c' to c'' . The rest in bar 8 divides the monophonic segment from the initial polyphony. It also divides the descent of the octave, c'' to c' at the structural g' , as shown in the graph. The added tones in bars 5-6 emphasize in neighbour motion the importance of g' before the leap to c' .

Regained immediately at the beginning of the polyphony, g' is prolonged into bar 10, then significantly transferred to the crossing tenor from which follows the descent by step to c' , the last three tones of descent recaptured by the superius. The crossing of the voices whereby the tenor has moved to the upper line triadically, $c'-c'-g'$, serves as well the prolongation of the C chord in bars 9-10. The definitive closing of the phrase is emphasized harmonically, I-V-I, the alteration, b_b , suggested as cadential function. Hereafter, all cadential *fiata* are to be regarded as self-explanatory. The rest in the superius in bar 12 separates the opening phrase from the succeeding one. The rest, as a device for separation, is used consistently throughout the work.

Phrase 2

In the rising line, by step, to c'' (bars 12-14; see example 5.4, p. 98), a' is the added tone, in contrast to b' in the first phrase. Dufay thereby creates a motivic parallelism to the incipit of phrase 1. In this case the motif is supported by harmonic motion, ii-V-I, the ii chord made possible by the added a' , and the strength of the tonic asserted with the arrival of the important c'' . The descending line from c'' (bars 14-15) moves by step to g' , arriving at this goal via a leading-tone chord. The suggested f'_1 is in accord with usual cadential practice. The superius tone g' before the dominant is an anticipation, actually an ornamentation of the Landini sixth ($f'_1-c'-g'$). A feature of the motion of the superius to the structural tone g' from the preceding tone a' is that it does so by descending first into the inner voice, f'_1 , of the leading-tone chord. Such strongly defining tonal motions from the upper to the inner voice within the leading-tone chord, immediately before the chord's resolution, are not at all uncommon in the works of Dufay.

The succeeding descent in the superius, $g'-f'-c'$ (bars 16-19), is supported harmonically, I-ii-V-I, the last chord of the progression fully attained at bar 19. The tonic is anticipated after V (bar 17), but vi is substituted and prolonged briefly, thus creating a delay of the tonic. The suggested change of b_b to b_a

Example 5.3 Phrase 1

Example 5.4 Phrase 2

Example 5.4 Phrase 2 is a musical score for a vocal line and a piano accompaniment. The vocal line is in treble clef and the piano accompaniment is in bass clef. The key signature has one flat (B-flat). The tempo is marked 'Allegretto'. The score is divided into measures 13 through 23. The lyrics are 'quae' and 'et stella'. The piano accompaniment includes figured bass notation: (I⁶) II V, I II V, (VI), I, V I. The figured bass notation is written below the piano part.

Example 5.5 Phrase 3

Example 5.5 Phrase 3 is a musical score for a vocal line and a piano accompaniment. The vocal line is in treble clef and the piano accompaniment is in bass clef. The key signature has one flat (B-flat). The tempo is marked 'Allegretto'. The score is divided into measures 23 through 31. The lyrics are 'et stel', 'la', and 'Surge-re'. The piano accompaniment includes figured bass notation: 8-7, 7-6, 6-5, 6-5-6 4-3, 2 3, VI (deceptive), I, V I. The figured bass notation is written below the piano part.

avoids the augmented fourth above it. Through the resolution in the superius, $e'-d'$, the full V chord, with the suggested major third, is realized.

In bars 20-2 the continued prolongation of the tonic in support of the structural e' , above, is characterized by the crossing voices in stepwise motion and parallel thirds within the chordal tones of the tonic triad, with the final descent in the superius, 3-2-1, supported harmonically. The tenor rises above the chant melody in the superius, thus prolonging e' . The reiterated motion of the third is indicated by the bracket.

The importance of the added tones in the paraphrase is demonstrated: as the means to achieve the descending line, by step, from e' , as enabling harmonic support, ii-V-I, in two successive progressions, the latter creating greater length and flow to the text, *coeli portas*; finally, in providing the ultimate descent, the definitive $e'-d'-e'$, with full harmonic support.

As in phrase 1, the rest in the superius in bar 22 separates this phrase from the succeeding one.

Phrase 3

This unit (see example 5.5) is divided into two parts: first (bars 23-6), the descent in the superius from e' to g' , coordinated with harmonic motion from I to V; second (bars 26-31), the descent from g' to e' , also with a succeeding harmonic progression.

Unlike the opening in the two preceding phrases, e' in the superius is stated at the outset, with the aid of the tonic delayed one bar. The word *stella* is set to few tones in the chant. The second tone in the descending octave in the polyphony is an added tone. The considerable and expressive expansion is arresting, particularly in the ornate implant between the chant-tones d' (bar 24) and g' (bar 26), enhanced by the smaller durational values. Noteworthy as well is the outline of two voices through the motion in the superius, as shown in the graphs by the brackets, that is, the motivic, successive thirds in descending parallel motion. An augmented example of this motion is seen in bar 25, d' moving to f'_1 via the passing tone g' , the last supported by a consonant neighbour, b_1 (see example 5.6). This motion is somewhat similar to its use in the preceding unit (bars 14-15), in which the passing g' functions in a dissonant-consonant 7-6 relationship to the lowest voice. Such multilinear implications of a single melodic line constitute an important facet in the development of the compositional process. The accidental f'_1 is an inner voice of the $\frac{3}{2}$ leading-tone chord that moves to V. The tones e' and b' in bar 25 are inner voices momentarily brought above the upper line, d' and g' , respectively. Melodic motion from one voice to another occurs frequently. The bracket has been used throughout this unit to alert attention to the considerable frequency of this multi-linear technique in this work. The succession of tones in bars 23-4 as follows, $e'-d'-e'-a'-e'-b'-g'-e'$ is repeated exactly in bar 25 as a diminution, that is, in half the values. The first statement and its repetition are identified in the graph (example 5.5) by the

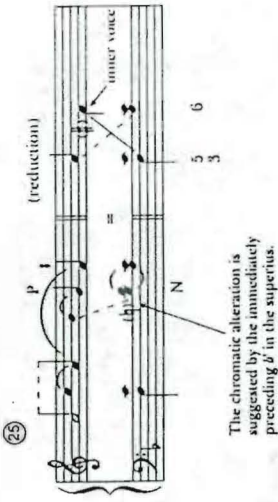
brackets a and a'. The repetition, entirely with added tones, reveals paraphrase as a subtle facet of design relationship while simultaneously the shaping of both statements fit into two different segments of the descending line. It also confirms the retention of b_1 in the superius within the diminution, leading to the alteration to b_1 in the immediately succeeding tone in the tenor, thus avoiding a cross-relation.

At bar 26 the rest of separation at the critical g' is given again to the superius, but V is sustained, the setting of the succeeding word, *maris*, commencing with an 'up-beat' g' , thus gaining through the added non-chant-tone the motif $g'-d'$, a rhythmic-melodic reiteration of the figures in bars 23-5, that is, $e'-d'-e'$, $a'-e'-b'$, $g'-d'$. The added tones in bar 27 emphasize the non-chant-tone f' , a structural tone which resolves to the structural e' , a chant-tone, at the beginning of bar 28. The harmonic motion II-V-I is made possible through added tones, especially through d' in bar 27. The vi chord at bar 28 is a substitution for the tonic. The latter, with its structural e' above, is delayed until bar 30. The eye is deceived, however, by the low e at the beginning of bar 30, for this chord is not the tonic. The implication of the descent in the superius, $e'-d'-e'$, as the final 3-2-1 is contradicted by the presence of f' in the tenor (bar 30), which has crossed above the superius e' . The tone e' becomes a dissonance forced down to d' , an inner voice. The lowest tone may be altered to b_1 (as in Besseler) if one wishes to stress the leading-tone function in the motion to the succeeding tonic. Now f' in the tenor resolves to e' , leading to the final descent, $e'-d'-e'$, fused with a full I-V-I progression. The definitive structural close, all with added tones in the upper voice, is completed throughout the rest of separation in the superius. The final tonic overlaps the beginning of the next phrase in the superius.

Particularly noteworthy throughout the phrase is the use of various dissonance-consonance (and vice-versa) linearities, as shown in the graph (example 5.5): 8-7, 7-6, 6-5, 4-3, 2-3, as well as $\frac{3}{2}$ -6, a rich array of contrapuntal expressiveness. Added tones play a significant role in this facet of linear motion.

As an example of Dufay's artful control of prolongation, the events in bars 26-30 are analysed inductively, that is, proceeding in stages from a basic projection to the actual composition (see example 5.7). Here, 7A shows the basic progression, and 7B the substitution of vi for the expected I and the regaining of I at bar 30. Theoretically, 7C is the most direct way of returning from the vi chord to the tonic via the path of b_1 , the latter supporting the upper neighbour, f' , a chant-tone, and simultaneously acting as a leading tone. 7D shows the return through b_1 placed, however, a seventh below, while 7E shows the adding of a lower neighbour, d' , in the prolongation of the superius e' ; the supporting of the neighbour with g in the lowest voice; and the descent from g to B through the passing tone d under the neighbour, f' , above. The d in the lowest voice represents an inner voice of the leading-tone chord that moves to the tonic. The last stage is represented in the graph for the complete unit, example 5.5.

Example 5.6



Example 5.7 Inductive analysis of bars 26-30



Example 5.8 Phrase 3a

Phrase 3a

7E' shows how close this representation is to a much later style of prolongation in which the motion from the beginning of bar 29 would have been viewed as an unfolding of the $\frac{3}{4}$ position of the leading-tone chord! No such interpretation is implied for the Dufay passage.

The concluding phrase to Part 1 (bars 31-4; see example 5.8, p. 102) is brief. It is characterized by an almost total adherence to the tones of the chant, with only one addition, the penultimate tone, f , and one substitution (marked o), d' for e' . The full force of the dominant is emphasized by the repeated d' in the superius instead of the chant-tone, e' . The final tones in the chant in this unit are e' , e' (as shown in the *Liber Usualis*, 273). The penultimate f , completing the prolongation of f through bar 33, creates the striking dominant-seventh chord. Unlike the preceding units in which continuity of movement from one unit to the succeeding one is gained simultaneously through the rest of separation in the superius, or with overlapping, part 1 terminates with the three voices projected by the sustained tones of the tonic chord – a fitting close. But there seems to be a purposeful reason for not extending the phrase beyond the final tone of the phrase in the chant, e' , in order to win the finality of arrival

on e' . The final tone in the superius, e' , suggests that the motet is not over!

The reader is now familiar with the registral relationship of the three voices. They are never more than two octaves apart, and the upper voice rarely exceeds the span of one octave corresponding to the C major scale.

Phrase 4

In this phrase there are only a few added tones to the chant, but they play a significant role. The structural descent of an octave in the superius again is by step (see example 5.9).

At the outset the motif $e'-b'-a'-g'$, a diminution of the structural descent, is captured by the addition of the tone b' . The initial e' is prolonged, moving to b' (bar 37). The descent b' (bar 37)– a' (bar 39)– g' (bar 40) is embraced by I–V–I of the dominant! The suggested *ficta* secure the prolongation of the dominant, commencing as a major chord. Motion within the chord, in parallel tenths, is followed by the prolongation of V of V (bar 39), a moving to f'_1 , the inner voice of the D major chord. This important motion is made possible by the added tones in the superius. The harmonic purpose of this fragment of paraphrase is evident. The function of the dominant as a dividing harmonic support to the descending line is emphasized in this phrase.

Example 5.9 Phrase 4

Example 5.10 Phrase 5

Example 5.10 Phrase 5 is a musical score in 4/4 time, spanning measures 49 to 53. The score is written for voice and piano. The voice part includes the lyrics "Vir - go ac po - sterius". The piano accompaniment features a descending melodic line in the right hand and a supporting bass line in the left hand. The score includes fingering numbers (e.g., 3, 5, 10, 5, 10, 5, 6, 5 - 6, 5) and a diagram of the descending scale with fingerings 8, 7, 6, 5, 4, 3, 2, 1. The piano part includes a diagram of the descending scale with fingerings 8, 7, 6, 5, 4, 3, 2, 1. The score also includes a diagram of the descending scale with fingerings 8, 7, 6, 5, 4, 3, 2, 1.

Example 5.11 Phrase 6

Example 5.11 Phrase 6 is a musical score in 4/4 time, spanning measures 54 to 57. The score is written for voice and piano. The voice part includes the lyrics "ac posterius". The piano accompaniment features a descending melodic line in the right hand and a supporting bass line in the left hand. The score includes fingering numbers (e.g., 7-6, 4-3, 5, 6-5) and a diagram of the descending scale with fingerings 8, 7, 6, 5, 4, 3, 2, 1. The piano part includes a diagram of the descending scale with fingerings 8, 7, 6, 5, 4, 3, 2, 1.

structural tone g' moves directly to f' (bar 41), a seventh in prolonged dominant chord. Its motion to the inner voice, the path of resolution to e' (bar 42).

Bars 42-6 are marked by oscillation between vi and I. The voice (bars 43-4) helps to attain the tonic through the initial figure $e'-b-a-e'$. The motions are guided throughout by the restriction of the chant's tones, here presented without added tones, with the exception of the ornamental g' and the inner voice, b_4 , in the ultimate cadence to the tonic. The cadence is emphasized by the motif $f'-e'-d'$, stated by the tenor, crossing above the superius. The latter, at parallel thirds below the tenor, reaches the strong tonic, b (bar 47). A remarkably assertive and motivic continuation of the second part of the descending line in diminished $g'-f'-e'-d'-c'$, sustained with harmonic motion I-V-I, ended during (!) the dividing rest in the superius.

Phrase 5

The descending line here (see example 5.10), commencing immediately from e' , is supported contrapuntally, parallel fifths in up sequentially as follows: 3 (10)-5, 10-5, 10-5 (bar 50). The first part of the descent in the superius, e' to g' , b' (bar 50) and g' (bar 50) are added tones, thus providing the means of stepwise descent not fully presented by the chant. The tone of the chant, f' (at the end of bar 50), and B_4 , a fifth below it, are treated as a neighbour chord in the prolongation of C chord, enabling the return in the superius to g' , the next tone, with ornamental added tones in the prolongation of its neighbour, f' . Returning to g' (bar 51) above c , g' is prolonged until it attains f' , a fifth above B_4 (bar 52). The rest created by the dissonant e' below this f' forces the upward motion of the inner voice, that is, e' to d' , thus bringing the transfer of the tenor to a position above the superius tone, temporarily, the upper voice. The dissonant e' in the superius is not a chant-tone. The chant melody's continuation to be completed as an inner voice. Simultaneously, the tenor as most voice descends $f'-e'-d'-c'$, artfully completing the descent from bar 49 with a final cadence I-V-I, over the beginning of the next phrase. The overlapping is aided by the ligatures in the tenor and contratenor.

Phrase 6

In this short phrase (see example 5.11) the superius is more strictly restricted by the chant. There are only four added tones each with a specific function, as follows: in bar 53 a' gives the motivic ascending motion from g' to e'' ; in bar 54 $ort\ g'$ rhythmically forces the repeated g' down to the original f_4 , the inner voice of the leading-tone chord of the ant, thus moving to the structural tone, g' (bar 55); e' in bar 58) preserves the prolongation of that tone from the beginning of bar 57, the second e' falling as b_4 to d' in the

penultimate V. While Bessler suggests the natural only for b (in the tenor) in the dominant chord, it seems appropriate to alter the b_4 in the contratenor as well, disregarding the diminished fifth created by the b_4 below f' , in order to avoid a cross-relation, in this way effecting a smooth, immediate anticipation of the same tone.

The clarity of the descending line, provided totally in this phrase by the chant itself, is enhanced by the polyphonic treatment. The dominant in bar 55 as a divider of the octave descent is strengthened by the motion of its own leading-tone chord, and confirmed in this function by the succeeding tonic, V-I supporting the prolonged g' , above. The final cadence is followed by the unison (!) rest of separation from the succeeding closing section. The rest, therefore, in its form-creating function, is stated at the end of the series of octave descents in the strongest possible way.

The close

The concluding phrase (bars 60-4; see example 5.12) does not reiterate the structural descent of the octave. First of all, the chant fragment offers no opportunity to do so, even with paraphrase. Secondly, the text calls for a different type of treatment. Dufay considers the entire unit as a homogeneous, expressive close. The same treatment is given in his other setting of the same antiphon. In this purely chordal, syllabic setting, rests separate the words. There are only two added tones in the paraphrase: e' , terminating *peccatorum* in bar 63, enables the closing of the word with V-I; f' , at the beginning of the last word, supplies the substitute $f'-e'-d'-c'$ for the less effective chant close, $e'-d'-c'-c'$. For the purposes of sonority and increased expressiveness, a fourth voice is added above (!) the superius in the setting of the last three syllables of *mi-se-re-re*. The first of these four tones is d' which, as a sixth above the lowest tone, precludes the tonic, thus avoiding a positive assertion at a weak point. The true line, still in the superius, descends $e'-d'-c'$. The positioning of the tonic chord throughout the entire unit at only three points of expressive and structural significance further reflects Dufay's selectivity in the use of harmonic forces. While the upper line does not fall through the entire octave, a descending line, 5-4-3-2-1, has been suggested. The beginning of the descent from 5 has been achieved by the superimposition of the tenor at the beginning of the phrase, the chant melody retained consistently in the tenor. The final harmonic close, V-I, is effectively delayed to coincide with the last two syllables of *mi-se-re-re*.

FORM

The musical form in this motet is conditioned by the tonal structure. As a treble-dominated setting, the course of the chant, significantly altered by the added tones, provides the matrix for a series of descending lines spanning the octave. While this

Example 5.12 The close

descent does not occur in phrase 3a, the latter does not operate as a full-fledged unit; it serves primarily as an extension beyond phrase 3, and acts as a close at the approximate midpoint of the composition. The final section characterized by fermatae is, by its very nature, a close, almost in the sense of a coda to the string of units. Each of the six descending-octave units is completely enclosed by the harmonic progressions embracing its basic structure, and by the descending top voice. The deliberate use of the rests of separation also serves to articulate and separate the units.

A summary of the 'background' of the tonal structure of each unit is shown in example 5.13 (see p. 108). One is tempted to regard the diversity of harmonic and contrapuntal treatment given to the descending octave, each phrase bound by the large-scale prolongation of the tonic, as comparable to the concept of structural variations. As such the work constitutes a most forward-looking accomplishment for this period.

Example 5.13 Backgrounds

Phrase 1

(I) I CS I V I

Phrase 2

I I II V I V I

Phrase 3

I II V I V I

Phrase 4

I V I (VI) I V I

Phrase 5

I CS CS I CS I V I

Phrase 6

I CS V I CS VI V I

MODE AND TONALITY

It may be argued that the selection of this composition to illustrate a supposed early example of tonality rests on its identity as a transposition of F Ionian, hence a work in the major, a mode providing the necessary prerequisites for tonality. Let the reader beware! Mode and key are two distinct properties of musical composition which exist simultaneously, for example, the key of C in the major mode, or in the minor mode, or, by extension, in any mode. Dufay's composition in the major mode – one of a considerable number – is a striking example of triadic tonality. One can demonstrate the achievement of tonal structure in various modes throughout the fifteenth and sixteenth centuries in a wide range of sacred and secular genres. During this period, however, there is a constant increase of mode alteration through *musica ficta* and stipulated accidentals, resulting through mixture in a tendency towards major and minor, the two modes which offer the maximal conditions for

the articulation of triadic tonality through linear and harmonic direction.

DUFAY's *Alma redemptoris mater* (I)

Space does not permit a detailed examination of Dufay's earlier setting of the same text.⁹ Here the *cantus firmus* lies in the tenor. It is not transposed. The tenor is mainly the lowest of the three voices, though the contratenor occasionally crosses under it. The melody in the lowest voice restricts the options for intensifying tonality. Paraphrase is used reservedly. A good example occurs at the point corresponding to the ending of phrase 2. Since the chant here ends on *a*, two tones are added, *g* and *f*, enabling the tenor to terminate the unit on the tonic. Although there is cadential and internal evidence to identify the tonal orientation, there are neither full V-I motions nor convincing large-scale direction in the uppermost voice. There is also an absence of strong spatial definition and form as in the second version. While the chant melody as a *cantus firmus* in the tenor creates the conditions for F Ionian, with inherent triadic suggestions of tonality in the major mode, the style remains basically conservative.

SUMMARY

It has been demonstrated that the composition, in the major, achieves its structural unity through a number of ways:

- 1) the reiterated nature of the uppermost voice, falling by step in each of the designated phrases by the degrees of the octave, from 8 to 1;
- 2) the support of the uppermost line by marshalling the fifth relationship in the lowest voice in the form of harmonic motion, that is, V-I, and ii-V-I;
- 3) the emphasis given in each phrase to the cadence, fused – with only one exception – with the motion in the superius from 2 to 1;
- 4) the use of the dominant as a midpoint in the large phrase (for example, bar 15), strengthened by its own dominant (bars 39–40) in its prolongation, or by a leading-tone chord (bars 54–55);
- 5) the artful use of dissonance, particularly 4–3, 6–5, and 7–6, as well as 7 above the root of V – the dominant-seventh chord (bar 33) – all contributing to the directional flow of the superius;
- 6) the use of vi (with extension) as a substitute for I, thus postponing the resolution to the tonic at the end of the phrase, an important concept of phrase organization interlocked with harmonic structure;
- 7) the articulation of most phrases not only cadentially but through the interjection of rests in either the superius alone or in all three voices, in several cases the rest in the superius

occurring simultaneously with I-V-I motions, the tenor reiterating the tonally defining 3–2–1.

Attention is invited again to example 5.13, in which the basic backgrounds of the six main phrases are outlined. The descent of the octave stresses in different ways the importance of *e'*, *g'*, *e'* and *c'*. The initial *e'* is embraced by the tonic; *e'* by the tonic, and in one case (phrase 6) the vi chord. The primary fifth, *g'*, is emphasized as shown in point 4, above, or by terminating a prolongation of I, as in phrase 1 or 2. The tone *f'* is either the third of a contrapuntal chord (neighbour-passing), or a dissonant seventh of the dominant. The tones *b'* and *a'* descend to the more primary *g'*. In several phrases *b'* is a dissonant seventh above *c'*. Finally, *d'*, gravitating to the final tone *c'*, is, in its resolution to *c'*, the penultimate tone subservient to the tonic. The last segment of the triad, *e'-c'*, is projected, with the 'passing' *d'*, in the definitive I-V-I (and in one case, vi-V-I) cadence. In all of these phrases the descending octave is outlined within the matrix of the triad.

To the above summary must be added particular features of design which are closely coordinated with the tonal structure. In each phrase built on the descent through the octave there is an increasing use of smaller durational values as the descending line approaches 5, the structural *g'*. The built-in 'accelerando' is particularly coordinated with harmonic functions: in phrase 3, with the motion to V; in phrase 4, with the prolongation of V, followed by greater rhythmic motion in the prolongation of vi as detour. The work as a whole appears to begin in longer values, the middle phrases revealing greater rhythmic activity, the last phrase, less activity, and the extended close, completely subdued, abandoning fixed durational relationships through the expressive fermatae, as a response to the text. The rhythmic-metrical variety, even to the extent of incorporating the use of hemiola, is fascinating, and deserves more comment.

Motivic life is generated by the frequent motion between the tones of the triad, both by step and by leap. It must be obvious that such motions are conditioned by the drive to prolong the triad by moving within its tones. Further, a single line, by moving within successive thirds, suggests multilinear motion, for example, the beginning of phrase 3, wherein the lines created by the upper voice continue through sequence. Parallel motion, in stepwise ascending or descending thirds, tenths or sixths, functions in chordal prolongation (for example, bars 37–8).

The importance of the dominant-tonic relationship requires a final comment. Scholars have debated the validity of applying this concept to fifteenth-century music, some arguing that it is based on different principles than those governing much later harmonic practice.¹⁰ While some scholars accept the V-I principle as a phenomenon of tonality arising out of conditions in settings for four voices, it is apparent in this and other examples by Dufay written for three voices only (!) that V-I, other fifth relationships and prolongations, especially the dominant with its own V-I motion, are used deliberately and have specific functions. It is imperative that these harmonic functions be

evaluated within the organic structure, going far beyond the usual final cadence, superficially and unfortunately considered as the primary determinant of tonality.

Finally, it has been shown that the procedure of paraphrase is related intimately to the tonal structure of the composition. The shape of the chant has been expanded, honed and absorbed to create in each of the main six phrases a descending structural line which clearly represents the octave descent. In several cases the paraphrase tones have gone beyond the chant section in order to achieve the final stage of the descent. In his use of paraphrase, Dufay reveals his compositional orientation to tonality as far more than a cadential phenomenon. The example demonstrates as well the role of the uppermost voice in representing triadic tonality, and the significance of the outer voices in creating an organic structure of great beauty.

NOTES

- 1 Guglielmus de Van and Heinrich Bessler (eds.), *Guillaume Dufay: Opera Omnia*, Vol. 5 (1966), ed. H. Bessler, Preface, p. iv. Bessler sets the dates of the compositions during the years 1430-3.
- 2 Archibald T. Davison and Willi Apel (eds.), *Historical Anthology of Music*, Vol. 1, no. 65, p. 70.
- 3 *Guillaume Dufay: Opera Omnia*, Vol. 5, pp. 117-19.
- 4 *Ibid.*, Preface, pp. iv-v.
- 5 *Liber Usualis* (1934), p. 273.
- 6 *Ibid.*, pp. 274-5.
- 7 *Guillaume Dufay: Opera Omnia*, Vol. 5, Motet No. 51.
- 8 A very thorough critique of the problem is provided in Karol Berger, *Musica ficta* (1987), esp. pp. 65-9, and relevant bibliography, particularly the studies by Lowinsky and Hoppin, Preface, p. xii.
- 9 *Guillaume Dufay: Opera Omnia*, pp. 115-17.
- 10 See Don M. Randel, 'Emerging Triadic Tonality in the Fifteenth Century' (1971), for a discussion of the issues.

Edition: *Alma Redemptoris mater* 11

The musical score is for the motet 'Alma Redemptoris Mater' by Guillaume Dufay, Edition 11. It is written for three voices: Soprano (Alto), Tenor, and Contratenor. The score is in G major (one sharp) and 4/4 time. It consists of three systems of music. Each system has three staves. The lyrics are in Latin. The first system starts with a 'C' time signature and a key signature of one sharp. The second system starts with a 'C' time signature and a key signature of one sharp. The third system starts with a 'C' time signature and a key signature of one sharp. The lyrics are: 'Al - ma red - emp - to - ris ma - ter quae per - vi - a cae - li Por - ta ma - nes et stel -'.

25

lu ma tis suc-cur.

re ca - den - ti Sur - ge - re qui cu - tra - po - pu - lo.

35

Tu quae ge - nu - si na - tu - ra mi - tu -

quae ge - nu - si na - tu - ra

mi - ra - ram - te tu - um sanc - tum ge - ni - to - rem.

mi - ra - ram - te tu - um sanc - tum ge - ni - to - rem.

30

Vir - go prius

Vir - go prius

35

sic - ri - us Ca - bri - e - lis ab - re

30

Su - mens il - lud A - ve pec - ca - to - rum mi - se - re - re.

Su - mens il - lud A - ve pec - ca - to - rum mi - se - re - re.

mi - se - re - re.

mi - se - re - re.

TONALITY AND THE STYLE OF PALESTRINA

SAUL NOVACK

TONALITY IS REGARDED generally as a phenomenon first appearing in the seventeenth century. Its beginnings are somewhat hidden in the baffling network of modal theory and practice in Renaissance polyphony. The usual view of this facet of stylistic differences between Renaissance and Baroque music is summarized thus by Manfred F. Bukofzer:

Tonality may be defined as a system of chordal relations based on the attraction of a tonal center. . . . It is no mere metaphor if tonality is explained in terms of gravitation. Both tonality and gravitation were discoveries of the baroque period made at exactly the same time.¹

Bukofzer goes on to explain that in Renaissance music chord progressions were dictated by the melodic laws of part writing, which were governed individually by modality. In the time since Bukofzer wrote these words there have been some changes of view, but the basic dichotomy between modality and tonality has been sustained generally. Despite some important initial studies that have begun to explain the gradual evolution of tonality, a widespread acceptance of these evolutionary views has been slow in coming.²

Tonality is a concept, not a system. It relies on a principle of composition

1. Manfred F. Bukofzer, *Music in the Baroque Era* (New York, 1947), 12.

2. See especially Edward E. Lowinsky, *Tonality and Atonality in Sixteenth-Century Music*, 2nd ed. (Berkeley, 1962). Important contributions concerning problems of tonality in the Medieval and Renaissance eras are to be found in vols. 1 and 2 of *The Music Forum* (New York, 1967 and 1970) in articles by Felix Salzer, Carl Schachter, Peter Bergquist, William J. Mitchell, and Saul Novack.

wherein one scale degree is more important than any other, and wherein the subservience of all tones in a composition to the centrality of this scale degree can be discerned; thus we can find within any tonal composition a background upon which are based the relationships of tones creating the force of a central tonality. In considering sixteenth-century composition, the chief problem rests with the theories of mode as they are applied to both earlier and contemporaneous practice. The theorists explain it in their ways. Our ears tell us differently.³

The music of Palestrina lies in a central position in sixteenth-century music. His Masses and motets are usually regarded as "conservative," though beautifully formed, typifying the ideal of Renaissance sacred polyphony. The predominant view holds that the great body of his music is written within the modal system. Since some of the theorists generally accounted for modes in polyphonic writing by considering the tenor only, the results of their thinking bear no relationship to the compositional process. Yet scholars have recently made notable progress in modal analysis based upon a number of factors.⁴ A number of works are problematic, and it may not always seem persuasive to identify the final as the principal note (a concept phrased thus for those fearful of using the term *tonality*). In an analysis of Palestrina's *Vestiva i colli*, Harold Powers makes a convincing point about the difficulty of assigning a mode to that work. He offers no conclusive solution, but rather an unorthodox suggestion.⁵ Knud Jeppesen provides a helpful overview of mode in Palestrina.⁶ He accepts only five modes as pertinent to Palestrina's music: Dorian, Phrygian, Mixolydian, Aeolian, and Ionian. He considers the Lydian mode with the flat signature to be primarily Ionian. For Jeppesen, the final becomes the basic indicator of the principal tone of the composition, hence its relevance to the mode; he also considers the beginning of a composition as an important criterion. In a more recent study Powers provides a formidable survey of the complexity of modal categories.⁷ Evaluating the contributions of Siegfried Hermelinck, Bernhard Meier, and Carl Dahlhaus, Powers constructs a system based on specific combinations of cleffing, ambitus, and finals, and he provides a number of tables to describe the tonal plans in modally organized cycles by Cipriano de

3. I do not dismiss the importance of the theorists, but I cannot ignore what our ears hear. See Edward E. Lowinsky, "Canon Technique and Simultaneous Conception in Fifteenth-Century Music: A Comparison of North and South," in *Essays on the Music of J. S. Bach and Other Diverse Subjects: A Tribute to Gerbard Herz*, ed. Robert L. Weaver (Louisville, 1981), 181-222, esp. his perceptive comments on p. 184.

4. Siegfried Hermelinck, in *Dispositiones modorum* (Tutzing, 1960), assigns a mode identification for individual works of Palestrina through a different system of analysis. For a critical discussion of his theories as well as an appraisal of the difficulties involved, see Harold S. Powers, "The Modality of *Vestiva i colli*," in *Studies in Renaissance and Baroque Music in Honor of Arthur Mendel*, ed. Robert L. Marshall (Kassel and Hackensack, 1974), 31-34.

5. *Ibid.*; see particularly the concluding paragraph. The entire study underlines the problem of describing sixteenth-century polyphony in modal terms.

6. "Problems of the Pope Marcellus Mass: Some Remarks on the Missa Papae Marcelli by Giovanni Pierluigi da Palestrina," in the Norton Critical Score of Palestrina's *Pope Marcellus Mass*, ed. Lewis Lockwood (New York, 1975), English trans. by the ed., 99-130. See esp. pp. 100-109.

7. Harold S. Powers, "Tonal Types and Modal Categories," *Journal of the American Musicological Society* 34 (1981): 428-70.

Rore, Tielman Susato, Orlandus Lassus, and Palestrina. The empirical evidence admirably produced by Powers reveals clearly the inadequacy of mode identification purely in terms of the traditional church modes and Heinrich Glarean's extension of them. (The title of the study, while valid for the purposes intended, may be misleading, since "tonal types" bear no direct relation to tonality.)

Thus complexity surrounds any application of modal theory to the music of Palestrina and his contemporaries. If we work our way through this labyrinth of sixteenth-century theorists and musicological etiologists, the total picture, while fascinating, speculative, and instructive, offers us no insight into the compositional matrix. Consequently, further consideration of mode per se is not germane to the purpose of this essay.

Several attempts have been made to find in Palestrina's music the "harmonic" factors that do not contradict mode identity. One study has determined the frequency of chords and the characteristics of cadences by means of statistical survey.⁸ Another has examined the frequency of immediate chordal relationships and the patterns of movement formed by them in a specific Mass.⁹ Both these studies fragment the object of study. While they provide us with information, they do not offer us a unified contextual analysis of a given work, a view of the work as a whole. Jeppesen's *Style of Palestrina* is universally acknowledged to be a monumental achievement in analysis; and the painstaking thoroughness of his exposition is quite admirable.¹⁰ While Jeppesen gives some introductory attention to other facets of Palestrina's style, the great bulk of his study is given over to the treatment of dissonance. Central as the dissonance is to the expressive elements in Palestrina's style, it is seen here as though through a microscope. Each type of melodic construction and intervallic combination is examined and accounted for with numerous examples, with small fragments being excerpted from the works, and all the types being categorized. It is impressive scholarship, yet we are never given large or complete units of music.

The largest single study of the overall style of Palestrina is the well-known work by H. K. Andrews.¹¹ The primary facets of Palestrina's music considered are mode, rhythm and time signature, melodic line, consonance and dissonance (treated in great detail), contrapuntal techniques, i.e., fugue, canon, and inversion, followed by texture, form and structure, and, finally, word setting. Each topic is minutely dissected, not with the surgical precision of Jeppesen, but still in considerable detail. Many excerpts are given as examples of various techniques. To close, one complete composition is examined—a motet 166 measures long. The study of this motet has as its purpose the identification of melodic-rhythmic motives (labeled a^1 , a^2 , b^1 , etc.) and the changes in textures. The result is a mere description rather than an analysis; neither mode nor tonal-

8. Andrew C. Haigh, "Modal Harmony in the Music of Palestrina," in *Essays on Music in Honor of Archibald Thompson Davison* (Cambridge, Mass. 1957), 111–20.

9. Richard Bobbitt, "Harmonic Tendencies in the Missa Papae Marcelli," *The Music Review* 16 (1955): 273–88.

10. *The Style of Palestrina and the Dissonance*, 2nd ed. (Cambridge, 1946; repr. New York, 1970).

11. H. K. Andrews, *An Introduction to the Technique of Palestrina* (London, 1958).

ity is mentioned. Thus, Andrews's book, while well-organized and detailed, is surgical and sterile, and lays out no unified approach to a conceptual evaluation of the art of Palestrina's compositions. The study of the *Pope Marcellus Mass* by Lewis Lockwood in the Norton Critical Score series merits special recognition as a meticulous approach to both a historical and a musical analysis of the work as a whole.¹² Lockwood provides a rewarding analysis of the setting of Kyrie I. Yet there are important features of integration that go unmentioned. These will be discussed below.

ERNEST NEWMAN once said:

Fux's book, as the reader will not need to be reminded, is one of the landmarks of music history; directly or indirectly, it is the fountain of practically all the methods of teaching counterpoint during the last two hundred years.¹³

While Newman is hardly a leading authority on music theory, here he is echoing the sentiments of composers and music teachers of the eighteenth and nineteenth centuries. It is well known that Johann Joseph Fux supposedly based his theories of counterpoint on the art of Palestrina, as is openly stated in his foreword to the reader in *Gradus ad Parnassum*.¹⁴ Fux has had a profound influence on the study of counterpoint up to the present day, and his work has been a vehicle for the continuation of the Palestrina legend.¹⁵ There are many noteworthy texts based on Fux's principles, primarily the species system, and these works have played a contributory role in establishing the notion of Palestrina's style as representing the ideal of sixteenth-century contrapuntal art.¹⁶ While Fux believed that he was abstracting the art of Palestrina, even to the extent of casting his ideas in the form of a dialogue in which he identified himself as the pupil of the master Palestrina, he allowed some characteristics of early eighteenth-century style to creep into the contrapuntal web. Jeppesen's counterpoint text eliminated these imperfections, and his examples are quite true to the pure linear flow and to the intervallic consonant-dissonant relationships to be found in Palestrina. Yet these studies do not reflect Palestrina's considerations of tonality as a unifying force. They fail to account for the nature of the important outer voices. Thus, species counterpoint as traditionally expounded, whether by Fux, Beller-mann, or Jeppesen, among others, has no stylistic relevance to Palestrina, or to any other composer, for that matter. Therein lies the value of species counterpoint. By limiting itself to the principles of linearity and intervallic relationships

12. See esp. 91–93 and the chart on p. 94.

13. *London Times*, Aug. 21, 1938.

14. *Steps to Parnassus*, trans. and ed. Alfred Mann (New York, 1943).

15. See Paul Henry Lang, "Palestrina across the Centuries," in *Festschrift Karl Gustav Fellerer zum sechzigsten Geburtstag am 7 Juli 1962*, ed. Heinrich Hüsch (Regensburg, 1962), 294–302.

16. Most noteworthy are the works of Johann Georg Albrechtsberger, Heinrich Beller-mann, Heinrich Schenker, Hermann Roth, Jeppesen, and, most recently, Salzar and Schachter.

based on a systematic temporal organization of consonance and dissonance, species counterpoint becomes applicable to all music based on triadic tonality, without any considerations of style. This is not my main concern here, though I will return to Palestrina's concepts below. I now turn directly to the music.

Opening Imitation

THERE IS A direct and important relationship between quasi-fugal beginnings in Mass movements or motets and tonal functions. The following example seems quite complex (Example 1a). Its thematic incipits commence on the following notes:

m. 1	altus	g
3	bass	c
5	cantus	c'
7	tenor	f
9	bass	Bb
10	altus	g (quasi-entry)
12	cantus	f' (some altered durations)
15	tenor	f
16	altus	f (rhythmically altered)

EXAMPLE 1. *Missa brevis*, Kyrie I

2.

b. Reduction

Such a series of successively descending fifths from g to Bb might be regarded as beginning in a foreign area distant from the main "mode." For this there is, however, a logical explanation. It is obvious that nine interphonic statements within a total of nineteen measures reflect a tightly knit design. The incipit is a complete four-bar unit characterized by a division into two equal and contrasting parts terminating, in its first four appearances, with a stepwise descent from the fifth degree to the root of a triad. While the successively descending fifths are not a usual practice, the choice of the intervals is dictated by the shaping of the tonal organization. The shape of the first part of the incipit is important; basically a movement down a third and a return to the initial tone, it permits the second voice to enter a fifth below at the moment of return to the initial tone at measure 3. This relationship of entry at the fifth is possible with a voice below the altus, not above it, for then the entry on c' would have resulted in the prohibited fourth (Example 1b). The cantus entering at measure 5 is at the octave, the only possible tone; entering on g would have been possible initially, but its prolongation to measure 7 would have produced a dissonant ninth above the bass, the determinant and dictating voice in the drive toward F, the tonic, at measure 7. The added entry of the bass at measure 9 on Bb is imaginative—far more dynamic than the possible entry on F. The alterations and adjustments in the succeeding entries are readily understood within the context of the direction of the voices in the complete tonal organization.

The exactness of imitation does not appear to be a criterion in this example. While the later terminology, *real* and *tonal*, may seem applicable, the connotations of these terms is quite different. I prefer the terms *exact* and *inexact*.¹⁷ The entry on Bb is inexact, as are the succeeding altered entries. The two entries of the bass determine the tonal structure of the entire movement. Its entry at measure 3 affirms the tonic in its stepwise descent through the triad, completed at measure 7. Its second statement, following almost immediately after, prolongs the IV chord (Bb), and it is altered so that it arrives to fit in with the beginning of a definitive IV-V-I progression of the dominant, which is attained at measure 14. The entire harmonic progression is shown in the example. It is clear that the shape of the incipit, the order of the succession of the voices, and the time factor between entries all combine to determine the initial tones, the degree of exactness, and the relationship to the entire tonal structure. Although the initial tone, g, is neither the root nor the fourth or fifth of the final, F, it is not "out of key." It is part of a totally integrated beginning within F Ionian. The total clarity of the succession of entries is not only affirmed by the bass entries but also by the added entry in the uppermost voice at measure 12. The statement is augmented, thus delaying the motion to the third tone, e', which falls as a result on the important V chord (measure 14). It continues to the close of the movement in a descent outlining in stepwise motion the entire octave f' to f, by this means affirming the tonality.

Bass Motion

IN MANY of Palestrina's compositions the lowest voice has a double responsibility, not only sharing with the other voices the statements of melodic units, but also providing the foundation for tonal unity. This occurs not alone at cadential points but throughout units and in large-scale dimensions. Neither Fux nor Jeppesen discusses bass motion in his treatise, and motions in fifths rarely appear in their examples other than at cadences. In the four-voice examples they are more frequent, but they do not have harmonic impact. Andrews calls attention to the "special treatment of the bass," but the discussion is very brief, superficial, and incorrect; it concludes with the statement "Palestrina's basses, however slow moving and disjunct, still preserve the essential character of the pure polyphonic line."¹⁸ In Example 2 the words "suscipe deprecationem nostram" are represented through a motion from the A chord. This chord, in terminating the preceding text phrase "Qui tollis . . .," is minor, attained through its own dominant, the E-major chord, with G# stipulated (measures 72-75), and then becomes A major at measure 81. The A-major chord is prolonged through a series

17. Modes are undeniably a factor in these relationships, but this is a separate topic. For additional comment on Palestrina, see Lowinsky, *Tonality and Atonality*, 31.

18. Andrews, 59.

EXAMPLE 2. *Missa Sicut lilium inter spinas*, Gloria, mm. 73-86

a.

b. Reduction

of successive descending fifths, A-D-G-C-F, followed by a quickly rising motion to A. It is here that, so as to conclude the phrase, the A chord, still major, resolves as a dominant to the D chord. Even at this point the D, as a major chord, moves strongly into the next text phrase, "Qui sedes . . .," which commences with the G chord. The strong harmonic character of these successive fifths, intensified by constant leading tones with the necessary accidentals stipulated, must be recognized. Earlier, in the same Gloria, the articulation of "Laudamus te. Benedicimus te. Adoramus te. Glorificamus te" is strengthened by a similar succession of fifths, each motion contained within each text unit, and all unified through the large-scale prolongation of the A chord, the section as a whole terminating on the A-major chord. The stipulated raised third is a concluding sonority factor, as is shown by the immediate appearance of the A-minor chord that begins the next text phrase (Example 3).

EXAMPLE 3. *Missa Sicut lilium inter spinas*, Gloria, mm. 8-17

N.B.: All accidentals shown are stipulated.

Bass motions sometimes take on a character that truly foreshadows the personalities of bass lines in early seventeenth-century music. They are unlike the upper voices. Although a bass line may begin a section as an interphonic repetition or first statement, preceded or followed respectively by an upper line, it will change its shape in such fashion as to direct its motion to a specific tonal goal, especially a cadence. Sections from a Credo by Palestrina are quoted to illustrate this point (Example 4). The descending motions to the dominant and to the tonic are used repeatedly. The pattern at measure 218 is not unlike a characteristic Italian dance type of the early seventeenth century. At measure 225 the polyphony of the last section of the Credo is supported by a bass motion which descends through the entire octave, c to C. The boundaries of the bass in the entire Credo lie within the octave c to C, the lower C always attained through a V-I progression or through a descending linear motion.

EXAMPLE 4. *Missa Ave Regina coelorum*, Credo, m. 180ff.

Qui - cum Pa - tre....

Pro - phe - tas.

218

mor - tu - o - - - rum.

225

Et vi - tam ven - tu - ri sae - cu - li A - - - men.

reduction 1

5 - 6

reduction 2

The bass in the succeeding Sanctus expresses the significance of the descent even more strongly (Example 5). In measures 2-6 the bass descends by step from c to G. In measures 11-15 the bass is repeated exactly, but commencing on F and falling to C. Thus the c-C octave is divided into two equal parts with design repetition. The setting of the Osanna in the same Mass, *Ave Regina coelorum*, is entirely on four statements in the bass of a complete octave, as in the Credo example, from c to C, with complete or partial stepwise motions divided into several harmonic parts.

EXAMPLE 5. *Missa Ave Regina coelorum*, Sanctus, mm. 2-18

San - - - ctus, San -

- ctus. Do - mi - nus etc.

It is thus evident that the frequent octave ambitus of the tonic, and its divisions, sometimes clearly profiled by thematic repetition, defines the causal role of the bass.¹⁹ Melodic repetition, whether within the same voice or in different voices, is well controlled and fused with tonal organization, as is shown in Example 6, from Palestrina's *Missa Ascendo ad Patrem*.

EXAMPLE 6. *Missa Ascendo ad Patrem*, Kyrie I, mm. 12-19.

cantus

bass

Ky - ri - e - le - i - son % etc.

The concluding motive of Kyrie I is first stated by the lowest voice at measure 12 in such a way as to move from the tonic C to the dominant G. At the moment of arrival on this G the cantus enters with the motive, beginning on d', which not only permits the motive to be prolonged within the G chord but also prepares the entry of the lowest voice with the motive again at measure 16. The bass, too, starts on the tone D, but in its descent its goal is the D chord, a full-fledged major triad with stipulated f#. This chord, V of V, strengthens the attained dominant that closes the movement. The concluding short section (not shown in the example) lies within the C chord. This does not function as the tonic. Rather, it is a neighbor IV chord lying within the prolongation of the dominant, G, and functioning as the so-called plagal IV. The section is tonally open-ended, with the final dominant leading into the Christe setting, which begins in the tonic.

Sequences intensify motion through the repetition of melodic units that commence on successive pitches. Palestrina employs descending sequences in stepwise order, which thus move very strongly toward a goal, as can be seen in Example 7.

19. Such tonal-defining functions are not new. In the works of Palestrina they are frequent and clear in their function. For a fascinating example in Josquin Des Prez, see Saul Novack, "Tonal Tendencies in Josquin's Use of Harmony," in *Proceedings of the International Josquin Festival-Conference*, ed. Edward E. Lowinsky in collaboration with Bonnie J. Blackburn (London, 1976), 330-33; my article provides an analysis of an entire motet, *Levavi oculos meos in montes*, organized by variations of descending bass motions.

EXAMPLE 7. *Missa brevis*, Kyrie II, mm. 45-51

Tonal Prolongations

THE IDEAL of the art of counterpoint attributed to Palestrina rests primarily on the flow of consonance and dissonance and on smooth linear motion. Chords are regarded as incidental to these factors, without any functional significance. We have already seen that this is an incorrect view. Harmonic functions are expressed in V-I motions, in other fifth relationships, and in their expanded harmonic progressions, not necessarily confined to cadences. Chord prolongations frequently guide the voices. Consequently, the linear flow of contrapuntal activity is controlled by the sense of a chord or chords being sustained over a time-space determined by the tonal processes. The simplest examples are to be found in codas, which almost consistently create the prolongation by means of combined neighbor motions and voice exchange, as is evident in Example 8. The prolongations in the example are only a schematic representation of two types. In actual composition the number of measures involved and the techniques used vary.²⁰ The previously examined Kyrie I of the *Missa brevis* serves as a good ex-

EXAMPLE 8



20. See, for example, the various endings to the sections in the *Pope Marcellus Mass*, particularly the seven-voice Agnus Dei II. The texture of seven voices imposes a relatively more intensive requirement of prolongation control on the individual voices.

ample (see Example 1). The interphonic incipit is triadic, terminating with a fall to the root. The bass entry at measure 9 begins a prolongation of the Bb triad starting on the first degree. The continuation is altered to preserve the prolongation of the chord. The voice leading at measures 13-14 is conditioned by the harmonic motion IV-V-I of the dominant, C. Triadically conditioned neighbor-tone and passing motions are found in all the voices in terms of the prolongations and/or harmonic goals.²¹

The Uppermost Voice

THE UPPERMOST voice has a special character in addition to its melody-carrying role. Its ambitus, partly conditioned by the mode, frequently defines the central tone that is being prolonged, both in small and large units. Palestrina is far from consistent in exploiting this concept, but it manifests itself often enough to merit our attention. The line created by the top voice is generally a descending one, hence a literal exhibition of the quality of gravitation to which Bukofzer refers. While it occurs most frequently in the drive towards the cadence, it is present elsewhere as well, thus fusing with the lowest voice in defining units. This stepwise motion of descent fills in the octave, scale steps 8 to 1, or the fifth, 5 to 1, or the third, 3 to 1. Palestrina most often uses the established cadential figure in which 2 moves to 1 by way of the leading tone. In Example 6 above, the cantus descends an entire octave, g'-g, in the prolongation of the dominant, G. Units of text frequently are marked not only by units of bass motion, but also by descents of the uppermost voice to the first degree. This voice may also play a role in the molding of form. In the Credo of the *Missa brevis* (an example too long for quotation) the line falls in each unit, but does not reach the first degree except at the end of the text phrase "per quem omnia facta sunt" (measure 41). At the end of the Credo, however, the setting of "Amen" is characterized by an extended sequential descent of the outer voices in parallel tenths, the inner voices joining in quasi-fauxbourdon style, so that all serve as a fitting climax to the form of the movement as a whole.

The contribution to form made by a descending line is shown in the following example from Palestrina's *Missa De Beata Virgine*. The closing section of the Kyrie II setting is divided into two parts by (a) polyphonic repetition, (b) harmonic motion (IV-V and I-V-I), and (c) reiteration of the descending line. The harmonic motion and the descending line in the cantus together create a

21. An excellent example of tonal prolongation in Palestrina's music is provided in Felix Salzer and Carl Schachter, *Counterpoint in Composition* (New York, 1969). In a detailed analysis of Agnus Dei I from *Missa Veni sponsa Christi* (pp. 413-17), the contrapuntal motions and the activities of the voices within the prolongations of the chords are represented graphically. The final reduction (p. 417) indicates the background of the mainly contrapuntal prolongations within the basic harmonic framework, I-IV-V-I. While there may be some reluctance to accept the final Schenkerian reduction, the forces of tonality in its extended form and the individual chords projected beyond the immediate are made obvious through the analysis.

beautiful inner form characterized by interruption: instead of falling from 2 to 1 at measure 42, the top voice, together with the other voices, commences again, the second time falling to the final tone by way of the leading tone. The extension leading to the resolution in the second statement attains through this artistic delay a lovely realization of the terminus.

EXAMPLE 9. *Missa De Beata Virgine*, Kyrie II, mm. 37-48

The endings of the uppermost lines after the descent has occurred are at times somewhat misleading. Palestrina is fond of superimposing a third over the first degree, either almost directly at the final cadence or indirectly through subtle preparation in the penultimate measures. This procedure of substitution is intended to secure a desirable sonority on the final chord, the third usually being major, either as a diatonic note or as a stipulated accidental. In such cases the continuation of the descending line from 2 to 1 is most frequently transferred to the altus.

Harmonic Function

IT IS NOT necessary at this point to illustrate the various types of harmonic function used by Palestrina, both at internal and final cadences and in large-scale prolongations of various chords, including chords such as the subdominant and dominant, which not only function as structural harmonic chords but also are themselves prolonged harmonically. (See, e.g., the discussion of the Kyrie of the *Missa brevis*, Example 1.) Successive fifths as major chords via stipulated raised thirds, and applied dominants are often used. These functioning chords combine with the direction of the voices and repetitions of design to create inner form and a strong sense of tonality.

In closing, attention can fittingly be given to the previously cited study by

Lewis Lockwood.²² In his very informative discussion and analysis of Kyrie I of the *Pope Marcellus Mass*, Lockwood describes the larger layout of this movement and its divisions, considering the facets of rhythmic, linear, contrapuntal, and harmonic elements. He accepts the role of C as the tonic, "solidly planted" at measure 9, though he views the preceding measures as ambiguous. A few additional observations may help to explain the fusion of tonality and melodic design. (Since this Mass is available in a number of editions, Kyrie I is not reproduced here.)

1. The opening interphonic statement of the initial motive ("point of imitation") is closely related to the tonal organization. The leap of the fourth after the repeated tone constitutes the essential motive. The succeeding portion is not repeated other than in some form of descent. Bass 2 and bass 1 follow each other significantly. The entries are as follows:
 - a. tenor 2, on d;
 - b. cantus, above the tenor's d, on d', an octave above by necessity;
 - c. bass 2, entering below d and d', on G, a fifth below, by necessity; (The shape of the bass now determines the shaping of the other voices. After the leap of the fourth to c it falls stepwise and returns to G, the other voices joining together in the G-major chord.)
 - d. altus, entering on g, an octave above bass 1, foreshortening the motive after the leap and resolving on b, the third of the G chord;
 - e. tenor 2 and bass 1 entering successively within measure 5 at d and G, both within the prolonged G chord.
2. The G chord is prolonged within measures 1-4. Each voice is controlled by this prolongation, not only in entry but also in shape. The cantus moves down an octave; the altus, from g to b, with c as an incomplete neighbor tone; tenor 1 prolongs d with an outline of the intermediate C chord (g-e-c). The C chord in measure 3 should not be construed as the tonic. In the succession of the chords, G-C-G, the C chord functions as a neighbor, subservient to G, which is being prolonged for four measures. The motion is outlined in Example 10:

EXAMPLE 10

3. The prolongation of G is continued through measures 5-8 with the same motion as in measures 1-4, bass 1 providing the structural foundation. Again each of the voices above moves within the chords in a directed fashion, outlining the prolonged G-C-G. Significantly the uppermost voice elaborates the neighbor-tone

22. Cited in n. 6 above; see esp. pp. 91-94.

motion, $d'-e'-d'$. This neighbor motion pervades the Kyrie I setting and can be considered a unifying motive.

4. At measure 9 bass 2 enters for a second time, beginning now on C. It is at this point that the resolution of measures 1-8 is finally achieved and, as Lockwood states, C as the tonic is "solidly planted." Thus, the opening measures, while possibly exhibiting tonal ambiguity, really serve as an artistic preparation for measure 9. The shape of the theme and the interphonic continuity demand this open beginning. The initial leap, $d-g$, answered by $g-c$ was necessary. Had Palestrina begun on g , the order would have been $g-c$ followed by $c-f$, which would have thrown the motion toward the subdominant. Obviously, Palestrina preferred gaining C at measure 9. (While such preparatory openings may appear to be deceptive, tonal structure like this is a possibility to be found in music of all styles.) From measure 9 on, the tonic is asserted without any doubt. The F-major triad at measure 10 is incidental to the prolongation of the C triad.
5. The close of the form of Kyrie I is attained with the support of chords that function harmonically. At measure 17 the tonic moves through ii^6 to V to I (measure 18). A repetition for the close of the form occurs through measures 18 and 19, with an extension delaying the final resolution for several additional measures—actually until measure 21. It is at this point that the coda begins.
6. The coda, measures 21-24, is typical. The sustained tone in the uppermost voice is the first degree, the tonic. It is similar to the schematic representation previously cited (see Example 8). In later usage this double neighbor-tone motion is realized above the sustained tonic via the well-known $\frac{6-3}{4-3}$ device and its expansions.
7. Throughout the entire Kyrie I it is apparent that the basic tonal structure has conditioned the flow of the voices. The tonal division of the entire setting is in three parts:

A measures	1-8, V;
B	9-16, I;
C ¹	16-18, I- ii^6 -V ⁷ -I; the dissonant 7 is passing;
C ²	19-21, repetition with extension of the close;
coda	21-24, I prolonged (I-[IV]-I).
8. The outer voices provide the framework. The cantus in each statement moves within an ambitus that defines the prolongation. On a larger scale its motion of tonal definition is fused with design, as the closing phrases indicate. The motion of the cantus is as follows:

measures 10-12	C chord prolonged, terminating on e' ;
13-15	same motive, terminating on d' ;
16-18	concluding motive terminating on c' ;
18-21	concluding motive repeated and extended terminating on c' through the leading tone.
measures 10-21	$e'-d'$ // $e'-d'-c'$ ($e'-d'-c'$ repeated) //
	I-V // I- ii^6 -V-I //
9. The linear flow of the voices has been guided by the prolongations of the chords that function in the dividing of the Kyrie. Each of the voices individually can be accounted for in these terms.

This brief essay on an enormous subject is not offered as a comprehensive study. Through a few examples I have sought only to focus on a handful of points which seem appropriate. A study of these examples suggests the need for a reassessment of Palestrina's style. The evidence of the music itself is that it is tonal, and the tonality is based on the triad, major and/or minor. Tonality and modality are different phenomena; the former does not evolve from the latter. While the ultimate major and minor modes proved to be the most successful modes for the projection of triadic tonality, other modes have always retained the capacity to prolong a central tone, with varying degrees of success depending on the art of the composer, and with varying degrees of intensity related to the admission of nonmodal tones through stipulation and *musica ficta*. There are tonal composers of the twentieth century who do not use the major and minor modes or the triad. Nor have the major and minor modes been pure, for in their history they have taken on various types of mutations and mixtures. In the music of the sixteenth century the harmonic factors constitute only one ingredient of the tonal process.

I have tried to point out some of the compositional factors that contribute to the tonal process in Palestrina's music. They vary considerably, and further study is needed to show the differences between various types. In the movements of the Mass, for example, Kyrie settings offer ideal examples of abstract music, since there are only two words in their text. This is also true for the Osanna. Gloria and Credo movements have a different kind of orientation, as do motets and madrigals. There are differences in prolongation techniques of the individual lines related to the number of voices involved. Special problems arise with respect to Masses based on another composer's work, but at the same time these pieces provide fascinating material for a detailed study of Palestrina's compositional techniques, the matrix being present before the composition. Another area to be examined concerns the relationships of tonality to the various modes and "tonal types." We also must review the relationship of Palestrina's style to the continuum of sixteenth-century composition.

Fux's species concept still remains a brilliant achievement of great value to the study of counterpoint and to the analysis of contrapuntal principles in all styles based on triadic tonality. It is not, however, an exposition of the music of Palestrina. The rules and exercises in Jeppesen's admirable text on counterpoint do not contradict the connective techniques in individual measures and small extensions within Palestrina's music, but it is a connection constructed of small mosaics and does not offer us a key to the organic compositional style of Palestrina. We demean Palestrina's art by concentrating on them. Finally, I believe that a consideration of the principles and points I have raised will contribute to revealing Palestrina to be an even greater master than is universally acknowledged.