

The *Symphonia harmoniae caelestium revelationum* by Hildegard von Bingen (1098-1179) occupies a unique and uncertain position in music history. This cycle of seventy-seven liturgical items and a liturgical drama, the *Ordo virtutum*,¹ exists on the periphery of chant scholarship, although it is occasionally, albeit tentatively, included in discussions of the Latin religious song of the twelfth century. For musicologists, two consequences of this uncertain position have been the continued treatment of the *Symphonia* as if it existed in an historical vacuum and the consideration of Hildegard the composer as if she were peerless. The uncertainty surrounding one issue in particular, that of Hildegard's compositional process, can only compromise efforts to place Hildegard within a musical tradition.

To date, musicological studies of the *Symphonia* have depended upon the analysis of musical structure for an insight into Hildegard's compositional process. Two scholars come to mind as having considered the entire repertory: Ludwig Bronarski, who authored the first complete study of the *Symphonia*, and Marianne Richert Pfau. Bronarski's methodological focus is exclusively historical, that is, it relies upon the traditional concerns of mode and genre for information about the compositional process. The narrowness of his methodology and a desire to explain Hildegard in historical terms led Bronarski to impose upon her music the technique of centonisation.² This prompted the following conclusion:

Die Melodien Hildegards sind nach folgenden Prinzipien gebaut: Sie bestehen nicht aus ausgewachsenen musikalischen Linien, aus weit und zielbewußt gesponnenen melodischen Bögen, sondern setzen sich aus kurzen Abschnitten, kleinen musikalischen Phrasen zusammen, die aneinandergereiht werden.³

[Hildegard's melodies are constructed [according] to the following principles: they consist not of complete musical lines, of long and purposefully invented melodic curves, but are made up of short segments, small musical phrases which are strung together.]⁴

Pfau's examination of melodic shape and structure in Hildegard's melodies forms the basis of a well-rounded methodology which also takes into consideration the traditional concerns of mode and genre. Her conclusion about Hildegard's compositional process, though less certain, is infinitely better informed than Bronarski's:

Hildegard's compositions appear... as processes that entail the shaping of the melody in conjunction with the delivery of the text, that involve the formal unfolding of each phrase and of the piece as a whole.⁵

A study of Hildegard's compositional process should necessarily involve as many areas of consideration as possible. The present assessment will take into consideration two areas of concern commonly overlooked by scholars: the musical language in which Hildegard was immersed and its relation to contemporary theory; and the most frequently dismissed and least understood aspect of the *Symphonia*, the notation used to preserve Hildegard's melodies.

Two twelfth-century manuscript copies of the *Symphonia* cycle survive: Dendermonde St.-Pieters & Paulusabdji MS. Codex 9 and Wiesbaden Landesbibliothek Hs.2 (the *Riesenkodex*).⁶ One of four principal liturgical functions is assigned to each of the seventy-seven items: antiphons, responsories, hymns and sequences. These liturgical forms are homogenised: all antiphons, including multiple-verse ones, are presented as a single text, and many are accompanied by a psalm cadence; verses and second repetenda divisions are indicated in responsories, although doxologies are not always present; hymns, both textually and musically, consist of a series of single stanzas; and sequences generally follow a set textual and musical pattern of paired stanzas.⁷

In both manuscripts, these liturgical forms are organised according to subject matter beginning with God the Father and descending through the celestial hierarchy to individual saints. The preference given to subject matter as a means of redactional organisation, while unusual, is not unprecedented.⁸ A secondary principle of organisation is discernible; antiphons and responsories are arranged together within subject groups and are separated from longer items, principally sequences and hymns.⁹ There are only three items in the repertory for which a liturgical function is not indicated: two *Symphoniae*, *O dulcissime amator* and *O dulcis electe*, and one 'song' devoted to the Virgin, *O viridissima virga*.¹⁰ These items are more properly described as non-liturgical, that is, there is no evidence that they were ever integrated into any official liturgical service. Two other items complete the collection, an Alleluia verse and a *Kyrie* setting.

During Hildegard's life time, the practice of the liturgy was in no way standardised. Religious commu-

nities were under the control of regional authorities and liturgical practices were to a large extent localised. Furthermore, diocesan control over individual monastic communities was 'often very loose',¹¹ and this allowed for the development of new ways to conduct the liturgy. The practice of liturgical embellishment, which is generally thought to have involved the integration of newly composed chants into established services, was tolerated by the Church,¹² and a substantial amount of new chant was composed during the twelfth century. New feast days and a heightened appreciation of the Virgin were two factors which contributed to its composition; the forty-three items in the *Symphonia* devoted to either local saints or the Virgin account for well over half of Hildegard's musical output.

There is no indication in either *Symphonia* manuscript of how these items were integrated into official liturgical services or for which feast days individual items were intended, although there are a number of items devoted to saints with only one feast day. Furthermore, some forty-three *Symphonia* song texts appear in manuscripts outside of the *Symphonia* cycle. Set within the context of letters and didactic writings, these song texts probably once assumed an expiatory role, since liturgical functions are not indicated.¹³ Of the three items preserved with music outside of the *Symphonia* manuscripts, only Hildegard's *Kyrie*, by virtue of its text, appears to have been written specifically for inclusion in the liturgy.

Nearly thirty of these song texts appear in manuscripts which predate the two *Symphonia* sources. In the case of these thirty, liturgical functions were most likely assigned *a posteriori*. Furthermore, it is possible that other liturgical items were originally conceived as either extra- or non-liturgical. As a cloistered woman, Hildegard engaged in the discourse of praise communally, through participation in the Mass and the Divine Office, and through individual contemplation. The separate documentation of the seventy-seven *Symphonia* items suggests that individual items were either integrated into services when the need arose or used in private worship.

The contemporaneous view of the liturgy as subject to variation or embellishment meant that newly composed music generally referred to as extra-liturgical coexisted with chants which, by the twelfth century, were at least several hundred years old. The differences between the new chant found in the *Symphonia* and traditional chant may be approached from a consideration of the criteria of mode and liturgical function. These criteria were essential for the organisation of the enormous body of chant needed to complete a full yearly cycle of the Mass and Office. The

degree to which Gregorian chant, for example, agrees with the specifications of genre and mode is such that these criteria provide a foundation from which the stylistic differences between chants naturally emerge.¹⁴ When applied to the *Symphonia* however, the criterion of mode often proves inapplicable and on its own reveals little about the music. Liturgical function is equally unrevealing, beyond the observation that antiphons and responsories are given melismatic settings and the stanzaic songs syllabic ones.

Modal classification of Hildegard's melodies is undermined by three factors: range, *ficta* (or the use of the b-flat), and modally unstable melodic progressions. Hildegard's excessive ranges prohibit their categorisation as either authentic or plagal. The use of b-flat in melodies, especially those which begin on a and c, tends to obscure intervallic associations with the four *maneriae*, or modal groups. There are long passages of melody which appear wholly unconnected with a designated final; the theoretical recommendation that the final should act as a central pitch was not always adhered to. In preference to an acceptance of this notion, it has been suggested that the manuscripts harbour a considerable amount of scribal inaccuracy.¹⁵ These observations seem to render modal classification of most *Symphonia* items a superficial and unproductive exercise.

What has been previously ignored here is the possibility that musical experimentation was widespread during this period. In the quest for an explanation for Hildegard's wide ranges, use of *ficta* and melodic peculiarities, a consideration of the Cistercian chant reforms offers a particularly good basis for contextualisation. The lack of uniformity between monasteries and the apparent freedom with which chant was sung were important influences on the Cistercian reform movement during the mid-twelfth century. Central to this movement was an attempt to unify monastic code and practice between Cistercian houses. Consequently, the reworking of Mass and Office chants was high on the Cistercian agenda, and revisions to their antiphony were conciliated by c.1147.¹⁶ One direct consequence of the Cistercian reform movement was the 'drastic alteration' of existing chant.¹⁷ The principle exponent of the Cistercian reform movement was Saint Bernard of Clairvaux (1090-1153), with whom Hildegard corresponded.¹⁸

It is of particular interest here that the Cistercian reforms represent a systematic reworking of melodies originally composed or copied according to principles that were not strictly theoretical; as Chrysogonus Waddell puts it, 'Bernard's chant reform had been chiefly the work of "Hyperlogicians", who systematically mutilated traditional melodies in virtue of artifi-

cial theories in profound contradiction with the true nature of the chant'.¹⁹ The revised antiphony was accompanied by an *Epistole* by Saint Bernard and a *Praefatio* which offered the theoretical basis for the revisions.²⁰ The author of this treatise used up a lot of parchment space not only reiterating the rules governing the modes but also what mistakes were being made by cantors and scribes. His objections to unsound practices give a strong indication of what was actually occurring.

The author had some particularly stern words of warning for those engaged in the disdainful practice of exceeding the range of an authentic or plagal mode:

Plane igitur insaniunt qui plagalem elevare per diapason, et autentum per diapente vel diatesseron deponere praesumunt. Ut quid enim fiunt vel habentur huiusmodi cantus, graves quidem ad notandum, graviore ad cantandum lineas variantes, arterias cruciantes, cauteriatam habentes progressionem, nunc ascendentes usque ad caelos, nunc descendentes usque ad abyssos?²¹

[Clearly therefore, they are out of their minds who dare to raise a plagal through an octave, or to lower an authentic a fifth or fourth. To what purpose are such chants composed or kept in use, too low for notation, lower still for singing, causing a change of clef lines, torturing the vocal chords, having an endless range, ascending at one time to the skies, and descending at another down to the abyss?]²²

The majority of Hildegard's items have a range of an octave and a perfect 4th or 5th, precisely that complained about here. Several items encompass up to two octaves and one item, the responsory *O vos angeli*, covers the entire medieval gamut, from G to d'. It is clear from the above objection that Hildegard was not the only monastic guilty of composing melodies with excessive ranges.

Only four of her items have the range of a 9th, the permitted range for liturgical chants, and only one, an antiphon devoted to Saint Ursula entitled *Studium divinitas*, falls within the range of an octave (Example 1). In this antiphon, the final, E, is surrounded by the octave C to c. Assigning a mode to this antiphon is a difficult task as the melody rises from the final to the 5th above, b, at two points; this would imply that the

modal range is authentic. The melodic phrase over 'cum turba sua' centres on the note a, the plagal reciting tone. The octave above the final, which delimits an authentic range, or the 4th below, which delimits a plagal one, do not appear. Even a melody whose range is narrow enough to allow for description as either an authentic or plagal displays traits of both categories.

It would appear that Hildegard was unconcerned with the theoretically contrived placement of melodies within designated authentic or plagal ranges. This lack of concern was not particular to Hildegard; the author of the *Praefatio* also acknowledged that during this period there were many chant melodies in which the authentic and plagal ranges were 'so intermingled' that modal designation was not possible.²³

Hildegard's melodies agree with a number of theoretical recommendations however, and several of these recommendations relate directly to the medieval gamut. The notes of the gamut were derived from nature and determined by a mathematical process.²⁴ Even if Hildegard were unaware of this process, it is apparent that either she, or her neume scribes, were mindful of which notes were admissible under this system; all her melodies, with the exception of one phrase in the antiphon *O choruscans lux stellarum*,²⁵ are preserved within the range of the gamut.

The note b-flat was sanctioned by theorists as a means by which the tritone between F and b could be avoided. B-flat is the only 'false' note found in the Hildegard repertory, again with only one exception in *O quam preciosa* (see Example 4 below).²⁶ The theoretical basis for the use of b-flat is well documented, and Hildegard's use of it may be readily compared with theoretical treatment. In his treatise *Micrologus* (c.1026–28), Guido of Arezzo recommended that the b-flat should only be used to make a concord with f; in other words, b-flat was included so that the tritone could be avoided.²⁷ The author of the *Praefatio* recommended that the b-flat be used 'to preserve a pleasant sound in many chants, a sound which the tritone, which ends on b-natural, would otherwise weaken or destroy'.²⁸

Hildegard's *Kyrie* setting (Example 2) offers a good point of departure for a discussion of the use of b-flat in this repertory. This is the only item in which the note F appears as a final, and as the note b always occurs in close proximity to the final, it is always flattened. The

Dendermonde Cod. 9: fol. 167v

Example 1: *Studium divinitas*

Example 2: *Kyrie eleyson*

Kyrie is preserved in two manuscripts: the *Riesenkodex* and Vienna, Österreichische Nationalbibliothek Cod. 1016, which dates from the twelfth century. In Vienna 1016, b-flat is included beside every appearance of the note b. In the *Riesenkodex*, only one b-flat is indicated, over the final syllable of the second 'Kyrie eleyson'. Here, the notes E and b form a perfect 5th, and the avoidance of one tritone, b-F, results in the creation of another from E to b-flat. It is at this point of possible confusion that a flat is indicated; all others were taken as read. It is also noteworthy that the upper tritone from f to b is avoided entirely. Therefore, no distinction can be made between theoretical recommendations and practical use of the b-flat in Hildegard's *Kyrie*.

The use of the b-flat as a means of avoiding the tritone proved to be a significant hindrance for accurate modal designation. The author of the *Praefatio* recommended that the use of b-flat should not interfere with the 'natural scheme of the finals' and was not to be 'taken into account' when defining the mode of a

chant.²⁹ For example, whole-tone intervals either side of the note a, a first *maneria* final, were theoretically required at phrase ends. Phrase ends which concluded by a semitone step could have otherwise be mistakenly identified as belonging to the second *maneria*.

In the antiphon *O magne pater* (Example 3), the first flat appears in both sources over the phrase 'quibus indigemus'. In the Dendermonde source, the second flat is indicated over the second syllable of 'quibus'. In the *Riesenkodex*, it is indicated over the second syllable of 'indigemus'. The end of this phrase coincides with a grammatically complete phrase of text, and neither source indicates that a flat should be sounded, even though it was possible that one appeared in performance. A b-flat is indicated on the third syllable of 'aspicias' in both sources; no flat is indicated over 'nos' at the end of the phrase. A similar melody occurs over 'nomen tuum', and a flat is indicated in both sources over the final syllable of 'nomen'. Again, no flat is indicated in either source over 'tuum' at the end of the

Example 3: *O magne Pater*

phrase. In the final phrase of the antiphon, a flat is indicated before the notes b-c-g in the *Riesenkodex*; in the Dendermonde source however, the flat is omitted and an *oriscus* is added to the c immediately preceding. It is possible that the *oriscus*, a neume which describes a repeated pitch, was added to soften the tritone, so that the intervallic integrity of the first *maneria* could be preserved for the entire phrase. It may therefore have been possible that Hildegard or the neume scribes were aware of this concern.

If one considers the context in which the b-flat is found in these two examples, it may be surmised that the b-flat was used according to the principle which allowed for its inclusion in the gamut: the avoidance of the tritone. It may also be surmised that the use of the notes a, b, c and C as finals aided the avoidance of notes which were not included in the gamut. This is not to suggest that Hildegard's items which have these notes as finals necessarily represent direct transpositions of melodies which originally began on D, E, F or g. Rather, all notes of the modern octave from C to c were used as finals, and this allowed for a wide range of melodic possibilities without the inclusion of notes which were foreign to the gamut.

The possibility that foreign notes were sounded in practice, however, is implied in the responsory *O quam preciosa*, which begins and ends on the note D (Example 4). All phrases in this responsory end on either the final or the 5th above, the note a. In the first verse of this responsory, a flat sign is indicated over the first syllable of 'habet' but is positioned in the E space in the manuscript. At first glance, this flat would appear to be either a hexachordal indication or scribal error. Upon closer inspection, this flat appears to be an unusual solution to an otherwise insoluble problem. As in the *Kyrie*, the avoidance of one tritone here creates a second tritone. As there is no other position on the gamut where this responsory might have been placed without the use of notes not included in the gamut, the E-flat seems to offer a convenient solution. As this flat was possibly intended to flatten the note E, then Hildegard's use of alternative finals may represent a desire to avoid such *ficta*.

Riesenkodex: fol. 468r



Example 4: *O quam preciosa*

With regard to theoretical treatments of the gamut, it would appear that Hildegard's melodies are not so removed from tradition as previously thought. Nonetheless it is clear that theoretical exactitude was not a primary concern for Hildegard. Rather, her primary concern was to praise God to the best of her ability. In her earliest written work, the *Scivias*, which was written between 1143 and 1151, she writes:

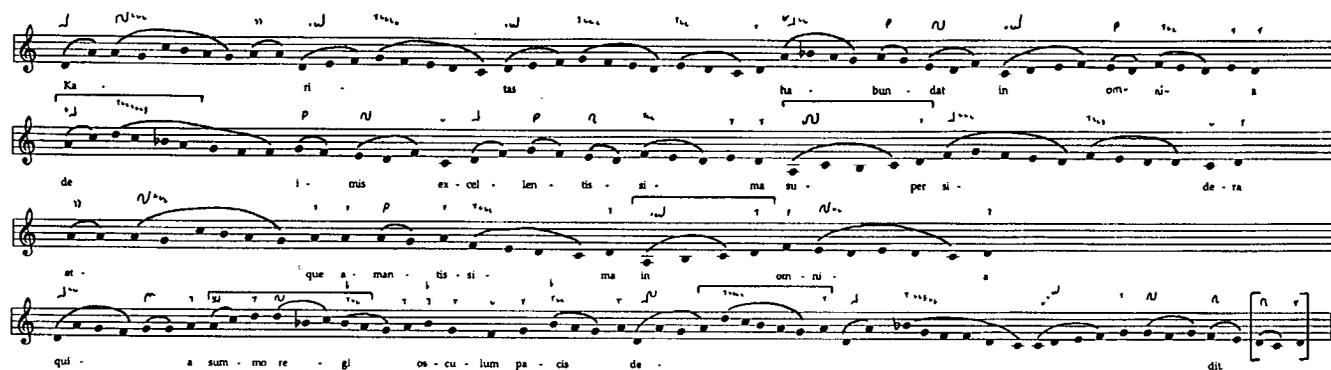
Quapropter et sonus ille, ut vox multitudinis in laudibus de supernis gradibus in harmonia symphonizat, quia symphonia in unanimitate et in concordia gloriam et honorem caelestium civium ruminat, ita quod et ipsa hoc sursum tollit quod verbum palam profert.³⁰

[And so that [sound], like the voice of a multitude, makes music in praise among the ranks of Heaven. For the song of rejoicing, sung in consonance and in concord, tells of the glory and honour of the citizens of Heaven, and lifts on high what the Word has shown.]³¹

It is of interest that the word 'symphonia', translated by Hart and Bishop as 'the song of rejoicing', was a standard musical term during the Middle Ages. Guido of Arezzo made use of this term in his *Micrologus*,³² in which it refers to the three intervals of the diatessaron (4th), the diapente (5th) and the diapacon (octave).³³ These three intervals form the basis for all of Hildegard's compositions. While Hildegard's preference for these intervals has been noted,³⁴ how these intervals related to the compositional process remains unclear.

In theoretical writings, it was recommended that the final should also act as a melodic centre.³⁵ Melodic centres have a different function to structural pitches, or those pitches which outline melodic contour. While all melodic centres may be said to have structural significance, not all structural pitches are melodic centres. In this repertory, melodic phrases are delineated by the textual phrases, that is, grammatical and musical pauses almost always coincide, a practice which was recommended by the theorist John in his treatise *De Musica* (c.1100).³⁶ Taking the beginnings and endings of text phrases as a guide to both structural pitches and melodic centres, the principal structural pitch, melodic centre and final are one and the same in many of Hildegard's melodies.

Recognition of which pitches define a melodic contour may be determined from 'position and repetition'.³⁷ Therefore, the repetition of a note at the end of successive phrases confirms its structural importance. Beside the final or an alternate note, the 5th above the final is the most commonly encountered melodic cen-



Example 5: *Karitas habundat in omnia*

tre; this 5th is usually complemented by the diatessaron which forms an octave above the final. The existence of the final and the 5th above as structural/central pitches are found in melodies which end on all finals, with the exception of the note b, of which there is only one example, the responsory *O viriditas digiti dei*.³⁸

This preference for diapente-diatessaron interval orders and the resulting diapason provides an almost text-book framework for Hildegard’s compositions. The antiphon *Karitas habundat* (Example 5) typifies those melodies which move within a final-5th-octave framework. The interval of a 5th sounded at the beginning of the antiphon sets up two melodic centres, the final D, and a. Both these melodic centres are complemented by the diapason; the 4th below the final appears over the words ‘super’ and ‘[amatissima] in’; the 4th above the note a appears over the words ‘de’, ‘sumo regi’ and ‘dedit’.

The movement from one note to the next within this framework appears to reveal what Waesbergher describes as ‘chains of 3rds’ which are generated from the final. According to Waesbergher, this chain of 3rds is complemented by ‘contrasting notes’, or those notes which belong to the alternate chain of 3rds.³⁹ For example, in the opening phrase of this antiphon the 3rd from a to c is juxtaposed with the 3rd from b to g. Following the leap from a to D, the 3rd from D to F is juxtaposed with the chain of 3rds C-E-g. Although similar chains may be identified throughout the antiphon, the notion that Hildegard’s music is essentially triadic contradicts the notion of consonance which is integral to the melodic structure.

An indication of the process by which these intervals were filled in is given in the notation used to preserve Hildegard’s melodies. This notation is usually and somewhat erroneously referred to as *Hufnagelschrift* [horseshoe-nailscript], a notational style particular to Germanic regions.⁴⁰ Other German notations, for example the so-called Messine notation, which lacks the ‘bulky strokes’ found in *Hufnagelschrift*, pre-

serve similar signs found in the Saint Gall sources.⁴¹ The Messine style of notation more closely resembles that found in the *Symphonia* manuscripts, and the *Symphonia* notation may also be compared to that of Saint Gall (Table 1).

| Neume | Symphonia (Rupertsberg) | St Gall |
|------------------|----------------------------|---------|
| <i>virga</i> | ∩ | / |
| <i>punctum</i> | ∪ | . |
| <i>clivis</i> | ∩ | ∩ |
| <i>podatus</i> | ∩ | ∩ |
| <i>torculus</i> | ∩ | ∩ |
| <i>porrectus</i> | ∩ | ∩ |
| <i>climacus</i> | ∩ | ∩ |
| <i>scandicus</i> | ∩ | ∩ |
| <i>quilisma</i> | ∩ | ∩ |

Table 1: Comparison of *Symphonia* and St Gall neumes

The vocabulary of neumes found in the *Symphonia* manuscripts is substantial. The combinations of neumes number around 170, and these are derived from eighteen distinct signs. The range of nuances that could be indicated with such a large number of distinct neumatic combinations is immense. Though precise performance of each neume is very much a matter of conjecture, notational accents may be identified, as the meaning of each sign remains the same regardless of its context. The neumes fall into three categories: basic neumes, liquescent neumes and ornamental neumes (Table 2).

Basic neumes are the building blocks of a neumatic vocabulary. These neumes indicate a single pitch or two or more pitches linked together. Liquescent neumes indicate a ‘liquescence’ in the text, such as a diphthong or doubled consonance. In order to facilitate the articulation of the text, the basic shape of a neume was altered. Liquescent neumes are traditionally thought of as unaccented.⁴² There are only two individual liquescent neumes in the *Symphonia* manuscripts; other liquescences are indicated by either a stroke at the end

The existence of neumatic accents is confirmed in the notation of the *quilisma*, which extends over the intervals of a 2nd, 3rd, 4th or 5th. As an isolated sign, the *quilisma* may be thought of as unaccented though it is most often preceded by a small *punctum*. When two or more pitches precede the *quilisma*, ordinary *puncta* are used.⁴⁵ The small *punctum* precedes this neume either on the same pitch as the *quilisma*, or is positioned a second lower. The position of the small *punctum* is often dictated by the modality of the item in question. If an item has one of four finals, D, F, a or c, then the *quilisma* accent usually occurs on a staff line and the small *punctum* precedes the *quilisma* on the same pitch. If the *quilisma* occurs on a note other than those which are tertially related to the final, then the *quilisma* is generally written with the small *punctum* as separate, and the middle note takes the accent. Use of the small *punctum* and *quilisma* on the same pitch level to accent pitches other than those thirds associated with the final is generally found at cadential points. In these instances, the *quilisma* is almost always found in combination with a neume which ends with a melodic centre.

As these signs indicate the performance of these melodies with extraordinary detail, manuscript copies could have easily served as a sound basis for performance re-creation for anyone familiar with the notation.

It is also clear that Hildegard's texts lack metric distribution, and it seems likely that Hildegard did not highlight text accents as part of her compositional strategy.⁴⁶ This allows for the possibility that Hildegard's musical settings were improvised over a given text. In light of Pfau's conclusion that Hildegard formulated her melodies 'in conjunction with the delivery of the text', it seems likely that the compositional process was one of performance, whereby a text was set to music as it was created or recited.

Consideration of the neumatic settings reveals that individual notes were often highly embellished. The subsequent complexity of neumatic description tends to obscure a simple principle of construction whereby melodic lines either centre around a single pitch or encompass the interval of a diatessaron or a diapente.⁴⁷ The process of approaching, quitting or decorating pitch centres may be observed in the antiphon *Karitas Habundat*. Here, the melodic possibilities afforded by movement around and between the four structural pitches of A-D-a-d are numerous. This is evident from a distributive analysis of the antiphon (Example 6) which takes into account the neumatic accents (indicated by dashes). It may be observed that no two sections of melody are exactly the same.

Dendermonde Cod. 9: fol. 157r

The image displays a musical score for the antiphon *Karitas habundat in omnia*. It consists of ten staves of music in a single system. The notation is neumatic, with Latin text written below the notes. Dashes are placed under certain notes to indicate neumatic accents. The text is: Ka - ri - tas ha - bun - dat in om - ni - a de i - mis ex - cel - len - tis - si - ma su - per si - de - ra at - que a - man - tis - si - ma in om - ni - a qui - a sum - mo re - gi ce - cu - lum pa - cis de -

Example 6: Distributive analysis of *Karitas habundat in omnia*

The melody is mainly centred around the final. The note a is established at the opening, but the diapente between a and D is not filled in initially. The note a is decorated within the interval of a perfect 4th from g to c, and the final is decorated within the interval of a perfect 5th from C to g. That is, the final and 5th are decorated within intervals that omit other structural pitches. The note a is quitted over 'habundat in omnia', and the note g, which frames both centres at the opening, is repeated over the second syllable of 'habundat'. This note links the two distinct pitch areas. A similar phrase of melody is located over 'de imis excellentissima'. The note a is complemented by a diatessaron, and the note F links the note a and the final. The note F also links these two centres over 'dedit' at the end of the antiphon.

The phrases over 'super sidera' and 'in omnia' share the same melodic outline, the perfect 4th from A to D, though the melodic progressions differ. In both instances the 4th is followed by a melody centred around the final, framed by the intervals of a perfect 5th and a perfect 4th respectively. The melody over 'atque' is the same as that over 'Karitas' at the opening; the initial note of this phrase is accented differently over 'atque' however. Again, the notes a and D are separated as the latter is decorated within the interval of a 4th, from C to F. The diapente from a to d is sounded twice near the end of the antiphon. In the phrase over 'summo regi', the progression includes repetition of the note b-flat, which links these two pitches, and the note a is framed by the perfect 4th from c to g. This note is then framed by the perfect 4th from b-flat to F over 'osculum pacis'. This contrasts with the decoration of the note a within the 4th from C to g found elsewhere. The melody over 'dedit' is different again. The intermediary note c between a and d is omitted, and the descending stepwise progression from d to a is uninterrupted.

This process of approaching, quitting and decorating pitch centres enabled Hildegard to create freely composed melodies within a stable final-5th-octave framework and allowed for a variety of juxtaposed diatessaron and diapente interval combinations. It also appears that the composer connected triads which emerged from this process. It may therefore be concluded that Bronarski's so-called juxtapositionings of melodic cells were nothing more than a preferred way of decorating a given melodic centre.

Hildegard's musical structures are not limited to the final-5th-octave paradigm, however. Though this paradigm is apparent in the majority of her seventy-seven items, eleven items include long passages of melody which juxtapose two or more frameworks. This is found in items which have either E, g or c as finals. The note E is the most frequently encountered final in the *Symphonia* collection, occurring in thirty-three items. The designation of the problematic note b as a structural pitch may be one explanation for the partiality towards this final. A total of seven E-final items contain phrases of melody which are framed by a different structure to the one outlined above. The notes D, a and c are the next most often encountered finals; of these, only one item with the final c juxtaposes two structural frameworks. The note g appears as final in only four songs, two of which contain sections which have multiple frameworks. In the original sources, two other items, *O dulcissime amator* and *O tu illustrata*, lack a stable melodic framework, and it is impossible to assign a final to them.⁴⁸ The frameworks associated with each final are given in Table 3.

The antiphon *O gloriosissimi*, devoted to the Angels (Example 7), gives an impression of the melodic possibilities afforded by the use of multiple final-5th-octave structures and the various ways of approaching, quitting and decorating melodic centres. The two versions of this antiphon are nearly identical, although the neumatic accents vary between sources.

The antiphon begins on the final, E, which is repeated at the end of the three phrases of melody over 'O gloriosissimi', 'lux vivens angeli' and 'qui infra'. Each phrase decorates the final in a distinct way. The phrase over 'divinitas' begins with a leap of a 4th from E to a; as in *Karitas habundat*, the a is decorated by the minor third above. The melody remains centred around the note E until 'obscuritate', and the melody leaps down a 5th from E to A. At this point, the note A becomes a melodic centre and the structural framework A-E-a manifests itself. This A-E-a structure is highlighted by the leap of a 5th between A and E over the first syllable of 'obscuritate' and of an octave from A to a between 'obscuritate' and 'omnis'.

The phrase over 'defideriis' is framed by the notes b and E, which are the two most commonly encountered melodic centres in E-final items. In the *Riesenkodex*, the *quilisma* accent falls on the note c, whereas in Dendermonde Cod.9, the accent falls on b. Similarly,



Table 3: Structural frameworks associated with each final

Example 7: *O gloriosissimi lux vivens*

the *quilisma* over the initial syllable of 'gloriosa' includes an accent on the note c in the *Riesenkodex* and one on the note b in the Dendermonde Cod.9. The final is briefly established as the basis of the final-5th-octave structure over 'gloriosa'. The A-E-a structure is re-established over 'gaudia illa vestra habet' and a third structure, D-a-d, is introduced at 'que in vobis'. These two contrasting structures are linked by the notes c and F, which form both 'functional units' with the notes D and a and are a minor 2nd above b and E respectively. Both F and c are neumatically accented in the phrase over 'forma'.

From 'que in vobis' until 'angelo', the melody is typical of those with the note D as final. The octave above D is introduced over 'intacta', and the 4th below D is introduced over 'voluit'. The phrase over 'opere' is noteworthy as the note a is decorated by the same melody that appears over 'omnis' near the opening of the antiphon. There, the note a forms part of an A-E-a framework; over 'opere' it is integrated into the D-a-d framework. As the note a is a structural pitch in both instances, this use of the same melody to decorate it may be deemed compositional preference.

At 'qui volare' the 5th and octave above the final interrupt the prevailing pitch structure. In

Dendermonde Cod.9, the opening b is given the *quilisma* accent, but in the *Riesenkodex*, the notes c and a are accented. The melody then remains within the D-a-d pitch framework until the end of the antiphon, where it concludes on the final, E. At only one point do the sources disagree; one short passage of melody, over the word 'ipsius' and the first syllable of 'instrumenta', appears a 2nd lower in Dendermonde Cod.9 than in the *Riesenkodex*. This phrase as preserved in the *Riesenkodex* appears as a second interruption of the D-a-d structure.

O gloriosissimi lux vivens is among the longest of the vocative antiphons preserved in the *Symphonia*. The juxtapositioning of three distinct final-5th-octave structures and the many pitch combinations afforded by these distinct pitch frameworks resulted in an endless flow of melody. The variety of neume accents, in particular those associated with the *quilisma*, perhaps suggests that the Dendermonde scribe was aware of the final throughout and accented the 5th above accordingly, whereas the *Riesenkodex* version appears to be centred around D, despite the short phrase of melody over 'ipsius'.

The source of this compositional process is difficult to assess. Hildegard was cloistered from a very young age, and it is likely that her initial isolation from the

outside world prevented her from experiencing anything of the different musical traditions that existed outside of her immediate environment. As her earliest compositions date from before her first preaching tour of Germany in the early 1160s,⁴⁹ her compositional method was probably derived from a tradition to which she was already exposed.⁵⁰

Hugh Feiss points out that while 'avowals of incompetence are common in twelfth-century authors', Hildegard's continued denial of a 'human source' for her output was in keeping with her insistence upon divine ascription.⁵¹ Similarly, Hildegard's assertions on the matter of her musical education serve to fortify her claims to divine perspicacity:

Sed et cantum cum melodia in laudem Dei et sanctorum absque doctrina ullius hominis protuli et cantavi, cum numquam nequam uel cantum aliquem didicissem.⁵²

[But I composed and sang melodious song in praise of God and the Saints without the teaching of any human being, since I had never learnt any neumes or song.]⁵³

It is possible that Hildegard 'never learnt any neumes', as transcription of her melodies was undertaken by scribes. Her allusion to 'cantum' [song] perhaps refers to the practical art of correct singing, of which she was also possibly ignorant.⁵⁴ Hildegard's claim that she was musically untrained cannot be taken literally, however. She may have been taught to compose melodies, as implied in the brief account of her early life at Disibodenberg in the *Vita S. Hildigardis* by the monk Godfrey. Hildegard shared a cell at Disibodenberg with her mentor, Jutta of Spannheim, from around 1106 until Jutta's death in 1136. Of this period, Godfrey writes:

Cumque iam fere esset octo annorum consepelienda Christo, ut cum ipso ad immortalitatis gloriam resurgeret, recluditur in monte sancti Disibodi cum pia Deoque dicata femina Iuttha, que illam sub humilitatis et innocentie ueste diligenter instituebat et carminibus tantum Daviticis instruens in psalterio de chacordo iubilare premonstrabat. Ceterum preter psalmodiarum simplicem noticiam nullam litteratorie uel musice artis ab homine percipit doctrinam, quamuis eius extent scripta non pauca et quedam non exigua uolumina.⁵⁵

[For when she was about eight years old she was enclosed on Mount Saint Disibod to be buried with Christ so that when she rose would rise with him to the glory of immortality with Jutta, the pious woman dedicated to God, who trained her carefully in the garment of humility and innocence: instructing

her in the songs of David, she showed her how to rejoice on the ten-stringed psaltery. Further, she did not receive any training either in the art of letters or of music from any human being, other than simple knowledge of the psalms. This is although not a few writings of her survive, and some not small in volume.]⁵⁶

It is clear from Godfrey's account that Jutta taught Hildegard to read the psalms and to *iubilare* [rejoice] 'on the ten-stringed psaltery'. Although Godfrey's reference to the psaltery is possibly allusionary,⁵⁷ the term *iubilare* may be linked to the practice of singing. In his commentary of Psalm 97, St Augustine defines this term as the wordless articulation of joy, an act which may be construed as musical: 'Si quod gaudetis loqui non potestis, jubilate' [If [it is] not possible to speak what you rejoice, jubilate].⁵⁸ As such, it may be suggested that Hildegard was taught by Jutta to musically articulate joy without words.

Although it is difficult to trace a link between this mode of musical expression and the practice of psalmody, the practice of composing new chant melodies to psalm texts is hinted at in the *Dialogi* of Anselm of Havelberg (c.1100-1158), which dates from around 1149. Anselm, who had experience of liturgical life in the East,⁵⁹ provided a critique of the alternative ways of conducting the liturgy in order to refute the objections of conservatives.⁶⁰

Ecce videmus in Ecclesia Dei, ut aiunt, quosdam emergere, qui pro libito suo insolito habitu induuntur, novum vivendi ordinem sibi eligunt, et sive sub monasticae professionis titulo, sive sub canonicae disciplinae voto, quidquid volunt, sibi assumunt, novum psallendi sibi adveniunt, novum abstinentiae modum, et metas cibarium statuunt, et nec monachos qui sub Regula beati Benedicti militant, nec canonicos qui sub Regula beati Augustini apostolicam vitam gerunt, imitantur.⁶¹

[Behold we see in the church of God, as they say, certain people emerge who put on unusual habits at their own whim, they choose a new way of living and whether under the name of the monastic profession or under the vow of canonical discipline, they take up for themselves whatever they want, they find for themselves a *new way of psalmody*, they decide on a new type of fasting and a new regime of food, imitating neither the monks who follow the Rule of Benedict nor the canons who follow the apostolic life under the Rule of Augustine.]⁶²

The implications of Anselm's use of the word 'psallendi' [psalmody] are that, in monastic communities, not only was the liturgy expanded upon but the

practice of chanting of psalms was itself also subject to variation, to a 'new way'. It is possible that the practice of psalmody was varied beyond the addition of newly composed antiphons, responses and canticles to the Mass and the Office and that newly composed chants were sung to psalm texts. It may therefore be suggested that, during Hildegard's early years at Disibodenberg, she and Jutta engaged in a practice of improvising new melodies to psalm texts, especially as it is now known that Jutta was regarded by the community at Disibodenberg as an accomplished musician.

The considerable distance from the Cistercian centre of Clairvaux to Havelberg implies that in between there was a considerable amount of musical activity which was experimental and, consequently, theoretically unsound. There is evidence that, conceptually at least, Hildegard or her scribes were aware of contemporary theoretical trends; concepts such as the correct use of *ficta* and the avoidance of notes not part of the medieval gamut may have influenced the composition or reaction of the *Symphonia* melodies. Musical experimentation was observed by authors during this period, and it is with particular reference to wide ranges that Hildegard distanced herself from theoretical pragmatism. Hildegard's corpus may therefore be thought of as preserving a new way of composing music which was conceptually based on theoretical recommendations and was most likely cultivated during her time with Jutta at Disibodenberg. Musicological contextualisation of this corpus will therefore depend upon the location of other repertoires which were the result of a similar compositional process based around the intervals of the diatessaron, diapente and diapa-
son.

Notes

¹ The *Ordo virtutum* is not taken into consideration in the present discussion as the setting of the *Ordo* and those of Hildegard's liturgical items are stylistically comparable.

² Borrowing Apel's definition, centonisation is 'the extensive use of standard phrases...it is the very opposite of original creation'. Willi Apel, *Gregorian chant* (Bloomington & Indianapolis: Indiana University Press, 1958), p.139.

³ Ludwig Bronarski, *Die Lieder der hl. Hildegard* (Leipzig: Breitkopf & Härtel, 1922), p.48.

⁴ My translation.

⁵ Marianne Richert Pfau, 'Hildegard von Bingen's *Symphonia Armonie Caelestium Revelationum*: an analysis of musical process, modality, and text-music relations', (Diss. State University of New York at Stony Brook, 1990), p.73.

⁶ Dendermonde Codex 9 includes fifty-seven of Hildegard's seventy-seven liturgical items; the *Riesenkodex* contains sev-

enty-five liturgical items and the *Ordo virtutum*. The *Riesenkodex* is generally thought of as having been redacted after Hildegard's death, between 1180-1190. Derolez has recently postulated that the *Riesenkodex* was in fact redacted during Hildegard's life time and dates from c.1179. See Albert Derolez, 'The manuscript transmission of Hildegard's writings: the state of the problem', *Hildegard of Bingen: The context of her thought and art*, Proceedings of a Colloquium on Hildegard, London, 17-18 Nov. 1995 (forthcoming).

⁷ Two exceptions to this are the antiphon *O tu illustrata*, in which the second verse is separated from the first, and the hymn *Mathias sanctus* which both musically and textually resembles a sequence.

⁸ The third book of Peter Abelard's *Hymnarius Paraclitensis* is also organised according to subject matter. See Barbara Newman, ed. and trans., *Saint Hildegard of Bingen: Symphonia* (Ithaca and London: Cornell University Press, 1988), p.57.

⁹ This secondary principle of organisation is especially evident in the *Riesenkodex*. In this manuscript, a second cycle of mostly longer items is located after a full cycle of antiphons and responsories only. A setting of the *Kyrie* is found between these two cycles. Since no longer items are devoted to the Father or the Son, the Holy Spirit is the first subject of the second cycle. The placement of the *Kyrie* between these two cycles perhaps serves to restore the Father and Son as foremost in this cycle ('Kyrie eleyson' [Lord have mercy], 'Christe eleyson' [Christ have mercy]). A discussion of the organisational differences between the two manuscripts is included in Newman, *Symphonia*, pp.51-60.

¹⁰ These three items resemble hymns.

¹¹ Patrick Diehl, *The Medieval European religious lyric* (Berkeley and Los Angeles: University of California Press, 1985), p.10.

¹² Diehl, *Religious lyric*, p.10

¹³ For a list of manuscripts which preserve *Symphonia* texts see Walter Berschin and Heinrich Schipperges, *Hildegard von Bingen: Symphonia Gedichte und Gesänge* (Gerlingen: Lambert Schneider, 1995), pp.241-42.

¹⁴ Theodore Karp, 'Interrelationships among Gregorian chants: an alternative view of creativity in early chant', *Studies in musical sources and style: Essays in honour of Jan LaRue*, ed. Eugene Wolf and Edward Roesner (Madison, Wisconsin: A-R Editions, 1990), pp.1-3.

¹⁵ There is only one complete edition of the *Symphonia*: Pudentiana Barth, M. Immaculata Ritscher and Joseph Schmidt-Görg, eds., *Hildegard von Bingen: Lieder* (Salzburg: Otto Müller Verlag, 1969). Even though the vocabulary of neumes in the *Symphonia* manuscripts exceeds that in square notation, the melodies have been transcribed into the latter. Long passages of melody which are unconnected with a given final have been reworked, and this is not documented in the edition.

¹⁶ Chrysogonus Waddell, 'Origin and early evolution of Cistercian antiphony: reflections on two Cistercian chant reforms', *The Cistercian spirit: a symposium*, ed. M. Basil Pennington, Cistercian Studies Ser. 3 (Washington: Cistercian Publications Consortium Press, 1973), p.192.

¹⁷ David Hiley, *Western plainchant: a handbook* (Oxford: Clarendon Press, 1993), p.608.

¹⁸ For an English translation of this correspondence, see James McGrath, trans., *The life of the Holy Hildegard by Gottfried and Theoderic* (Collegeville, Minnesota: The Liturgical Press, 1995), pp.100-103.

- 19 Waddell, 'Origin and Early Evolution', p.208.
- 20 Waddell, 'Origin and Early Evolution', p.194. Although the *Praefatio* accompanies Saint Bernard's *Epistola*, it can not be assumed that he authored this treatise. See Francisco J. Guentner, ed. and trans., 'Epistola S. Bernardi et Tractatus', *Corpus Scriptorum de Musica*, vol. 24 (American Institute of Musicology, 1974), pp.14–19.
- 21 Guentner, 'Epistola', p.36.
- 22 Guentner, 'Epistola', p.55.
- 23 Guentner, 'Epistola', p.56.
- 24 For an explanation of this process, see Guido of Arezzo, 'Micrologus', *Hucbald, Guido and John on Music: Three Medieval Treatises*, ed. Claude V. Palisca, trans. Warren Babb (New Haven and London: Yale University Press, 1978), pp.59–61.
- 25 This antiphon, which is for the dedication of a church, contains one phrase of melody which exceeds the medieval gamut by a major second above the highest allowable note, d'.
- 26 *O quam preciosa* is preserved in the *Riesenkodex* only.
- 27 Guido of Arezzo, 'Micrologus', p.64.
- 28 Guentner, 'Epistola', p.47.
- 29 Guentner, 'Epistola', pp.47–48.
- 30 S. Hildegardis, *Opera Omnia*, ed. J. P. Migne, *Patrologia Latina* vol. 193 (Paris, 1882), p.735.
- 31 Hildegard of Bingen, *Scivias*, trans. Mother Columba Hart and Jane Bishop (New York, Mahwah: Paulist Press, 1990), p.532.
- 32 Guido, 'Micrologus', p.54.
- 33 Guido, 'Micrologus', p.63, n.1.
- 34 For example, see Pfau, 'Symphonia', p.139.
- 35 For example, see Guido, 'Micrologus', pp.66–67.
- 36 John, 'De Musica', *Hucbald, Guido and John*, p.139.
- 37 Hendrik van der Werf, *The emergence of Gregorian chant: A comparative study* (Rochester NY: van der Werf, 1983), p.43.
- 38 In the responsory *O viriditas digiti dei*, the final-5th-octave paradigm is reworked so that the final, b, resembles the 5th of this paradigm and the octave e to e' is situated either side of it.
- 39 Joseph Smits van Waesbergher, *A textbook of melody: A course in functional melodic analysis*, trans. G. Doyle-Davidson (American Institute of Musicology, 1955), p.54.
- 40 Alexander Blachly, 'Some observations on the "Germanic" plainchant tradition', *Current Musicology*, 45-47 (1990), p.90.
- 41 Blachly, 'The "Germanic" plainchant tradition', p.90.
- 42 Dom Eugène Cardine, *Gregorian Semiology*, trans. Robert M. Fowels (Solemnnes, 1982), p.221.
- 43 Cardine, *Gregorian Semiology*, p.17.
- 44 Cardine, *Gregorian Semiology*, p.143.
- 45 A possible explanation for this is that if a normal *punctum* always preceded the *quilisma*, some confusion about which text syllable the *punctum* belonged to may have arisen.
- 46 In this repertory, text accents often correspond with the highest pitches of phrases, melismatic passages. If these are taken as set criteria, however, and there was a conscious attempt to highlight text accents in the melody, then it may be said that many errors were made in the process.
- 47 A similar principle of construction is discernible in the chansons of the troubadour and trouvère from the twelfth and thirteenth centuries. Van der Werf links this principle to the practice of liturgical psalmody, in which recitation in the chansons is 'preceded by an *intonation* and followed by a *termination*'. He also observes that the potential for melodic variation afforded by the composition of terminations 'seem to have been endless'. See Hendrik van der Werf, *The chansons of the troubadours and trouvères: A study of the melodies and their relation to the poems* (Utrecht: Oosthoek, 1972), p.48.
- 48 Both these items have been extensively reworked in the *Lieder* edition.
- 49 Sabina Flanagan, *Hildegard of Bingen: A visionary life* (London and New York: Routledge, 1989), p.9.
- 50 This may be assumed from the appearance of fourteen song texts in Vision Thirteen of the *Scivias* (1143-1151).
- 51 Hildegard of Bingen, *Explanation of the rule of Benedict*, trans. and intro. Hugh Feiss (Toronto: Peregrina, 1990), p.53.
- 52 Monika Klaes, ed. and intro., *Vita S. Hildegardis*, *Corpus Christianorum, Continuatio Mediaevalis* 126, vol. 2 (Turnhout: Brepols, 1993), p.24.
- 53 McGrath, trans., *The life of the Holy Hildegard*, p.52.
- 54 Pfau, 'Symphonia', p.8.
- 55 Monika Klaes, *Vita S. Hildegardis*, vol.1, p.6.
- 56 I am greatly indebted to Constant Mews (Monash University, Melbourne) for providing me with a translation of this passage.
- 57 Flanagan, *A visionary life*, p.32.
- 58 Sancti Aurelii Augustini, *Enarrationes In Psalmos Opera Omnia*, ed. J. P. Migne, *Patrologia Latina*, 37 (Paris, 1882), p.1254. Imogene Horsley argues that reference to the improvisatory practice of the *jubilus*, or the 'melismatic flourish' on the final syllable of some alleluias, is found in the writings of Church Fathers. St Augustine's definition of the term *iubilare* may be interpreted as an allusion to this practice. See Imogene Horsely, 'Improvisation', *The New Grove Dictionary of Music and Musicians*, ed. Stanly Sadie, 6 (London: Macmillan, 1980), p.32.
- 59 Flanagan, *A visionary life*, p.52. Havelberg is approximately 100km north-west of Berlin.
- 60 Anselm's *Dialogi* is devoted to a comparison of the Eastern and Western churches.
- 61 Anselme de Havelberg, *Dialogues: Book 1*, ed. Gaston Salet (Paris: Éditions Du Cerf, 1966), p.36.
- 62 I am again indebted to Constant Mews for bringing this information to my attention, providing me with the above translation and assisting me with the translation of St Augustine's commentary on Psalm 97:4.