THE ROLE OF RECURRENT MELISMAS IN THE ALLELUIAS OF THE ST GALL
CANTATORIUM

by

Andrea Klassen

Submitted in partial fulfillment of the requirements

for the degree of Master of Arts

at

Dalhousie University

Halifax, Nova Scotia

August 2019

TABLE OF CONTENTS

LIST OF TABLES[1]

---

[1] For list of examples, please see Appendix D

LIST OF FIGURES

ABSTRACT

This thesis studies melodic construction in medieval chant by focusing on the highly melismatic genre of the alleluia. Limiting the corpus to the alleluias found in the tenth century adiastematic St Gall Cantatorium, the thesis explores the recurrent melismas within the manuscript by analyzing them in two contexts. First, recurrent melismas are examined in the context of Karl-Heinz Schlager's type melodies, where entire melodies are adapted to suit new texts. Schlager's melodies 271, 27, and 205 are excellent examples of this practice, and serve as case studies in this thesis. Second this thesis adapts methodology developed by Emma Hornby and Rebecca Maloy for Old Hispanic chant to search the entire sample and find shared melismas between chants of otherwise different melodies. Both these methods of examining recurrent melismas demonstrate their melodic function within the alleluia repertory.

ACKNOWLEDGEMENTS

I would like to thank all the people who have been so helpful and kind throughout the past two years. I would like to thank Dr Emma Hornby at Bristol University for allowing me to come visit her for a week in November to discuss her methodology. That week helped shape the second chapter of this thesis. I would also like to thank Dr Christoph Hönerlage for meeting with me to speak about his work on graduals and type melodies.

I would also like to thank Greg Sinclair for creating the computer program that allowed me to find matches across my entire data set.

I would like to thank my parents for being so supportive of my studies, even while I've been so far away from home, first in Halifax and then in Germany.

As well, I would like to thank Dr Inga Behrendt for welcoming me to Germany and so enthusiastically helping shape my thesis, especially in its beginning stages, and for her incredibly useful criticism throughout the writing process. She was extremely hospitable and encouraging to me, and was always constructive and supportive towards my work. I am deeply grateful for all her thought-provoking questions.

And of course, most of all, I would like to thank my wonderful thesis advisor Dr Jennifer Bain, who encouraged me towards so many opportunities and was consistently supportive and kind to me with her valuable feedback. She was always available and ready to provide constructive criticism, helping make this thesis possible. I am very grateful for all the time and energy she put into helping me with my research and my writing.

Chapter One: Introduction

The reuse and adaptation of melody was a common compositional practice in the Western medieval liturgy. It is not atypical for the same melody to appear with multiple different texts, and often adaptation of the melody arises because of changes in the number of syllables and stress patterns in the Latin texts. These textual differences can thus complicate the study of the relationship between notational representation of melodies and the melodies themselves. In the following study of melodic structure and notational design, I remove this impediment by focusing on melismas, longer melodic gestures and phrases set to a single syllable. To constrain the study further, I focus on a single genre, the alleluia.

Occurring after the gradual and before the gospel in the mass, the alleluia is a melismatic genre of chant, displaying its joyous nature to the performer and listener alike. The alleluia consists of a call and a verse, with the call repeated by the cantor as well as the choir. The end of the alleluia call consists of the *jubilus*, a long melisma falling on the final syllable of "alleluIA". Beyond just the *jubilus*, alleluias tend to have many other melismas, particularly in the verse. They often have an extended melisma at the end of the verse, which is sometimes a repetition of the *jubilus*. This proliferation of melismas in a single chant genre make alleluias ideal for the study of the behaviour of melismas and their interactions between chants.

Additionally, because alleluias are a melismatic genre of plainchant, which make them particularly attractive to study from a melodic perspective, they provide many opportunities for the study of notational nuance. The melismas present in the alleluias offer a space to compare notation without the interruption of varying syllable divisions. While the *jubilus* is the most well-known melisma found in the alleluia repertory, the alleluia verses have melismas which can also

have an important melodic structural role, especially in instances of type melody, where the same melody is adapted to suit various new texts. In this thesis, I will investigate the melodic and notational functions of the melismas found within the limited sample of the alleluias present in the St Gall Cantatorium. I will perform melodic analysis using transcribed sources of the alleluias to survey how the melismas function structurally in type melody composition. I will also point to notational differences between the iterations as they are found in the Cantatorium. Additionally, I will apply new methodology developed for Old Hispanic chant by Emma Hornby and Rebecca Maloy to compare melodic contour as expressed through notation and analyze the use of repeated notational formulas within the melismas. Through these approaches, I offer a study of the notational and melodic function of melismas within one group of chants from a single manuscript, as well as demonstrate how the Hornby and Maloy methodology can be utilized outside of the Old Hispanic chant repertory.

The St Gall Cantatorium is a cantor's book for the mass that contains all of the music sung by the cantor rather than music sung by the choir. The book dates to the tenth century and originates at the Abbey of St Gall, which is located in modern day Switzerland. Alleluias, tracts, and graduals are neumed in the manuscript, although occasionally given only as incipits, whereas only text incipits are given for the un-neumed introits, offertories, and communions, which suggests they were meant for the choir to sing. The Cantatorium itself can be considered as three parts (see table 1.1).[1] The second part, the focus of my study, is the earliest section and considered to be the main part of the Cantatorium, while the first and third sections were added later. This second section forms the largest part of the book, accounting for 134 of its 166 pages,

---

[1] See Catholic Church, *Cantatorium: IXe Siecle: No. 359 de La Bibliotheque de Saint-Gall*, ed. André Mocquereau (Solesmes: Abbaye St.-Pierre, 1968), and Rupert Fischer, "Einführung in Handschriften des Gregorianischen Chorals. I.: St. Gallen, Stiftsbibliothek, Codex 359: Das Cantatorium von St.Gallen," *Beiträge zur Gregorianik,* 19 (1995), 61-70.

while the first section spans the first 23 pages and the third section the last 8 pages. The main section of the Cantatorium appears to have a single notator, with some exceptions where items have been notated by a later hand.[2] Some liturgical books have separate sections for the *Sanctorale* and *Temporale*, but the Cantatorium interlocks these elements. Liturgically, the second part spans from the first Sunday of Advent until Pentecost, and is followed by a collection of alleluias.

Table 1.1: Sections of the Cantatorium

Section	Pages
Part One	1-23
Part Two	24-158
Part Three	158-166

My sample includes 82 of the 99 alleluias present in the main part of the Cantatorium, a complete list of which is included in Appendix A. As table 1.2 shows, there are 99 total alleluias in the main part of the Cantatorium, including fourteen which are text incipits only. Eleven of those text incipits are for an alleluia that is neumed elsewhere in the main part of the Cantatorium, while three of them were added by a later hand and do not have a neumed counterpart. A further two of the 99 alleluias are not neumed (even though their texts are written out in full), while one more is neumed by a later hand. This leaves 82 neumed alleluias that may be included in my study. Four of the 82 alleluias contain two verses rather than one, which are included in my sample as well.

---

[2] Columba Kelly, *The Cursive Torculus Design in the Codex St. Gall 359 and Its Rhythmical Significance: A Paleographical and Semiological Study* (St. Meinrad, Indiana: St. Meinrad Archabbey, 1964), 13.

Table 1.2: Alleluias in the Main Section of the Cantatorium

Total Alleluias	**99**
Text Incipit Only	14
Not neumed	2
Neumed by a later hand	1
Neumed Alleluias	**82**

Each alleluia consists of an "alleluia call" and an "alleluia verse". The call is sung before and after the verse and contains the word "alleluia" and the *jubilus*, the long melisma on the final syllable of "alleluia". The verse's text varies based on the feast day for each unique alleluia. While some verses share the same melody, referred to collectively as a "type melody", the texts set them apart as separate chants. The full performance of these alleluias would begin with the cantor singing the alleluia call, repeated by the choir singing the alleluia call, then the cantor singing the alleluia verse, followed by the cantor singing the call once more.[3] When written in the Cantatorium, the call is written first, followed immediately by the verse without the repetitions required in performance.

Overview of Methodology:

The Cantatorium and alleluias are independently already well researched by scholars. Eugène Cardine discusses the Cantatorium in his seminal book *Gregorian Semiology*, referring to the manuscript as "the most perfect and most precise".[4] Because of this feature of the Cantatorium, the notation of the book has been closely examined. Walter Wiesli's 1966 study of the quilisma and Columba Kelly's 1964 study of the cursive torculus both focus on specific neumes within the Cantatorium.[5] Wiesli's study includes a variety of St Gall sources, and offers

---

[3] David Hiley, *Western Plainchant: A Handbook* (Oxford: Clarendon Press. 1993), 130.

[4] Eugène Cardine, *Gregorian Semiology* (Sablé-sur-Sarthe [France]: Solesmes, 1982).

[5] See Walter Wiesli, *Das Quilisma im Codex 359 der Stiftsbibliothek St. Gallen. erhellt durch das Zeugnis der Codices: Einsiedeln 121, Bamberg lit. 6, Laon 239 und Chartres 47. Eine paläographischsemiologische Studie*

a comparison between them. Kelly catalogues the cursive torculus based on shape, word, and syllable and also provides a paleographical and codicological study of the manuscript. These scholars offer a method of notational study focusing on single neumes, which differs from my focus on examining multiple neumes and their melodic context in a single genre.

Alleluias themselves have also warranted considerable study over the years, notably including Karl-Heinz Schlager's 1965 catalogue of 410 alleluia melodies, which he groups by mode and starting pitch, including manuscript sources for each alleluia melody.[6] In my study, I use Schlager's numbering system to refer to each type melody and unique alleluia. Anton Stingl Jr. has very recently published his book on the alleluia in 2018, which has been very helpful in my study of type melodies, providing many useful comparative charts of the type melodies, where he examines syllable stress in the adaptations of type melodies.[7] His book also discusses the phenomenon in which all or some of the *jubilus* is repeated at the end of the alleluia verse, which I discuss in my chapter on type melodies.

There are also studies specifically on the alleluia melisma, including Leo Treitler's 1968 article on the subject.[8] He focuses solely on the melodic structure of the alleluias, only briefly speaking to notation, and without focusing on type melodies and their relationship to one another. My study focuses on the Cantatorium's notation of the alleluia melismas, and how the notation shapes the structure of the melismas, as well as the melodic structure of the melismas.

(Immensee: Verlag Missionshaus Bethlehem, 1966) and see Columba Kelly, *The Cursive Torculus Design* (St. Meinrad, Indiana: St. Meinrad Archabbey, 1964).

[6] Karlheinz Schlager, *Thematischer Katalog der ältesten Alleluia-Melodien aus Handschriften des 10. und 11. Jahrhunderts, ausgenommen das ambrosianische, altrömische und altspanische Repertoire* (Erlanger Arbeiten zur Musikwissenschaft 2, Munich, 1965).

[7] Anton Stingl, *Alleluia Dulce Carmen. Aspekte des gregorianischen Alleluia* (St. Ottilien: EOS-Verlag, 2018).

[8] Leo Treitler, "On the Structure of the Alleluia Melisma," *Studies in music history; essays for Oliver Strunk* (1968): 59-72.

In addition to my comparative analysis process, I also apply the methodology of Hornby and Maloy from the study of Old Hispanic chant to the study of these alleluias. Hornby and Maloy have released a series of articles in which they label neumes by contour: each neume begins with neutral (N), while all subsequent pitches in the neume are labelled according to contour direction from the previous pitch: high (H), low (L), or same (S). They do this to compare the melodies of Old Hispanic chant, where there is no later, pitched version that can be used for this purpose. In their 2016 article "Fixity, Flexibility, and Compositional Process in Old Hispanic Chant," they explore questions of stability in the Old Hispanic chant using this methodology, identifying "formula A", a specific cadential figure.[9] In another 2016 article, titled "Melodic Dialects in Old Hispanic Chant" Hornby and Maloy focus on cadential contexts and openings within the Old Hispanic repertory in order to identify various melodic dialects within the repertory.[10] Of interest to the study of melismas specifically, Hornby published a further article in 2016, "Musical Values and Practice in Old Hispanic Chant," in which she discusses melismas, including the *jubilus*. Old Hispanic chant often has very long melismas, spanning from 50-300 pitches in length.[11] In this thesis I apply their methodology to explore endings of chants in the alleluia repertory, looking for recurrence of significant notational patterns.

---

[9] Emma Hornby and Rebecca Maloy, "Fixity, Flexibility, and Compositional Process in Old Hispanic Chant," *Music & Letters* 97, no. 4 (2016): 547-74.

[10] Emma Hornby and Rebecca Maloy, "Melodic Dialects in Old Hispanic Chant," *Plainsong and Medieval Music*. 25, no. 1 (2016): 37-72.

[11] Emma Hornby, "Musical Values and Practice in Old Hispanic Chant," *Journal of the American Musicological Society* 69, no. 3 (2016): 595-650.

<u>Outline of Chapters</u>:

The first of the following two chapters argues that the melismas in type melodies found in the Cantatorium are consistent between their many iterations, acting as structurally important stable points in the chants. Through detailed comparisons with later pitched versions of the alleluias, beside notational elements of the versions included in the Cantatorium itself, I investigate the exact role of the melismas in these type melodies. The chapter focuses on three type melodies in particular: Schlager's melodies 271, 27, and 205. For each type melody, the chapter offers a detailed analysis of any alterations found between the iterations in the Cantatorium, and how the melismas function as structural strongholds in these altered versions. By examining these changes between the iterations, I argue that the consistency found in the melismas marks them as structural pillars to the melody as a whole. Additionally, this chapter compares notational differences between the iterations, focusing on significative lettering and performance practice, particularly in the melismas. In this way, the first chapter analyzes and compares the melismas in the type melodies through melodic analysis as well as notational analysis, establishing the stability of the melismas between the iterations and how they function within the type melodies.

The second chapter uses the methodology developed by Hornby and Maloy to compare the melodic contours of the melismas and address questions of notational similarity between melismas, across my entire sample of alleluias. As well, by examining the endings of alleluia calls, the methodology points to certain notational patterns which are then compared with later versions of the melodies to address issues of pitch consistency within these repeated notational figures. This chapter also addresses repeated material in the melismas, finding that the Hornby and Maloy methodology is successful in locating repeated material across the large sample of

532 melismas. While similar material is not found within the middle of melismas, the beginnings and endings of the melismas proved a fruitful space to investigate shared material across the sample. Even though not all melismas that share a neumation also share a pitch structure, some longer passages demonstrate a similarity in neumation as well as in pitch. This finding indicates that although the Hornby and Maloy methodology does not guarantee that two matches will have the same pitch structure, it is certainly possible, particularly in cases where larger amounts of the melisma are shared.

Using these two contrasting methods, this thesis examines how melismas are treated in both type melodies, as well as the larger sample. I have found that melismas in the type melodies are incredibly stable across iterations, acting as landmark points for consistency between the iterations. This finding demonstrates their importance in that context and in the adaptation of type melodies. Through analysis using the Hornby and Maloy methodology, I have found that the methodology is successful at locating passages of melismas that have the same neumation and pitch structure, by searching only by contour. This success shows the effectiveness of Hornby and Maloy's work in a new repertory, indicating that further studies using this methodology in this repertory might also prove worthwhile.

Chapter Two: The Structural Role of Melismas in the Adaptation of Type Melodies in the Alleluia Repertory in the St Gall Cantatorium

It has long been acknowledged by scholars that in the chant repertory, it is a standard practice for melodies to be re-used and adapted to new texts and to various liturgical occasions. Various scholars have catalogued melodies for specific repertories,[1] and some have adopted the term "type melody" to describe melodic groupings where multiple chants share the same overall melody. I will adopt that term here as well. For the alleluia repertory, these type melodies have been catalogued in detail by Karl-Heinz Schlager.[2] While the term contrafact can include small changes in the melodies, it generally implies a stricter adaptation of the melody, while the term "adaptation" denotes a slightly looser reuse of a melody. As well, further adaptations can occur in melodies through the use of tropes, by providing additions to a melody, both by adding melody and by adding new text.[3] Melismatic portions of the type melodies are sometimes unaffected by new text, because in the alleluia repertory they are not dependant on text or text length. My project focuses specifically on the melismas and how they are treated in these already identified type melodies in order to better understand the process of adaptation in these specific cases, within a melismatic genre. In this chapter, I will first provide an introduction to the type melodies in general by discussing how some scholars have defined the phenomenon. I will then

---

[1] For example, Bruno Stäblein has collected hymn melodies, Margaretha Landwehr-Melnicki has collected Kyrie melodies, Detlev Bosse has collected the Gloria melodies, Peter Josef Thannabaur has gathered the Sanctus melodies, and Martin Schildbach has done this for the Agnus Dei melodies. Bruno Stäblein, *Hymnen I. Die mittelalterlichen Hymnenmelodien des Abendlandes* in Monumenta Monodica Medii Aevi (1956).; Margaretha Landwehr-Melnicki, *Das einstimmige Kyrie des lateinischen Mittelalters* (Regensburg, 1954);Detlev Bosse, *Untersuchung einstimmiger mittelalterlicher Melodien zum "Gloria in excelsis deo".* (Forschungsbeiträge zur Musikwissenschaft II, Regensburg, 1955); Peter Josef Thannabaur, *Das einstimmige Sanctus der römischen Messe in der handschriftlichen Überlieferung des 11. bis 16. Jahrhunderts* (München, 1962); Martin Schildbach, *Das einstimmige Agnus Dei und seine handschriftliche Überlieferung vom 10. bis zum 16. Jahrhundert* (Erlangen-Nürnberg, Diss., 1967)

[2] Karl-Heinz Schlager, *Thematischer Katalog der ältesten Alleluia-Melodien aus Handschriften des 10. und 11. Jahrhunderts, ausgenommen das ambrosianische, altrömische und altspanische Repertoire* (Erlanger Arbeiten zur Musikwissenschaft 2, Munich, 1965).

[3] David Hiley, *Western Plaincahnt: A Handbook* (Oxford: Clarendon Press, 1993), 196.

discuss the type melodies found in the tenth-century Cantatorium specifically, including their

distribution in the church year. Finally, I will use Schlager's melodies 271, 27, and 205 as case

studies of type melodies and analyze how they have been adapted to different texts in the

Cantatorium.

Many variances may appear between different iterations of a single melody. Such

differences may occur to accommodate the text, whether it be shorter or longer than the other

versions of the melody. However, despite these differences, similarities still allow the melodies

to be recognizable as the same type, generally by there being some predictability to how the

melodies are changed to suit the text. Scholars have commented on these adaptations, and

speculated about some of the methods in how these changes occur. Theodore Karp, for example,

specifically points out that the melody itself can be either expanded or shortened to suit the text's

needs.[4] This adaptation is possible regardless of the text length, as the melody can change to

accommodate different text lengths. Willi Apel also comments on the process of adapting a type

melody to a new text, stating "In most cases the adaptation of the original melody to a new verse

is rather strict, the difference mainly in the omission or addition of notes caused by the varying

number of syllables".[5] Here, Apel does not speak of a disregard of text length specifically, but

rather the adaptability of the melodies and a strictness in the technique of adaptation. He does not

address explicitly what he means by strict, but I take it to mean that when adapting the melody to

the text, the fewest number of changes necessary are made; in other words, I interpret this to

mean that new elements are not introduced. Apel does clarify that occasionally entire passages

---

[4] Theodore Karp, *Aspects of Orality and Formularity in Gregorian Chant* (Evanston, Illinois: Northwestern University Press, 1998), 62.
[5] Willi Apel, *Gregorian chant* (Bloomington: Indiana University Press, 1958), 382.

can be omitted from the new adaptation if the text is too short,[6] a process I will demonstrate later

with Schlager's melody 27 where the fourth and fifth phrases are absent from *Alleluia Justus non*

conturbabitur and *Alleluia Tu es Petrus.* These cases demonstrate that strong similarities can

exist between melodies, even if parts of the melody are excluded in order to accommodate the

text.

While not all scholars use the term "type melody", they do describe the same

phenomenon in other ways. For example, Leo Treitler discusses the "multiple use of some

melodies" within the alleluia repertory.[7] David Hiley in reference to the alleluia repertory states

that the number of melodies is fewer than the number of alleluias, suggesting that some of them

share a melody.[8] Anton Stingl in his *Alleluia, Dulce Carmen Aspekte des gregorianischen*

Alleluia, however, discusses "type melody" by name and introduces the idea of type melody with

a discussion of *Dies Sanctificatus* (Schlager's melody 271) and *Ostende nobis* (Schlager's

melody 27), and how those melodies are adapted to various texts. His detailed discussion of

these melodies includes comparative charts that demonstrate areas of similarity between each

version of each melody, showing where notes have been added or taken away.[9] His tables of

melody 27 and 271 cover all the alleluias present in the Cantatorium as well as some found in

other manuscripts. I will use these tables in my own comparison of the melodies in these groups.

In this study, I define a type melody to be a melody built of the same melodic

components in the same order, with additions or omissions of notes as needed to suit the text; as

well, the text-melody relationship must also remain similar in the musical phrasing between the

---

[6] Ibid.

[7] Leo Treitler, "On the Structure of the Alleluia Melisma," *Studies in music history; essays for Oliver Strunk* (1968), 64.

[8] Hiley, *Western Plainchant,* 130-139.

[9] Anton Stingl, *Alleluia Dulce Carmen. Aspekte des gregorianischen Alleluia* (St. Ottilien: EOS-Verlag, 2018), 54-77.

iterations. While not all components must be present for me to consider a melody part of a melodic family, the components must occur in the same order and the elements left out must be done so consistently in the melodies that drop a component.

Of the 82 alleluias in the Cantatorium, 43 fall within nine of Schlager's alleluia type melodies, while the other 39 are independent melodies appearing only with a single text in the Cantatorium. Of these nine type melodies, the most common to the Cantatorium are Schlager's numbers 27 (in mode 2) and 271 (in mode 8), each occurring eleven times (see table 2.1). The next most frequent type melody is melody 205 (in mode 4), which occurs 6 times. The rest of the type melodies occur only 2 or 3 times. There seems to be no major structural or melodic differences between type melodies and non-type melodies, both proceeding in the same general fashion.

Table 2.1: Distribution and Mode of Type Melodies in the Cantatorium

Schlager Number	Frequency in Cantatorium	Mode
27	11	2
271	11	8
205	6	4
28	3	2
74	3	1
203	3	3
123	2	1
185	2	3
211	2	3

Examining the distribution of type melodies within the church year provides insight into the logic that governed their use for various liturgical occasions. While 57 of the alleluias in my sample come from the collection of alleluias at the end of the Cantatorium, the remaining 25

come from specific feasts from the first Sunday of Advent to Pentecost (excluding Lent, of course, where the alleluia is replaced with the tract). As well, in the collection of alleluias at the end of the Cantatorium, some are specified for the Common of one Martyr, some for the Common of several Martyrs, some for the Common of Apostles, and some for the Common of several Virgins.

Like the other melodies, melody 27 is clustered around main feasts in the church year, including Christmas and Easter (see table 2.2). It occurs twice during Easter, four times between Christmas Day and Epiphany, and appears in the common of one Martyr and the common of several Martyrs. These feasts are not only significant in the church year, but they are also very old feasts. It is interesting to note that the melody would be sung in close proximity to itself in important liturgical seasons, occurring back-to-back on Easter Monday and Easter Tuesday, and then again with close repetitions on Christmas Day, and soon after on the feast for St Stephen, John the Evangelist, and on Epiphany. As well, the melody has a connection with martyrdom, since it is included in both the common of one Martyr and the common for several Martyrs and is sung for St Stephen, who is considered to be the first Christian martyr. The texts for melody 27 chants come from a variety of Biblical sources, including the Psalms and the Gospels, as well as Acts, and do not seem to have a particular connection to one another.

Table 2.2: Melody 27 and its Distribution in the Church Year

Liturgical Occasion	Incipit
Christmas Day (December 25th)	Dies sanctificatus illuxit nobis
Stephen (December 26th)	Video caelos apertos et
John the Evangelist (December 27th)	Hic est discipulus ille
Epiphany (January 6th)	Vidimus stellam ejus in
Easter Monday	Surrexit dominus vere et
Easter Tuesday	Obtulerunt discipulti domino partem
Peter (June 29th)	Tu es Petrus et
Common of one Martyr	Inveni David Servum meum
Common of one Martyr	Justum deduxit dominus per
Common of one Martyr	Justus non conturbabitur quia
Common of several Martyrs	Sancti tui domine benedicent

Like melody 27, melody 271 occurs 11 times and is clustered around main feast days in the church year, with some variation (see table 2.3). It occurs both on the first Sunday of Advent, and on Christmas Day. This shows a level of continuity in the season leading up to Christmas. It is also present on the Octave of Easter and appears again on Ascension Thursday, the fortieth day of Easter, connecting the two liturgically. Many of the iterations of melody 271 occur in the collection of alleluias, where they are given no specific feast or function, which might mean that melody 271 was used more generally, and not associated with a specific occasion. It may, however, have had a strong association with Christ, appearing at Christmas, Ascension, Octave of Easter, and the common of the Apostles which also had a strong Christ association. Textually, the chants are connected as all of the texts come from the book of Psalms, except for *Alleluia resurrection tua Christe*, which is an unusual, non-Biblical text. This trend demonstrates a unified textual approach to this type melody.

Table 2.3: Melody 271 and its Distribution in the Church Year

Liturgical Occasion	Incipit
First Sunday of Advent	Ostende nobis domine misericordiam
Christmas Day (December 25th)	Dominus dixit ad me
Octave of Easter	In resurrectione tua Christe
Ascension Thursday	Dominus in Sina in
Common of the Apostles	Nimis honorati sunt amici
Unspecified[10]	Dominus regnavit exsultet terra
Unspecified	Haec dies
Unspecified	Diffusa est gratia in
Unspecified	Specie tua et pulchritudine
Unspecified	Memento nostri domine in
Unspecified	Lauda anima mea

Like in the case of melody 271, not all iterations of melody 205 are given specific liturgical occasions, with only four of the six iterations of melody 205 given a specific feast day in the Cantatorium (see table 2.4). However, of those with liturgical occasions, they continue to be clustered around large feasts in the church year. *Alleluia Excita Domine* is for Tuesdays in Advent, *Alleluia Laudate deum* is for the third Sunday after Epiphany, *Alleluia Ascendit Deus* is for Ascension Thursday, and *Alleluia Emitte Spiritum tuum* is for Pentecost Sunday. There is a possible relationship between Ascension and Pentecost, as both are related to the Easter season. Easter has a high number of type melodies generally, so perhaps this is simply an extension of that phenomenon. The texts of melody 205 chants, like melody 271, all come from the book of Psalms. This observation demonstrates coherence between the texts, which all have the same source.

---

[10] These melodies marked "unspecified" are found in the collection of alleluias at the end of the Cantatorium, and were not marked for a specific occasion.

Table 2.4: Melody 205 and its Distribution in the Church Year

Liturgical Occasion	Incipit
Tuesdays in Advent	Excita Domine
3rd Sunday after Epiphany	Laudate deum omnes
Ascension Thursday	Ascendit Deus
Pentecost Sunday	Emitte Spiritum tuum
Unspecified	Qui posuit fines
Unspecified	Lauda Jerusalem

More generally, it seems that the distribution of type melodies in the liturgical year has a certain logic. For example, Easter Monday through Easter Friday all use type melodies. Easter Monday and Tuesday both use melody 27 (mode 2). Easter Wednesday uses melody 74 (mode 1), and Easter Thursday and Friday use melody 123 (mode 1). Melody 123 only occurs in the Cantatorium on those days, and perhaps would then have a strong association with Easter. Melody 74 occurs twice more in the Cantatorium, in the collection of alleluias in the Common for one Martyr and the Common of Apostles. However, this use of type melodies coupled with the use of type melodies on the Octave of Easter seems to associate the Easter season with these repeated type melodies in the alleluias. One similarity between all these cases is the mode: they are all in modes which end on D, as they are modes 1 and 2. This shows a further connection between these chosen chants, beyond all of them being type melodies.

The Repetition of the *Jubilus* at the End of the Alleluia Verse

The *jubilus*, the long melisma on the final syllable of "alleluia", is perhaps the most important melisma found in alleluias. It expresses the outburst of joy when singing the word "alleluia", and is repeated multiple times within the performance structure of the alleluia and its verse. The *jubilus* is sung by the choir both after the cantor sings the initial alleluia call and at the

end, after the cantor sings the verse.[11] The *jubilus* is also sometimes repeated at the end of the verse, thus finishing that section of the performance as well.[12] This repetition of the *jubilus* can be written out in manuscript sources, providing another opportunity to see the notation of the *jubilus*.

Figure 2.1: Position of the *Jubilus* in the Structure of an Alleluia[13]

Alleluia Call: "Alleluia" and *jubilus* (Cantor)

Alleluia Call: "Alleluia" and *jubilus* (Choir)

Alleluia Verse: Verse and possible repetition of *jubilus* as part of the verse (Cantor)

Alleluia Call: "Alleluia" and *jubilus* (Choir)

While the repetition of the *jubilus* at the end of the verse sometimes provides an additional opportunity to see the *jubilus* in a manuscript source, the scribe of the Cantatorium does not always write out this repetition in full. Scholars have observed that this repetition of the *jubilus* at the end of the verse is common, and part of the overall structure of many alleluias. Of the three type melodies that I am discussing, only melody 205 contains a repetition of the *jubilus* as part of the verse, while melodies 27 and 271 have new melismas that are more often written out in full. With the text *Alleluia Excita Domine* (the first 205 melody to appear in the Cantatorium), the melisma is repeated in full at the end of the verse. In all other iterations in the Cantatorium, only the opening of the melisma is repeated. For example, *Alleluia Laudate Deum* provides the opening half of the melisma at the end, but not the melisma in its entirety in the Cantatorium. The melisma continues to be abbreviated throughout the manuscript, although books like the *Graduale Novum* provide the entire melisma in every iteration, based on other

---

[11] Hiley, *Western Plainchant*, 130.
[12] Ibid.
[13] Ibid.

sources. In cases where the *jubilus* is repeated in the verse but it is not a type melody, the

repetition can be included in the Cantatorium, such as *Alleluia Mirabilis Dominus* (see table 2.5).

However, often only the first neume or few neumes are given, like a repetendum in a responsory,

signalling the repeat of the previously heard material.

Table 2.5: The Scribal Abbreviation in the Cantatorium of the Repetition of the *Jubilus* in the Alleluia Verse

Page Number	Incipit	Schlager Number	Repeated Melisma
157	In omnem terram exivit	74	Repeated in part
153	Posuisti Domine	74	Repeated in part
28	Excita Domine	205	Repeated in full
48	Laudate Deum	205	Repeated in part
151	Qui posuit fines	205	Repeated in part
116	Ascendit Deus	205	Similar melisma
117	Emitte Spiritum tuum	205	Repeated in part
113	Confitemini…quoniam bonus	277	Similar melisma
154	Mirabilis Dominus	128	Repeated in full
154	Gaudete justi	178	Repeated in part
147	Te decet hymnus	360	End of final melisma like *jubilus*
155	Te martyrum	397	Repeated in full

Overview of Melodies

Before turning to each melody type and their alleluia verses individually, the following is

an overview of the melodic characteristics of each alleluia call, referring both to later pitched

versions of the melody as well as notational features found in the Cantatorium versions. Pitched

versions indicate that melody 271 is in mode 8, and begins on F, a step below the finalis. Melody

27 (mode 2), also begins a step below the finalis, on C. Unlike these two, melody 205 (mode 4)

begins on F, a step above its finalis. All the melodies act overall as an arch, starting lower and

then ascending to the apogee, before descending to the finalis. In melody 271, the melody

reaches its apogee on D, immediately on the *jubilus*, after the melody builds tension through the

repetition of the tenor C. In melody 27, the apogee begins slightly later in the *jubilus*, following a

small descent to the finalis and a leap up to F before the ascent to A, the apogee. Melody 205 is

like melody 271, in that the apogee appears as the second pitch of the *jubilus*. Unlike the other

two melodies, this apogee is repeated: first it is followed by a descent to F, and when the apogee

is repeated it is followed by a descent to E (the finalis). Melody 271 is quite active prior to the

jubilus, including multiple notes per syllable preceding the *jubilus*. In contrast, melody 27 is set

syllabically prior to the *jubilus*. Melody 205 acts as a middle ground between these two

extremes, providing fewer pitches than melody 271, while not engaging in a strictly syllabic

setting.

Example 2.1: Melody 271 *Alleluia Ostende nobis* (*Graduale Triplex* [Solesmes 1979], 16).

Example 2.2: Melody 27 *Alleluia Dies sanctificatus* (*Graduale Triplex* [Solesmes 1979], 49).

Example 2.3: Melody 205 *Alleluia Excita Domine* (*Graduale Triplex* **[Solesmes 1979], 23).**

Comparisons of the Iterations of each Type Melody

By comparing the iterations of each of these melodies, it is possible to see the differences and similarities between them, in order to uncover the methods of adaptation implemented in their construction. In examining these melodies together, the structural role of the melisma emerges as a stable feature in relation to the changes in other parts of the iterations. The melismas tend to remain the same between all the iterations, both by remaining melismas (and not being adapted to help accommodate longer texts) and the melismas themselves remain essentially identical, occurring in approximately the same location in the melody. This puts them in an important position in terms of how the melodies themselves are constructed – these melismas make chants of the same type melody identifiable between iterations, regardless of additions or cuts to the text length in the rest of the verse. In this way, the melisma occupies a significant structural role in the composition of type melodies, acting as pillars to the construction of the chants. This section of the chapter will demonstrate the structural importance of the melisma through detailed analysis of the iterations of type melodies 271, 27, and 205, with particular emphasis on the placement of the melismas, occurring at approximately the same spots across the iterations with very little variability.

It is important to note that, as a scribal habit, sometimes the *jubilus* or the end of the final melisma of the verse is not written out in full. For example, the first three appearances of the

final melisma for melody 271 in the Cantatorium provide a significantly longer version than the abbreviated version seen later on. In later appearances either the scribe intended the singers to sing a shorter version of the melisma or assumed that they would know the end of the melisma which was left out. The fact that the melisma becomes increasingly abbreviated later in the manuscript implies an approach to scribal efficiency, since it had already been written out previously in the manuscript. While we cannot know for certain what the scribe intended, evidence that this is an approach to scribal efficiency, rather than an actual shortening of the melisma, is also found in comparisons of these melodies with later manuscript sources.[14] I will be treating these instances as though the melismas would have been sung in full in all cases.

Melody 271:

Schlager's melody 271 is one of the most stable of the type melodies in the Cantatorium, with a consistent phrase structure and very few changes between the eleven iterations (identified in table 2.6), only making small, necessary changes to accommodate the text. In this section, I argue that the melismas are structurally significant within this type melody and display strong consistency throughout all the other changes that occur between iterations, changes which I will describe in some detail.

---

[14] For example, while the Cantatorium shortens the melisma in melody 271 more and more as the manuscript progresses, the melisma is written in full in the *Graduale Novum*, based on later sources. As well, manuscript sources such as Einsiedeln 121 include the full melisma in places where the Cantatorium does not, such as in *Alleluia Haec Dies* and *Alleluia Dominus in Sina*.

Table 2.6: Melody 271 Chants and their Location in the Cantatorium

Chant	Page
Ostende nobis	26
Memento nostri domine in	36
Dominus dixit ad me	38
Haec dies	111
In resurrectione tua Christe	112
Dominus in Sina	116
Dominus regnavit, exsultet	149
Lauda anima mea	151
Nimis honorati sunt	156
Diffusa est gratia	157
Specie tua	157

The stability of melody 271 is first apparent in the large-scale phrases of the melody. The musical phrasing in the eleven iterations follows the same plan with no variation and the placement of the extended melismas is structurally consistent within these phrases. As evident in Example 2.4, the overall phrasing of melody 271 in the pitched sources shows a fixed plan for ending pitches in this mode 8 alleluia: the alleluia with the *jubilus* (which both begins and ends the chant in performance) ends with a G, while the four phrases of the verse end with b, G, F, and G consistently between the iterations. Anton Stingl uses this same phrase structure in his analysis of the type melody, where he demonstrates that there is an underlying structure to the melodic changes in the iterations by looking at syllable count and syllable stress. Because he has already done this work on syllable count and stress, I focus primarily on the melodic aspects and how they relate to the melismas, referencing Stingl as appropriate.[15]

---

[15] Stingl, *Alleluia Dulce Carmen*, 55.

Example 2.4: Phrase Analysis of *Alleluia Ostende nobis* (Graduale Triplex [Solesmes 1979], 16-17). Cantatorium neumes are under the staff in example.

In looking at the melismas specifically, it is clear that they are never affected by a text setting, or otherwise altered in any way, between all the iterations, and their placement within the phrase is also consistent between all iterations. A close analysis of the placement of the melismas in melody 271 demonstrates the kind of approach used for the varying lengths of text in the verses of the eleven iterations. The first melisma (phrase 1) and third melisma (phrase 3) always occur on the penultimate or antepenultimate syllable of the musical phrase, while the second melisma (phrase 2) always occurs on the penultimate syllable of the phrase. In all cases, the final melisma occurs on the final syllable of the verse, bringing it to a close. The variation in the first

and third melismas is to ensure that the melisma falls on a stressed syllable, as Stingl notes in his analysis of this type melody.[16]

A more detailed analysis across the various different textual iterations of melody 271 demonstrates the approach to melodic adaptation and some differences between each iteration, and some characteristics of each portion of the melody. On the text "alleluia", including the *jubilus*, the iterations are all the same.[17] The verse, however, has more variability. As mentioned, the first phrase of the verse contains a melisma on the penultimate or antepenultimate syllable of the phrase across all iterations, depending on syllable stress (see example 2.5 for comparison,[18] and 2.4 for full chant).[19] Even though the length of the phrase is variable because of the different verse texts in each iteration, the placement of the melisma at the end of the phrase is consistent, which is apparent by similarity in the material that directly precedes the melisma, both melodically and in notational practice. In all but one, the phrase begins with a virga followed by a torculus, c, b-d-c (see Appendix C for a table of neumes from the Cantatorium). This opening gesture is followed by text recitation on c, with a c-b or c-b-b ending (depending on the number of syllables), which leads into the melisma.[20] In situations where the melisma is placed on the antepenultimate syllable, the penultimate syllable has a clivis on c-b.[21] The opening of this melisma sometimes has slightly different beginnings, both melodically and in neumation. It

---

[16] Stingl, *Alleluia Dulce Carmen*, 55.

[17] In some of the iterations, the *jubilus* is not written out or not written out in full in the Cantatorium, just like the final melisma of the verse already discussed. In *Alleluia Haec dies*, only the end of the *jubilus* is absent. In *Alleluia Lauda anima mea* and *Alleluia Specie tua*, the *jubilus* is not written out at all in the Cantatorium.

[18] All of these transcriptions of melody 271 are transcribed from the *Graduale Novum*, except *Alleluia Memento nostril domine in* and *Alleluia In resurrection tua Christe*, which are not in the *Graduale Novum* and I have transcribed from Stingl.
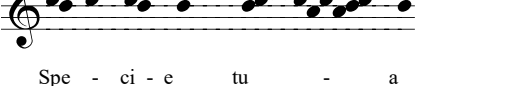
[19] Stingl, *Alleluia Dulce Carmen*, 55.

[20] In *Alleluia Haec dies* there is no preceding figure. Instead, there is a NLHLL figure on c-b-d-c-b, combining the preceding figure with the ending figure, prior to the melisma.

[21] Stingl also notes that in cases where the phrase ends on a single note, there is a paroxytone (the stress is on the penultimate syllable), but in cases where a clivis falls on the penultimate syllable, it is a proparoxytone (the stress is on the antepenultimate syllable). *Alleluia Dulce Carmen*, 55 (point 2).

sometimes begins with an ascending figure (neumed with a virga or a tractulus in the

Cantatorium) or a descending figure (neumed with a clivis) before it proceeds to similar material

(with which some iterations begin immediately). The clivis always has either a "t" (tenere) or an

episema, indicating a longer duration. However, the end of the melisma is neumed the same

throughout each iteration, with small changes with a "c" ("celer", meaning faster) added on the

scandicuses. The slower beginnings to the melismas might be seen as a jumping off point or

preparation for the melisma as a whole. This phenomenon will be discussed in more detail in the

next chapter.

Example 2.5: The First and Second Phrases of the Verse from Melody 271 Chants

O – sten - de no - bis Do - mi – ne   mi-se- ri- cor - di- am tu   -   am

Mem- en - to nos -tri Do - mi – ne   in be- ne – pla - ci - to tu   -   o

Do - mi-nus di - xit ad   me   Fi-li - us   me-us   es   tu

Haec   di - es   quam fe - cit Do - mi - nus

In re - sur-rec-ti-o-ne tu - a Chri - ste   cae-lum et ter - ra lae - tan - tur

Do - mi- nus in Si -na in san - cto   a - scen - dens in al - tum

Do - mi- nus reg - na - vit   ex - sul - tet   ter - ra

Lau - da a-ni- ma me-a Do - mi - num   lau - da - bo Do - mi - num in vi - ta me - a

Ni – mis ho-no - ra - ti sunt   a - mi - ci tu - i De - us

Dif- fus - sa est gra - ti - a   in la - biis   tu - is

Spe - ci - e   tu - a   et pul- chri-tu - di - ne tu - a

The second phrase of melody 271, like the first phrase, contains an extended melisma shared between all eleven iterations, which is placed similarly within the musical phrase across all iterations (although *Alleluia Lauda anima mea* provides only the second half of the melisma). In the first phrase, there is some slight variability in the approach to the melisma, an aspect that becomes more apparent in the approach to and the beginning of the second phrase melisma. Some of the iterations begin the melisma with a clivis (on a-G), for example, while others do not.[22] *Alleluia Haec dies* has a clivis on the syllable preceding the melisma, indicating that while the melisma is stable, there is some flexibility prior to the melisma. Generally the melisma is preceded by the same group of four neumes: a c-a figure followed by a torculus on c-e-d, a virga on c and a pes on b-c. Exceptions include *Alleluia Dominus regnavit, exsultet* which uniquely includes a small melisma on "ex-sul-*tet*", adding additional pitches to the general layout of this section in this particular iteration. The melisma usually occurs on the penultimate syllable of the phrase, except for *Alleluia Haec dies* where it appears on the final syllable of the word ("do-mi-*nus*"). This consistency in placement is similar to what is seen in the first phrase, including the variability preceding the melisma. In both examples, the melismas function structurally within the verses, providing firm similarity between the iterations. Stingl adds that a clivis in included at the penultimate syllable if there the stress occurs on the antepenultimate syllable (proparoxytone).[23] The final melisma also shows consistency of neumation, with some minor changes to significative lettering (for example, the difference between "t"s and an episema on a set of clivises). This demonstrates again similarity and stability within that melisma.

---

[22] Those that include the clivis are: *Alleluia Ostende nobis, Alleluia Dominus dixit ad me, Alleluia Dominus in Sina, and Alleluia Specie tua*.
[23] Stingl, *Alleluia Dulce Carmen*, 55.

The third phrase of the verse of melody 271 also contains a melisma, which is generally the same in all iterations, with some mild variation. A porrectus begins and precedes the melisma.[24] Where the porrectus precedes the melisma, the porrectus and the melisma are separated by up to seven syllables (or as few as one syllable) of text recitation on b.[25] The melisma generally occurs on the penultimate syllable, but appears on the antepenultimate syllable of the word or phrase in *Alleluia Ostende nobis*, *Alleluia Nimis honorati sunt*, and *Alleluia Specie tua,* again due to syllable stress as seen in phrase 1.[26] In two of these cases (*Alleluia Dominus dixit ad me* and *Alleluia Specie tua*) the additional syllable after the melisma is a clivis on G-F, while in a third (*Alleluia Nimis honorati sunt*) only a G is added on the penultimate syllable, since in this chant the final syllable is also a new word ("sunt").[27] All this is to say that while the melisma itself is essentially the same between all iterations, the material surrounding the melisma, like in the second phrase, experiences some variation. This observation demonstrates the consistency of the melisma itself in an environment where some changes occur between iterations to accommodate the text. Perhaps that speaks to the memory process of the performers, that these stable melismatic portions of the chants were memorable and therefore stable, or perhaps stable and therefore memorable. However, as Stingl points out, there is a method to many of the changes in the rest of the verse, which also would have aided memory process, if it was a predictable pattern of change. This also speaks to the melody's recognisability, which would also aid with memory.

---

[24] In *Alleluia Dominus in Sina*, *Alleluia Dominus regnavit, exsultet*, and *Alleluia Nimis honorati sunt*, the porrectus begins the melisma.

[25] Stingl notes that the opening porrectus is on a stressed syllable, with up to three recitation notes prior to the porrectus, or a recitation note combined with the porrectus if the first syllable is the stressed syllable, except for *Alleluia Memento nostri Domine*, where it is placed on a non-stressed syllable because the melisma is on the final syllable of the word. Stingl, *Alleluia Dulce Carmen*, 55 (section 5).

[26] Stingl, *Alleluia Dulce Carmen*, 55.

[27] Stingl states that the final melisma starts on a stressed syllable, except for *Alleluia Memento nostri Domine*. As well, he says that when the final word is a paroxytone, a single note is added and for a proparoxytone a clivis is added.

The final melisma of melody 271 always occurs on the final syllable of the chant, and its placement is structurally consistent like the other melismas in its type melody grouping. Unlike phrases one and two, the material immediately before the melisma is identical, although there is some variation earlier in the phrase, demonstrating the variability in the non-melismatic parts of the chant. Some of this material is only found in some of the iterations, and contains an a-F figure followed by a G-a figure (occasionally with an additional G preceding G-a), as well as a repetition of a (once or twice), depending on the number of syllables. The phrase itself is typically quite short leading up to the long melisma, which dominates the phrase. The melisma is consistent between all the iterations of its melody, and is consistent in neumation where it appears in full in the Cantatorium.[28]

The melismas in melody 271 work to structure the alleluias, giving points of the chant that are identical across iterations, without having to account for differing text lengths. The inner sections of the phrases are more variable because they are accounting for differing numbers of syllables. Not only is the material of the melismas the same, but their placement in each phrase is also similar between the iterations. This similarity gives a strong sense of likeness to the chants in the group as a whole, reinforcing Schlager's grouping of them as the same melody, which has been adapted to suit many texts, even when they are surrounded by slight variations in the verse.

An examination of the notation of these longer melismas reveals some slight variances between them, mostly to do with significative lettering. I will be focusing on these melismas because they provide a stable melodic context in which the notation may be explored. This examination shows that even in a stable melisma, there are some slight variations in notation that could indicate nuances of performance practice. This examination is significant in determining

---

[28] In some cases it is not written out in full.

the performance of the melody in general, as well as uniquely between iterations. For example, on the pressus minor in the *jubilus* there is a "t" meaning "tenere" or "hold" in four of the eleven iterations.[29] Additionally, in four iterations of the *jubilus*, the pes subbipunctis is marked with a "c" ("celer", meaning faster).[30] However, it does not seem that having significative lettering on one of these neumes in any way predicts significative lettering on the other.

Variations in significative letters are also present at the end of the second phrase of the verse of melody 271, where another extended melisma appears, further demonstrating the variation in notation between the iterations for a very stable part of the chant. For example, in all but two of the iterations, some or all of the scandicuses are marked with a "c". These letters are only entirely absent in *Alleluia Dominus dixit ad me* and *Alleluia In resurrectione tua Christe*. All other iterations contain at least one or more scandicuses with a "c". Additionally, when a clivis appears at the beginning of the melisma, it is always marked as "t" or with an episema, which both indicate a rhythmic lengthening of the marked pitches.[31] In those melismas that lack an initiating clivis, clivises are absent from the phrase entirely.

In the melisma at the end of the third phrase, there are also discrepancies in the significative lettering. In all eleven chants the first clivis is marked with a "c", while the following clivis is marked twice with a "t" and four times includes an episema instead.[32] The third clivis either has its own "t", or the "t" for the second clivis is placed between the two figures. In cases where the second clivis has an episema, the third clivis also has an episema.

---

[29] This is the case in *Alleluia Ostende nobis*, *Alleluia Dominus dixit*, *Alleluia Dominus in Sina*, and *Alleluia Nimis honorati sunt*.

[30] This occurs in *Alleluia Nimis honorati sunt* and *Alleluia Dominus in Sina*.

[31] It is marked "t" in *Alleluia Ostende nobis* and *Alleluia Dominus dixit ad me* (two iterations early in the manuscript), and given an episema on all other iterations with a clivis in that position.

[32] *Alleluia Ostende nobis*, *Alleluia Dominus dixit ad me*, and *Alleluia Nimis honorati sunt.*

In the final melisma, there are no significative letters in any of the iterations, but the degree to which the melisma is written out is variable: the final melisma ranges from only the first neume, to two neumes, to half of the melisma, to the final melisma in full. As discussed earlier, these variations are likely just a scribal practice, and the singers would have had the entire melisma memorized.

Melody 27:

Like melody 271, the melismas in melody 27 (in mode 2) provide points of similarity between the various iterations, functioning structurally to form a melody that can be considered the same type. Unlike melody 271, melody 27 has fewer extended melismas, but the shorter melismatic points in the melody function similarly between the iterations. Just like melody 271, melody 27 has eleven iterations in the Cantatorium, and the phrasing of the six phrases is identical between the eleven versions (see table 2.7 for list of iterations). Comparisons of the transcriptions in the *Graduale Novum* indicate that the first phrase always ends on D, the second on C, the third on D, the fourth and fifth on C, and the final phrase on D (see example 2.4). Interestingly, the melisma in the second phrase is the same as the melisma in the fifth phrase, providing another point of comparison within the melody. The final melisma, however, is not a repetition of the *jubilus*. The similarity between the second and fifth phrase provides continuity for the verse as a whole, as well as another place to examine notational differences in instances that share the same material.[33] Perhaps this also has to do with sonic memory, and cohesion within a single chant. The repetition of the passage is increased because it is both repeated

---

[33] Stingl has also completed an analysis of this type melody, focusing on the underlying rules of syllable stress and syllable number, like he did with melody 271. Stingl, *Alleluia Dulce Carmen*, 59-61.

within the melody, and the melody is repeated as a type melody. This repetition perhaps acted as a memory aid for this chant and its structure.

Table 2.7: Melody 27 Chants and their Location in the Cantatorium

Chant	Page in C
Dies sanctificatus	40
Video caelos apertos	41
Hic est discipulus	42
Vidimus stellam	46
Surrexit Dominus vere	108
Obtulerunt discipuli domino partem	109
Tu es Petrus	123
Inveni David	152
Sancti tui…benedicent	153
Justus non conturbabitur	153
Justum deduxit dominus per	153

The musical phrasing closely follows the text structure in most cases. As example 2.6 shows, the division between the first two phrases in *Alleluia Tu es Petrus* accommodates the text, since there is a musical break in the text after "tu es Petrus". However, the final textual phrase of melody 27 is divided into three musical phrases. For example in *Alleluia Dies sanctificatus* (reproduced in example 2.7), the final text phrase is "quia hodie descendit lux magna super terram", and is divided musically into 3 phrases: "quia hodie", "descendit lux magna" and "super terram". While the musical phrasing generally follows the text structure, it also creates its own phrases within the textual phrases. Still, the larger phrasing groups adheres to the text structures, with the musical phrases acting within that framework.

Example 2.6: The First Two Phrases of *Alleluia Tu es Petrus*

Example 2.7: Phrase Analysis of *Alleluia Dies Sanctificatus* (*Graduale Triplex* [Solesmes 1979], 49).
Cantatorium neumes are under the staff in example.

Just like in melody 271, the melismas are generally placed in the same or similar parts of a phrase amongst the eleven iterations. The first extended melisma falls on the penultimate or

antepenultimate syllable of the second phrase.[34] The next extended melisma is more variable in

its placement. In four of the examples, it occurs on the first syllable of the following phrase. In

the remaining seven alleluias, the melisma occurs later in the phrase, depending on the length of

the text, four falling on the penultimate syllable of the phrase, and three occurring in other parts

of the phrase.[35] Although the placement of the second extended melisma within the phrase is

different, it always falls on a stressed syllable in the text. The third extended melisma is also

consistent, occurring on the penultimate syllable of the fifth phrase, except for two instances

where it occurs on the antepenultimate, and two instances where it does not occur at all.[36] In this

way, the placement of the extended melismas is crucial to the structure of the alleluia verses,

related either to syllable placement or syllable stress; each phrase in melody 27 contains a

melisma or melismatic passage that is placed consistently in versions of the melody and contains

the same musical content. Like in melody 271, the melismas act as structural pillars for the

verse, with their extreme similarity between the eleven versions.

A more detailed view of the melody is necessary to examine how shorter melismatic

passages function within the melody, to see if they have the same structural functions as longer

melismas. Additionally, exploring these melodies in detail gives further insight regarding how

the longer melismas function as structural pillars between the iterations.

---

[34] Four of the melodies place this melisma on the antepenultimate syllable while the remaining seven place it on the penultimate.

[35] In *Alleluia Justus non conturbabitur* and *Alleluia Surrexit dominus*, it begins on the third syllable of the phrase (the second word in both cases) and in *Alleluia Hic est discipulus* it begins on the fourth to last syllable of the phrase.

[36] It should be noted that two of the alleluias lack phrases 4 and 5, *Alleluia Justus non conturbabitur* and *Alleluia Tu es Petrus.*

Sometimes multiple syllables in a row contain melismas that are broken up differently between the iterations.[37] As example 2.8 shows, the first phrase of melody 27 contains a multi-melismatic passage that is remarkably similar across all eleven iterations, though sometimes broken up differently.[38] These melismas occur across two, three, or four syllables, as visible in example 2.8. The syllable divisions always occur at the same parts of the passage, showing consistency across the iterations. The final syllable is melodically identically across all iterations, while the first part is divided across one, two, or three syllables. The placements of the divisions are consistent regardless of whether it is divided into two or three segments. In *Alleluia Sancti tui…benedicent*, for example, it is divided across four syllables ("san-cti tu-i"). In this case, one syllable ("san-*cti*") is not melismatic, but rather is a single note on G, which is part of the melisma in other iterations. Similarly, this opening passage is divided across four syllables in *Alleluia Obtulerunt discipuli domino partem*, in which the first syllable is not melismatic while the others are.[39] *Alleluia Sancti tui…benedicent* is still divided in the same manner seen in the other iterations. Two other iterations of the melody vary considerably by omitting the opening ascending line of the melismatic passage.[40] In *Alleluia Tu es Petrus* the melismatic material begins on "Petrus", emphasizing that word in the phrase. Similarly, while the opening two syllables of *Alleluia Obtulerunt discipuli domino partem* deviate from the other iterations in its division, the final two syllables are consistent with the other iterations. *Alleluia Inveni David* begins the melisma on the second syllable ("in-*ve*-ni"), jumping ahead and skipping the opening ascension. In these cases, the melisma is divided in the same way as the other iterations, except

---

[37] Stingl states that this passage functions in two or three syllable words the same, regardless of emphasis, but for three-syllable words the penultimate syllable is the high point of the melody. Stingl, *Alleluia Dulce Carmen*, 59.

[38] All transcriptions of melody 27 in my examples come from the *Graduale Novum*, except for *AlleluiaHic est discipulus* and *Alleluia Surrexit Dominus vere*, which are not in the *Graduale Novum* and I have transcribed from Stingl.

[39] Stingl also mentions these two solutions to the four syllable words or word-blocks. Stingl, *Alleluia Dulce Carmen*, 59-60.

[40] In both *Alleluia Tu es Petrus* and *Alleluia Inveni David*, the opening ascending line of the melisma is absent

that the earlier segment is absent. A similar phenomenon also happens in the fourth phrase of the verse, where a melismatic passage is divided across two or three syllables, depending on the number of syllables to be accommodated.

**Example 2.8: The Opening Melismatic Passage from the Verse of Melody 27**

Di - es

Hic est

Just - us

Ju - stum

Vi - de - o

Vi - di - mus

Sur - rex - it

San - cti tu - i

Ob- tu - le - runt

Tu es Pe - trus

In - ven - i

As visible in example 2.9, the placement of the final melisma demonstrates the melisma's relationship to other structural features within the phrase: the melisma always occurs on the final syllables of the chant and is always preceded by a bivirga on F at some point earlier in the phrase (with, as we have already seen, some flexibility in the middle of the phrase).[41] By examining the melisma's relationship to the bivirga, one can see the structural consistency of the melisma within the chants and its relationship to other structural landmarks in the phrase. This final melisma occurs in all the chants, including those that did not include phrases four or five. The melismatic passage is generally broken up into two parts, though not always. In *Alleluia Vidimus stellam*, the melisma is broken up on a three syllable word ("do-mi-num"), so an extra a is added on the middle syllable to allow for a similar distribution as the other chants. In the case of *Alleluia Video caelos apertos*, there is a bivirga on "*De*-i" that occurs earlier in the phrase in the other iterations. In other chants, the final melisma is preceded by up to five syllables of recitation on F, with the bivirga occurring at the beginning of that section. In *Alleluia Video caelos apertos,* phrase 5 is directly followed by the melisma in phrase 6, so the bivirga is included in the melisma rather than the preceding recitation. In this way, while the placement of the bivirga is variable, it always precedes the melisma towards the beginning of the phrase, and the melisma itself remains consistent between the iterations.

---

[41] Stingl also notes that the bivirga always begins the phrase, except for *Alleluia Surrexit Dominus*, which begins with a virga and pes. Stingl, *Alleluia Dulce Carmen*, 61.

Example 2.9: The Final Phrase of Melody 27

Dies sanctificatus

su - per ter - ram

Video caelos

De - i

Hic est discipulus

te - sti-mo- ni- um e - jus

Vidimus stellam

ad - o - ra - re Do - mi - num

Surrexit Dominus vere

quo- mo-do cog-no-ve-runt e- um in frac-ti-on- ne pa - nis

Obtulerunt discipuli

et fa- vum mel - lis

Tu es Petrus

Ec-cle - si - am me - am

Inveni David

un - xi e - um

Sancti tui

tu - i di - cent

Justus non conturbabit

ma - num e - jus

Justum deduxit dominus

reg -num De - i

In addition to the melodic and syllabic variations across all iterations of melody 27, there are some minor notational differences as well, sometimes to do with the significative letters and other times to do with neume shapes. For example, in the second phrase of the chant, there are usually significative Cs (for celer, meaning faster) on the final porrectus and clivises.[42] In addition to the differences in significative lettering, the two clivises at the end of the melisma in the second phrase are sometimes combined into a single connected shape.[43] These connected clivises also appear in the melisma in phrase five (the same melisma as the second phrase). Unlike in the second phrase, all but one of the final clivis pairs are combined into a single connected shape.[44] This is likely a scribal convention, but perhaps indicates greater connection in how it is performed, as a single group rather than two groupings. Other notational differences include variations in the length of the clivis. In the third phrase, the clivis is sometimes written as a long clivis.[45]

Although alleluias are the focus of my discussion, some melodic connections go beyond genre, and melody 27 provides a good example. While primarily featured as an alleluia type melody, it also shares its ending with the first Sunday of Advent mode 2 gradual *Universi qui te exspectant*. This similarity stretches back for the entire final phrase, beginning with the bivirga until the end of the chant. Within melody 27's variations, as already discussed, this final phrase has some differences, with a possible period of recitation after the bivirga and before the rest of the phrase. That being said, the main events of the phrase (including the bivirga, the clivis, the

---

[42] While some of the melody 27 chants do not include the significative C at all (*Alleluia Sancti-tui…benedicent*, *Alleluia Justus non conturbabitur*, and *Alleluia Tu es Petrus*), in *Alleluia Inveni David*, there is no C on the porrectus but there is one on the clivis.

[43] These include: *Alleluia Vidimus stellam*, *Alleluia Sancti tui…benedicent*, *Alleluia Justus non conturbabitur*, and *Alleluia Tu es Petrus*.

[44] *Alleluia Dies sanctificatus* is the exception.

[45] See *Alleluia Dies sanctificatus*, *Alleluia Sancti tui…benedicent*, *Alleluia Tu es Petrus*, and *Alleluia Video caelos apertos*.

porrectus, and the final melisma) occur in the same order between all iterations of melody 27 as they do in *Universi qui te exspectant*.[46]

There is a liturgical connection between *Universi qui te exspectant* and melody 27. *Alleluia Dies sanctificatus* (a melody 27 chant) occurs on Christmas Day, while *Universi qui te exspectant* occurs the first Sunday of Advent. This commonality shows continuity between the melodies in the Christmas season, with *Universi qui te exspectant* anticipating the birth of Christ, while musically anticipating the first occurrence of melody 27 in the Cantatorium. While this liturgical connection is only apparent through this one iteration of melody 27, it is also the first occurrence of melody 27 in the Cantatorium, so the connection is more apparent due to that particular alleluia's proximity to *Universi qui te exspectant*.

Melody 205:

Melody 205 is more variable in its adoption of texts than the other melodies discussed so far. There are six iterations that share the same alleluia call, while only five iterations share the verse melody, listed in table 2.8. *Alleluia Lauda, Jerusalem* shares only the alleluia call and the opening of the verse with the other iterations. Can it then be considered part of this melodic family? It is certainly related, but arguably has an entirely different melody in the verse. While melodic elements are similar throughout the iterations, there are also times when the chants vary considerably between one another. Unlike melodies 271 and 27, Stingl does not address this melody type, leaving an interesting opportunity to analyze a less well-known type melody.

---

[46] This commonality with graduals is not unique. The end of *Beatus vir qui* (melody 227) is the same as *Christus factus est.* In this case, the final extended melisma is the same between the two chants but, this similarity is only seen in later versions of the chant, as the Cantatorium does not write out the final melisma in full in either case.

Table 2.8: Melody 205 Chants and their Location in the Cantatorium

| Chant	Page in C
Exita Domine	28
Laudate Deum	48
Ascendit Deus	116
Emitte Spiritum tuum	117
Qui posuit fines	151
Lauda Jerusalem	152

In general, the iterations are more variable in the beginning, where only *Alleluia Excita Domine*, *Alleluia Laudate Deum*, and *Alleluia Ascendit Deus* share a phrase structure (see examples 2.10 and 2.11). All three verses begin with a phrase ending on G, followed by a phrase ending on D. The next phrase ends on E, as does the final phrase in these three chants. *Alleluia Emitte Spiritum* follows similar phrasing, but the first phrase is much shorter and ends on E, while the next phrase (like the other chants) ends on D. This demonstrates a similarity between *Alleluia Emitte Spiritum* and the other chants in their phrase structure, because the second phrase ends the same as the others, despite the earlier variation. The remainder of *Alleluia Emitte Spiritum* is divided into three phrases, each ending on E, again demonstrating a similar approach to the phrase plan. The phrasing of *Alleluia Qui posuit fines* is also somewhat different from the first three chants. While it shares melodic material with *Alleluia Excita Domine*, *Alleluia Laudate Deum*, and *Alleluia Ascendit Deus*, the first phrase ends on A, while the second phrase ends again at a similar place where the second phrase ends in the other iterations. Its other two phrases proceed similarly to the last two phrases of the other chants, both ending on E, like the other chants. This similarity also demonstrates the likeness between these iterations in their phrasing, even though there is some variation early on.

Example 2.10: Phrase analysis of *Alleluia Excita Domine* (*Graduale Triplex* [Solesmes 1979], 23).

Cantatorium neumes are under the staff in example

Example 1.11: Melody 205 Alleluia Call and First and Second Phrases of the Verse, transcribed from the *Graduale Novum*

Al - le - lu - ia   Ex- ci- ta   Do -   mi- ne   po -ten- ti - am tu - am

Al - le - lu - ia   Em- it- te   Spi – ri - tum tu - um

Al - le - lu - ia   As-cen-dit De - us   in ju- bi- la - ti - o - ne

Al - le - lu - ia   Lau-da-te De - um   om-nes An- gel - li e - jus

Al - le - lu - ia   Qui po-su- it   fi - nes tu -   os pa - cem

Al - le - lu - ia   Lau - da   Je - ru - sa- lem   Do - mi- num

Example 2.12: Comparison between *Alleluia Excita Domine* and *Alleluia Lauda Jerusalem*

The placement of the extended melismas in the second half of the melody is correlated with a stricter approach to the melody. In the third phrase of most of the iterations (the second phrase of *Alleluia Qui posuit fines*), an extended melisma is placed on the penultimate syllable of the phrase, except for *Alleluia Ascendit Deus*, where it occurs on the final syllable of the phrase. This melisma in the rest of the iterations is consistent throughout the iterations except in *Alleluia Qui posuit fines*, where the first half of the melisma is absent. It is significant that the second half of the melisma is the one that is present, since it shows structural consistency at the end of the phrase. This melisma is absent in its entirety in *Alleluia Lauda Jerusalem*, which indicates that chant may not be part of the same melodic family (see example 2.12; this melisma is structurally significant in the composition of melody 205 in the other iterations, as demonstrated by its consistency between the other chants leading to the end of the third phrase. In this case, the alleluias other than *Alleluia Lauda Jerusalem* all express far more similarities with one another than we see with *Alleluia Lauda Jerusalem*. These similarities are found particularly at the beginnings and ends of phrases, and the end of the verse as a whole, similar to the melodic behaviour of melody 271 and 27. Because the melody 205 chants are following this same general procedure as the other type melodies, it makes sense to group them together even though they have more divergences than seen in the previous type melodies. However, *Alleluia Lauda Jerusalem* does not share any material with the other 205 melodies by the end of the verse. This example demonstrates a different pattern of behaviour, showing that it does not have similarities where one would expect to find them if one was treating it as part of the same melody type. This divergence indicates that *Alleluia Lauda Jerusalem* might be considered separate from the other chants in this type melody, even though the alleluia call and opening of the verse are the same.

A further difference between *Alleluia Lauda Jerusalem* and the others can be seen in the final melisma, which is different in *Alleluia Lauda Jerusalem* than the others (see examples 2.12 and 2.13). This final melisma is structurally important to melody 205 because it is a repetition of the *jubilus*, and is shared between all other iterations, occurring on the final syllable of each chant (except *Alleluia Lauda Jerusalem*).[59] Because of these two extended melismas in the third phrase and on the final syllable, which are consistent between the five primary examples of melody 205, the second half of the chant is much more congruent between the iterations. The melismas play a structural role in defining the type melody, in their consistent placement within each iteration. The lack of extended melismas in the beginning of the chant leads to a looser adoption of the melody, without these structurally significant melismas to guide the construction of the melody.

While there are many slight variances between the five primary iterations of melody 205, it is important to note its increased level of variation from the other two type melodies. As we have seen in melodies 271 and 27, the beginnings and endings of phrases in melody 205 are the areas that are most stable, compared to the middle section of the phrase, which offers flexibility for a varying number of syllables between the iterations. For example, the first phrase of the verse is variable between the six iterations, as example 2.11 demonstrates. While they all begin with the same general gesture (a-G), the middle section is variable with a large ascending melisma occurring only in *Alleluia Excita Domine* and *Alleluia Qui posuit fines*. However, stability between the iterations returns at the end, with a consistent closing figure between all five primary iterations.

---

[59] It is sometimes only partially written out in the Cantatorium, such as in *Alleluia Qui posuit fines*, where only the opening of the melisma is written and *Alleluia Laudate Deum*, where only the first half is written out.

The second phrase (in example 2.11) and third phrase (in example 2.13) all have some shared material between the iterations, but the second phrase of the verse also shows some variability at the beginning of each iteration, although the ending is still consistent: *Alleluia Excita Domine*, *Alleluia Emitte Spiritum,* and *Alleluia Ascendit Deus* proceed to the same material and end in the phrase in the same manner. *Alleluia Lauda Jerusalem* continues to pursue an entirely different melody, as example 2.12 demonstrates. The third phrase has shared material between all except *Alleluia Lauda Jerusalem* and *Alleluia Qui posuit*, the latter of which only shares some of the material, demonstrating a general similarity in the type melody (see example 2.13). *Alleluia Emitte Spiritum* expresses some differences, however*,* by having a different ending to the extended melisma at the penultimate syllable of the phrase. The ending is changed from D-F-G-F-E-F-E to D-F-G-E-F. In this situation, the similarity usually seen in the melismas is absent, with variation occurring at the end in one of the iterations. This is significant and demonstrates melody 205's increased variability when compared to melodies 271 and 27. However, importantly, *Alleluia Qui posuit,* which varies considerably in this section, shares the second half of the extended melisma on the penultimate syllable of the phrase with *Alleluia Emitte Spiritum*, altered in the same way as we have already seen. This shows some consistency between the iterations in their variability, in that multiple chants share the same modifications. As well, it is important to remember that the placement of the melismas remains consistent across the iterations despite this small change in the melisma itself. The consistency of the change (occurring in two chants) as well as the placement of the melisma indicates that the melismas continue to act as structural pillars in the melody, even though melody 205 is more variable than what is seen in melodies 271 and 27.

Example 2.13: Phrase Three of Melody 205

Excita Domine

et   ve   -   ni

Laudate Deum

lau- da- te   e   -   um

Ascendit Deus

et   Do- mi   -   nus

Emitte Spiritum tuum

et   cre- a -   bun   -   tur

Qui posuit fines

et   a- di- pe fru -   men   -   ti

Lauda Jerusalem

De - um   tu   -   um

Unlike earlier phrases of melody 205, the final phrase is essentially the same in all the iterations, except, again, for *Alleluia Lauda Jerusalem*. This demonstrates consistency at the end of the verse, like we have seen in melody 27 and melody 271. The final melisma especially is consistent between the iterations, except for *Alleluia Lauda Jerusalem* which has a new melisma at the end of the chant. This similarity between the five primary iterations demonstrates the importance of the melisma in the structure of the chant. The melisma repeats the *jubilus*, creating coherence within each chant as well as between them, functioning structurally in defining the type melody. It is possible to say that because *Alleluia Lauda Jerusalem* lacks this melisma, as

well as the extended melisma seen in the third phrase, it is not part of this melody type, at least in the verse. Rather, it lacks these points of extreme consistency in the melody that the other iterations all share. So, even though it shares the *jubilus* and the opening, it is a unique chant rather than part of melody 205 as Schlager identified it.

An examination of the neume notation for melody 205 in the Cantatorium indicates that there are some small changes between the iterations in the melisma in the third phrase, a very stable portion of the melisma melodically. While most of the iterations begin the melisma with a virga episema, *Alleluia Ascendit Deus* begins instead with a tractulus, which is another way to indicate a longer-held pitch. The opening of the melisma is approached by a torculus from below, like it is *in Alleluia Emitte Spiritum* and *Alleluia Laudate Deum*. *Alleluia Ascendit Deus* also differs from the other iterations in that the melisma begins on the final syllable of the phrase, rather than the penultimate. *Alleluia Excita Domine* differs from the group notationally, where the pair of clivises are marked with episemas, while in the other iterations they are marked "tenere", again two different ways of indicating a longer rhythmic value. Otherwise, all the iterations are notated the same way. This shows consistency between the iterations and emphasizes the stability of the section of the chant, which is structurally important to melody 205 as a whole.

Conclusion:

By examining melodies 271, 27, and 205, it is clear that the melismas function as structural pillars when applying the melodies to new texts. The placement of the melismas is consistent within the chants, with longer melismas often occurring towards the end of a phrase on a consistent syllable in the phrase, depending on syllable stress. Additionally, the melismas

themselves are melodically consistent and show only small differences in neumation, with some variation occurring in melody 205. This consistency between the iterations perhaps has to do with recognisability and with memory, with consistency in the melismas helping the singer remember the chants.

As table 2.9 summarizes, in melody 271, the melismas function structurally at the ends of phrases, while the internal parts of the phrases saw more variation to suit the texts. In melody 27, the melismas function similarly to melody 271, and even smaller melismatic portions functions as similar material between the eleven iterations. Melody 205 shows more variation than the earlier two, with entirely different material between iterations in the early part of the verse. However, the second half of the verse shows more stability across the iterations, perhaps because of the presence of extended melismas. This structural approach demonstrates the importance of maintaining melismas when adapting a type melody to a new text. As well, while melody 271 and melody 27 demonstrate a consistent phrase structure throughout, melody 205 is again more variable, with *Alleluia Emitte Spiritum tuum* and *Alleluia Qui posuit fines* both showing variation in the first half of the melody. However, even though they arevariable, they still end on D at the end of the second phrase, demonstrating similarity amongst the iterations within this variability.

Table 2.9: Summary of phrase structure and melisma placement of melodies 271, 27, and 205

Melody	Phrase Structure	Melisma Placement
271	• Four phrases, ending on b, G, F, G respectively. • Phrases are consistent between the iterations	• First phrase: penultimate or antepenultimate syllable • Second phrase: penultimate syllable • Third phrase: penultimate or antepenultimate syllable • Fourth phrase: final syllable
27	• Six phrases, ending on d, c, d, d, c, d respectively. • Phrases are consistent between the iterations	• First phrase: first syllable (broken into 2-4 parts), except in *Alleluia Tu es Petrus* and *Alleluia Inveni David* where it waits for a stressed syllable • Second phrase: penultimate or antepenultimate syllable • Third phrase: beginning of the phrase, sometimes preceded by text recitation • Fourth phrase: end of the phrase, divided across two or three syllables • Fifth phrase: penultimate or antepenultimate syllable • Sixth phrase: divided across final two syllables of the chant
205	• Four phrases, ending on G, d, e, e respectively, with two exceptions. • *Alleluia Emitte spiritum tuum* has five phrases, ending on e, d, e, e, e respectively. After the first phrase, this generally lines up with the other iterations in terms of pitch and phrase structure. • *Alleluia Posuit fines* ends the first phrase on a, but rejoins the other melodies in the second phrase, ending it on d	• First phrase: third, fourth, or fifth syllable, depending on opening (see Example 1.8) *Alleluia Qui posuit fines* has additional melismas in the first phrase • Third phrase: penultimate or final syllable • Fourth phrase: final syllable

As well, melody 205 provides an interesting opportunity to re-evaluate Schlager's rationale for melodic grouping. While Schlager groups *Alleluia Lauda, Jerusalem* with melody 205 for having the same *jubilus*, he considers melody 27 and melody 28 separate melodies even though they also share a *jubilus*. The relationship between melodies 27 and 28 will be discussed

in more detail in the following chapter, but it does point to the difficulty of considering how similar chants have to be to say that they share a melody.

By understanding the differences between the iterations of a type melody, it is possible to say something about compositional practice. It is clear that the melodies could be applied to a text of any length, and that the melody could be shortened or lengthened to suit the length of the text. As well, we have seen that parts of the melody might be left out of the new chant entirely. The middle parts of the phrases seemed to have the most variability. That is where text recitation can be added to suit a longer text. As well, this is where notes can be removed to suit a shorter text. Likewise, the middle of the chant is where sections might be removed, not the beginning or the end, as is the case with the fourth and fifth phrase of melody 27. In this case, the middle of both the phrase and the chant as a whole seem to be most variable.

The melismas act as structural landmarks within this framework. They often occur towards the ends of phrases. They signal the end of the phrase, and also that the various iterations of the melody are the same. Parts of the melisma are rarely reused to extend the melody. Rather, they remain melismatic between the iterations regardless of text length. This feature shows the importance of their recognisability between the various iterations. They remain the same, and occur in the same places within the melody. This consistency shows the importance of their placement within the type melodies to the chant's structure and the melody's recognisability. The melismas are therefore crucial to the construction of the type melodies and their consistency in their adaptations shows that they were treated as such.

Chapter Three: Using Hornby and Maloy's Methodology to Find Shared Material between Melismas in the St Gall Cantatorium's Alleluia Repertory

The study of adiastematic notation has frequently been accomplished through careful comparison with later, heightened sources, but in the case of Old Hispanic chant, there are no pitched manuscripts with which to make that comparison. In order to study this repertory, Emma Hornby and Rebecca Maloy have endeavored to create a newly adapted methodology which focuses on contour rather than exact pitch structures. They compare the notation of individual chants within the Old Hispanic repertory to identify patterns and posit what they might mean. While they cannot study specific intervallic melodic patterns, they can instead assess contour by assigning values of neutral, low, high, or same to each pitch within each neume. Hornby and Maloy examine which are used where, and if there are common patterns that recur. This approach allows the melodies of adiastematic notation to be compared without using later sources and has been particularly fruitful in the study of openings and endings, where Hornby and Maloy have identified melodic formulae and intersections between melodic traditions. This research has allowed them to find internal cadential figures, by notational similarities with the ends of chants. While this methodology was developed specifically for Old Hispanic chant, it offers a new way to study other adiastematic notations as well. It also calls into question the definition of a melodic formula: can the repetition of contours alone be considered formulae?

In Old Hispanic chant, the benefits are obvious: it is a way to analyze adiastematic melodies that belong to a closed tradition. And it has yielded fruitful results. Hornby and Maloy have identified various melodic families within the Old Hispanic repertory, as well as cadential figures that can be found regularly at final cadences and internal cadences across the repertory. By discussing only the contour, no assumptions are made about the intervallic melodic structure

itself. These comparisons bring to light similarities across the repertory, and identify patterns that might not otherwise be seen. While the Hornby and Maloy methodology has not been applied to other forms of adiastematic notation, such as St Gall notation, its application to other notational systems invites new perspectives on the notation. It allows scholars to study melodies in adiastematic notation on their own, assessing similarities and differences without relying on later, pitched sources. This system allows contour to be discussed and compared without assigning specific melodies to the chants, being aware that recurrent notational patterns may not always suggest recurrent melodies.

Applying this methodology for the first time to the St Gall Cantatorium alleluia repertory provides a new way beyond Schlager's typology of finding patterns within that repertory. Schlager's focus was on larger, recurrent melodic patterns, but this approach provides a way of locating smaller patterns that might otherwise remain hidden. Compiling a data set by assigning values of neutral, high, low, or same (NHLS) to neumes in the repertory, allows the user to search the melodies by contour and find shared passages that would be difficult to trace through manual analysis alone. In my study, I am specifically applying the methodology to the melismas in the alleluias in the St Gall Cantatorium. Because this methodology has been used in Old Hispanic chant, which is notoriously melismatic, itseem particularly suited for the study of melismas. By applying this methodology to this specific area, new patterns in the alleluia repertory emerge, including the recurrence of melismas within the sample, outside of known type melodies, particularly in opening gestures in melismas and closing gestures from the melismas and the *jubilus*.

My sample includes 532 melismas of five pitches or more found in the 82 alleluias in the St Gall Cantatorium. I have defined five pitches as the minimum, because five pitches, typically,

requires more than one neume. The "basic" neume shapes range from one to three pitches, so five pitches will generally be made up of more than one neume shape.[1] I have assigned values of neutral, high, low, same, or quilisma to each pitch of each neume within each melisma and compiled the data in an excel spreadsheet, including images from the Cantatorium of each melisma. The first pitch of each neume is labeled N because we cannot know its directional relationship with the previous neume. After the first pitch of the neume, I have labeled each of the following pitches as H, L, S, or Q (high, low, same, or quilisma), dependant on the contour of that neume. In the case of the quilisma, I have followed Hornby and Maloy in using a "Q" to denote the pitch that the quilisma falls on, because it could indicate either an N or a H.[2] Although Hornby and Maloy did not use Q originally, they have now adopt this practice.[3] This table allows me to search, organize, and sort the melismas by their openings and their endings, while immediately comparing the NHLS designations to the actual notation. Please see Appendix B for a neume chart for the Cantatorium and Appendix C for a list of all neumes and their NHLS designations included in my sample, and see figure 3.1 for an image of my spreadsheet.

---

[1] Arguably, a porrectus or torculus plus two subbipuncti is a single neume, but the same contour could also be realized as a porrectus or torculus plus a clivis.
[2] In Montpellier, the quilisma could also be L.
[3] Personal correspondence with Emma Hornby

Figure 3.1: Screenshot of Excel Spreadsheet

To enhance the searching capacity, I have used a program developed for this purpose to search for how many times each string of letters is used.[4] The program takes the data from my excel spreadsheet and systematically searches it for recurrent strings of characters. It identifies how many times that strings of characters appear, which allows me to identify the most promising matches: those that are either two or more recurrences of long strings or multiple occurrences of relevant shorter patterns. I have focused primarily on the longer stretches of characters, even though the results also indicate, for example, how many instances of NL-NL occur, which is a very common occurrence within the melismas; NL-NL appears 94 times, but is not a full melisma on its own and occurs primarily in the middle of the melisma at varying actual pitch levels, when compared to later sources.

In this chapter, I will discuss my results from applying the Hornby and Maloy methodology to the melismas in the St Gall Cantatorium's alleluias. I will begin by discussing

---

[4] I would like to thank Greg Sinclair for creating this program for me.

type melodies, and how looking at the larger sample of melismas complicates Schlager's designations of type melodies. I will then discuss two important moments in all melismas: the endings and the beginnings, first focusing on figures found at the end of each *jubilus* in the entire sample and then on the openings of each melisma (not each chant), identifying repeated material. As well, I will discuss formulaic material found in the melismas outside of Schlager's melody groupings, identifying repeated melismas in a single chant, and shared endings of the melismas (not the final endings as found in the *jubilus*, but rather shared material occurring at the end of any melisma). Finally, I discuss the application of this methodology to St Gall notation and what might be improved for future studies of this type.

Type Melodies

In chapter one, we saw that through his cataloguing of alleluias, Schlager identified a number of type melodies. By applying Hornby and Maloy's methodology, we can confirm the existence of these type melodies in the Cantatorium using a different method. The analysis in chapter one demonstrates, that the melismas are integral to the structure of the type melodies. It makes sense, then, that a method that looks only at melismas would be able to identify type melodies based on this very stable portion of the melody. By examining the melismas that recur in the Cantatorium, it is clear that the longest stretches of similarity belong to type melodies. In addition to finding the three most used type melodies discussed in chapter one (melodies 271, 27, and 205), this methodology also finds some of the less commonly used melodies (such as 74). This finding demonstrates not just melodic repetition but also notational repetition since the N position at the beginning of each neume establishes neume grouping. As well, this result shows that in the other type melodies in the Cantatorium, the melisma continues to be a stable place, making the melodies findable by looking only at the melismas. Importantly, this approach proves

that it is possible to find passages that are the same pitches by looking only at contour, demonstrating the effectiveness of Hornby and Maloy's contour methodology.

Examining the type melodies this way also clarifies where notational changes occur in the melismas. For example, in melody 27, there are two notational endings to one of the melismas; sometimes it ends with a porrectus flexus and other times two clives. This methodology points to that difference, since it identifies the beginning part of the melisma as the same, but would not include the deviation in what is considered to be similar material. However, it does identify which iterations share which ending, by grouping those with the shared ending together. This approach might be even more useful with a larger sample of type melodies, showing how many versions share which endings, but even with this sample size, the methodology demonstrates that deviations can be found, and that the type melody can be identified despite small changes.

<u>Similarities between Melodies 27 and 28</u>

By pointing out strings of characters that are the same in a large sample of alleluias, comparisons between seemingly unrelated alleluias are possible. For example, while Schlager identifies melodies 27 and 28 as separate melody types, my searches found that they share the same *jubilus* and by further comparison I have discovered that they share the same notation for the entire alleluia call, not just the *jubilus*. In fact, by looking at later pitched versions of the two alleluia calls, according to the *Graduale Novum*, it is apparent that they share the same actual melody as well. They only deviate in the verse, which is perhaps why Schlager considered them to be separate melodies. However, as discussed in chapter one, Schlager considered all the melody 205 iterations to be the same, even though *Alleluia Lauda Jerusalem* has a different

verse. While the verse begins in the same way, it deviates considerably from the other melody

205 alleluias throughout the rest of the verse, after the first word of the chant. If Schlager

considers *Alleluia Lauda Jerusalem*, which barely shares more than the alleluia call with the

other melody 205 alleluias, to be a melody 205 chant, it seems inconsistent that he would

consider melodies 27 and 28 separately. By examining all the alleluia melodies as a group, using

this contour methodology, it is possible to see these points of similarity that are not visible by

only studying pre-existing type melodies. This disparity has the potential to call into question the

current type melody designations assigned by Schlager, pointing to inconsistencies in how these

melodies have been defined in the past.

Ending Figures at the End of the *Jubilus*

Hornby and Maloy used the NHLS contour methodology, to study specifically cadences

in Old Hispanic chant, looking for repeated patterns. They found that there were certain formulas

that occurred at the end of chants, and that such formulas were sometimes found in the middle of

the chants as well, which suggested that they are points of internal cadence. They observed that

only certain neume patterns were employed at the ends of chants in the Old Hispanic repertory.

As well, internal three-syllable cadences were being treated by the scribe in the same way as

final ones, with the penultimate syllable having NH or NHH 93 per cent of the time.[5] To see if

similar levels of predictability occur in the St Gall Cantatorium's alleluia repertory, I have

assessed the end of the *jubilus* of each chant (which would be the end of the chants as well) to

see if any endings recurred. I test to see if such patterns can be found in the Cantatorium, by

---

[5] Emma Hornby and Rebecca Maloy, "Melodic Dialects in Old Hispanic Chant," *Plainsong and Medieval Music*. 25, no. 1 (2016): 45.

examining whether there is a certain neumatic formula used at the ends of chants, and suggest that there are three repeated endings in this repertory.

The first of the three patterns is found at the ending of melody 34 and 27, as seen in table 3.1. This recurrence seems noteworthy because in addition to sharing an ending pattern of a clivis followed by a quilisma torculus, they are also both mode 2 chants and the pitched versions in the *Graduale Triplex* show a shared pitch structure as well (FD-EFD). While the pattern of clivis and quilisma torculus appears to occur primarily within this small sample, the quilisma torculus alone appears as well as an ending figure in three mode 1 graduals from the *Graduale Triplex*[6], sharing the final three pitches of the mode 2 alleluia examples.

Table 3.1: Melodies that Share Ending One

Melody Number	Pitches from the GT Clivis-Torculus
34	
27	

The second of the three ending figures, comprising a pes quassus and a pressus maior, occurs in twenty chants in the Cantatorium, across thirteen different melodies. Unlike the earlier example, this figure occurs across modes in the alleluias, including modes 3, 4, 5, and 7. The most common is mode 7, in which the figure occurs in seven melodies out of the thirteen melody types. Because it occurs in so many modes, the figure represents a variety of pitch structures, yet all maintain the same contour. The figure, therefore, shows some flexibility, but there are really

---

[6] These include *Custodi me Domine*, *Inveni David*, and *Gloriosus Deus in sanctis*.

just two variations. As table 3.2 shows, the first half of the figure comprises a neighbour figure, made up of major seconds in all the present modes. The only variant is melody 355, which begins with a major third followed by a major second. The final interval is a minor second in modes 3 and 4 (F-E) and a major second in all other cases. These intervallic relationships demonstrate that the overall intervallic composition of the ending shows some variation between modes, but is more or less otherwise consistent. Even melody 355, which shows deviation in the opening interval returns to a major second for the second interval, like all of the others, and proceeds to a major second, again like the other mode 7 chants. In this way, the ending demonstrates consistency between the different melodies and the different modes, even though the exact intervallic composition is adjusted to suit the modes.
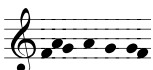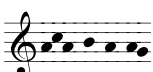
Table 3.2: Melodies that Share Ending Two

Melody Number	Mode	Pitches from the GT Pes quassus – pressus maior	Opening Interval	Closing Interval
198 and 203	3		Major second	Minor second
205 and 206	4			
224	5			Major second
337, 360, 375, 380, and 385	7			
355	7		Major third	
362	7	No transcription available		

The final ending figure that is shared between multiple alleluias in the Cantatorium appears in twenty chants in the Cantatorium, across eight different melodies (see table 3.3). This ending comprises a virga and pressus maior, and, like the second figure, it occurs across modes and finals, including modes 1 (D), 3 and 4 (E), 5 (F), and 7 and 8 (G). Unlike the earlier figure, no one mode appears more frequently than the others, and, as table 3.3 demonstrates, there is more variation in pitch structures. Notably, mode 3 uses a slightly different pitch structure for the figure's four pitches compared to the other iterations. While the others utilize a second followed by a unison, followed by another second, mode three uses a third at the end, rather than another second. This varying pitch structure is also present in the preceding torculus, which only occurs with some versions of this ending, being absent from melodies 77 and 178. In most occurrences, the torculus is structured as two thirds, but in melody 202 it is realized as two seconds and in melody 227 it is formed by a third followed by a second. This discrepancy even appears within a single mode. The torculus in mode 3 is comprised of seconds in one version and thirds in another. In mode 8, the torculus is formed of thirds in one version, and a fourth followed by a third in the other. While all of these share the torculus contour, their intervallic structure varies dramatically. This variability raises the question of whether the torculus is part of the ending figure or not. Although the rest of the ending figure seems somewhat more stable, the torculus is highly variable and only sometimes present. This variability demonstrates that even though the neumation may be the same, and it may be used in the same context, the musical content of the passage may be drastically different in each appearance. As well, while there are some instances where the same contour results in the same pitch structure (such as melodies 353 and 223), they are in the minority in this sample. Although the pitch structure is different between these examples, what is significant here is that the contour is the same. Searching by pitch structure

could not find these relationships, and this was clearly an important cadential gesture to approach

the finalis from the third above, followed by a lengthened (or doubled) step above the final.

Table 3.3: Melodies that Share the Third Ending

Melody Number	Mode	Pitches from the *Graduale Triplex* (torculus) + virga + pressus maior
77	1	
185 (2 iterations)	3	
202	3	
178	4	
227	5	
353	7	
223	8	
271 (11 iterations)	8	

Opening of Melismas:

      Hornby and Maloy also examine opening contexts of each chant in their sample,

assessing shared figures. I have applied this approach to my sample, but focus instead on the

openings of each melisma, to see if there are common openings that occur across the sample.

While there are some common beginnings, they do not share the stability of the opening figures

that Hornby and Maloy found in the Old Hispanic repertory, looking at the openings of the entire chants. In my sample, the most common opening figure was N, occurring 113 times in the sample of 532 melismas. The most common N neume was the virga episema, occurring 63 times out of the 113 N figures. The next most common was the tractulus, occurring 33 times. Both of these neumes indicate a longer rhythmic value than, for example, a normal virga, of which there were only 17 examples in this sample. This pattern indicates that perhaps longer rhythmic values are preferred at the beginnings of melismas, acting as a jumping off point, similar to the openings found in Notre Dame organum where it begins with a held pitch before continuing into melismatic material. In other words, it is a way of preparing the melisma. This trend continues in the next most common opening figure, the NL; NL begins 107 of 532 melismas, and more than half of these, 57 or 53.27%, include an episema. In the rest of the sample, episemas at openings are not as common, appearing in the opening neume of only 13 of the remaining 312 melismas. This result indicates that the longer-held pitches at the beginning of the melismas are not as common as the two most common openings might imply. It is important to note that a fewer number of melismas are marked "c", meaning faster, with only 18 of the NL figures marked "c" compared to 57 with an episema.
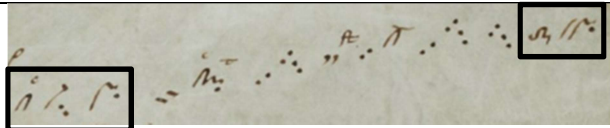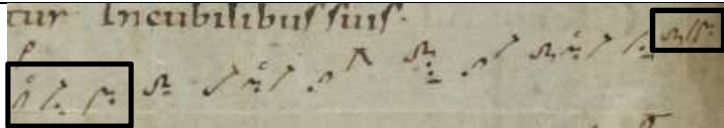
The fact that N and NL figures are the most common beginnings may be a product of their frequency within the larger sample. N occurs 432 times in total (15.39%), while NL occurs 487 times (17.35%) out of a sample of 2,807 individual neume groupings within the 532 melismas. For reference, the next most common figure in the overall sample was NLL, occurring 252 times, which is nearly half as often as the most common figure, NL. That is to say that the N and NL figures are extremely frequent in the sample, compared to the other figures, which may have led to their frequency as starting figures. However, while N occurs 15.39% of the time in

the overall sample, it is slightly more common as a starting figure, accounting for 21.24% of the starting figures. Likewise, NL is slightly more common as a starting pitch than in the overall sample, occurring 20.11% of the time as an opening figure and 17.35% in general. Still, it makes sense that they would be frequently used as an opening figure, because they are frequently used in the sample in general.

In looking at the opening figures, there are some cases where more than one melisma will begin with a shared string of neumations. Some of these shared neumations also share pitch structures, while others do not. In some cases, the openings of two melismas begin with the same contours over several neumes, but then diverge. As table 3.4 demonstrates, this is the case with melodies 185 and 223, which both have a melisma that begins with the same contour and same neumation (as well as the same pitches), but then diverges for the remainder of the melisma. Additionally, both melismas appear as the *jubilus* of their respective alleluias, which perhaps strengthens the relationship between these two melismas, since they are being used in the same context. Despite this shared material, the two alleluias are in different modes: melody 185 is a mode 3 chant while melody 223 is a mode 8 chant. It is logical that than even though they would share an opening, they would need to diverge to fulfill their modal obligations. The two melodies also share an ending figure, as discussed earlier in this chapter, but because they are in different modes, their pitches are different. This is an example where the neumation and contour of a melody does not necessarily predict a shared pitch structure, even though the pitch structure at the beginning of the melisma is identical. Nonetheless, these relationships are found by comparing the contours using the NHLS method, making large numbers of melismas searchable for similar characteristics and sortable by openings. This finding demonstrates a small success of the methodology, finding two melismas that share an opening, despite them being distinctly

different melodies in different modes. This method of searching makes it possible to consider these relationships between modes and between melodies that are not generally grouped together.
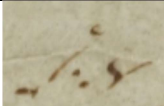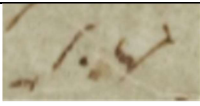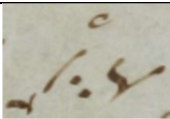
Table 3.4: The Shared Opening and Ending of the *Jubilus* of Melodies 185 (*Alleluia Domine Deus*) and 223 (*Alleluia Vox exsultationis*)

Melody	Neumation	Opening pitches from the GT	Closing pitches from the GT
185		 -ia	
223		 -ia	

There are also examples where two melismas can share a contour at the opening but not an exact pitch structure. This is the case for melodies 337 and 62 in table 3.5, which share an identically notated small melisma. Like we saw in the previous example, the two alleluias have different modes: melody 337 is in mode 7 while melody 62 is in mode 1. Unlike the earlier example, this "opening" of the melisma comprises the entire small melisma. Additionally, this melisma occurs three times in melody 337, where it is used at a consistent pitch level each time. One might think that this figure has a certain association with that exact pitch structure, but melody 62 demonstrates that this is not the case. Although it still opens with a second, it is of a different quality (in 62 it is minor and in 337 it is major), and the melody proceeds with a different intervallic structure. So, while a figure can be used consistently at a pitch level in one

context, it is not necessarily used the same way in another context. This result demonstrates a limit of only looking at contour: what might share the same contour might not function the same melodically, even if it is known to function consistently in one context.
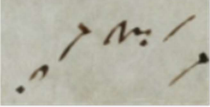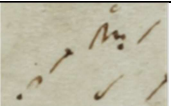
Table 3.5: Comparison between Melodies 337 (*Alleluia Exsultate Deo*) and 62 (*Beatus vir qui suffert*)

Melody	Neumation	Pitches from the GT
337	 DEo	
337	 NOStro	
337	 laCOB	
62	 coROnam	

A similar phenomenon occurs in melodies 203 and 27, which share a small melisma, but do not share a pitch structure, despite sharing a contour and neumation (see table 3.6). The shared neumation is particularly significant because of the rhythm; in both cases there is a salicus with an episema, indicating that the final note of that figure should be elongated. This is a particularly marked notational similarity in an instance with the same contour. As well, in melody 27 (mode 2), the melisma always falls on the final syllable of a word in each iteration of

the type melody. This feature of the melisma continues in melody 203 (mode 3), even while the melisma does not share the exact pitches. These melodies are another example of an instance where shared contour and neumation do not predict shared pitches. The shared contour and neumation, however, also indicates a relationship between these melodies across modes: even though they do not share exact pitches, the contour is consistent between the two melismas, and the shared neumation and rhythm emphasizes this similarity. As well, this pattern might be considered a melodic formula in its contour, as this visual pattern indicates a sameness between these occurrences. Melodic formula, then, is not strictly tied to pitch, but also to contour. Perhaps contour alone is enough for two occurrences to be considered the same, regardless of pitch structures seen in later sources. The melisma might, however, be more associated with melody 27, since it occurs eleven times in the Cantatorium in that context while melody 203 only occurs three times.
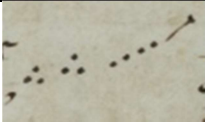
Table 3.6: Comparison between Melodies 27 (*Alleluia Video caelos apertos*) and 203 (*Alleluia Adducentur*)

Melody	Neumation	Pitches from the GT
27	DEX-tris	
203	POST	

There are also examples in the Cantatorium of small melismas that share the same contour, neumation, and pitches. For example, melodies 121 (mode 1) and 178 (mode 4) in table 3.7 share a melisma that is the same, despite the different modes. This is another instance where

the opening of the melisma comprises the entire small melisma. Again, these melismas are another example of a relationship between different modes that can be discovered by searching through the melismas by contour, rather than only looking at melodies of the same mode and type. There might be some liturgical connection between the two chants: melody 121 occurs for John the Baptist, who was a martyr, and 178 on the Common of several Martyrs. There is a textual connection between the two chants as well. Melody 178 praises the upright people while melody 121 discusses the preparation of a perfect people for the Lord, and so both chants discuss morally upstanding people.[7]

Table 3.7: Shared Material between Melodies 121 (*Alleluia Qui timent Dominum*) and 178 (*Alleluia Gaudete justi*)

Melody	Neumation	Pitches from the GT
121	adJUtor	
178	RECtos	

---

[7] Christoph Hönerlage discusses textual connections between formulas in graduals, and I am grateful that I was able to meet with him to discuss this topic.

Formulaic Material in the Melismas Outside of Type Melodies

Beyond the shared material of melisma openings and of the ends of chants, there are two other ways contour analysis reveals shared material between alleluias and their melismas: through repetition within a single chant, and through extended passages of shared material at the the end of the melismas, not just the *jubilus*. In my sample, I searched for shared material from the middle of longer melismas, but found no significant results, which seems to imply that shared portions are more likely to be beginnings or endings of melismas. Perhaps this is because those are the more recognizable parts of the melisma, or because the middle section is more flexible, like the middle of phrases when looking at type melodies. While there are some examples of shared material in the middle of melismas, they are insignificant. For example, NL-NL figures are very common, both at the beginning and in the middle of melismas, occurring 94 times in the sample. Such occurrences are insignificant in this context because they represent a prevalence of that figure in the sample in general, rather than a similarity between a few chants, and do not represent specific shared material that is unique in the repertory. The beginnings and endings of the melismas is where it is more common to have passages that share a contour, neumation, and pitch structure – in other words, the beginnings and ends are more likely to share an actual melody portion, rather than a common figure.

There are two melodies (27 and 337) that repeat melismas within the individual chants. Type melody 27 contains a melisma that occurs twice in each iteration, with identical neumation each time (although there are some changes to significative lettering). According to the *Graduale Triplex*, the pitches of this melisma is the same at both points in the chant. Melody 337 also has a small melisma that is repeated three times within the chant, each time at the same pitch level. However, in the melody 337 example, there is also an occurrence of the melisma in another
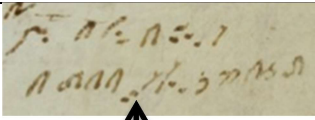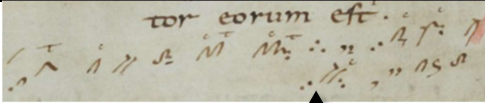
melody, in another mode, at a different pitch. This finding acts as a cautionary tale that a melisma's behaviour in one melody does not predict its behaviour in a different melody. That is to say that if someone found the melody 27 melisma in another chant, it would not mean it is again at the same pitch level. It would, however, share a contour and possibly a neumation and still be connected to melody 27 in that capacity.

In cases where the shared material between two melismas is larger, it is more likely that they will share a pitch structure, as well as a contour and neumation. As we already saw when looking at the endings of each alleluia in shorter passages, the last few neumes may be the same, but contain different pitches and belong to different modes. However, when comparing longer stretches of contour, it becomes more likely that the melismas will also share a pitch structure. Melody 203 and melody 211, both in mode 3, in table 3.8, share a melisma ending; in melody 203 it occurs at the end of the alleluia verse, while in melody 211 it occurs at the end of the *jubilus*. The ending of the melisma is largely the same in pitch, though many pitched sources do not include the ending torculus in melody 211, so I have not included it in table 3.8.[8] It seems plausible to me that the torculus would have the same pitches in melody 211 as melody 203, though that is not guaranteed. The available evidence indicates that the end of the melisma is shared between these two melodies. Interestingly, one iteration of the three instances of melody 203 found in the Cantatorium, *Alleluia Adducentur regi virgins post,* only contains the first part of the melisma, before the shared material. The other two iterations in the Cantatorium write out the melisma in full. Melodies 203 and 211 do not share a common liturgical occasion (both are unassigned in the Cantatorium in the collection of alleluias) and the texts do not have any strong similarities. However, it is worthwhile to note that both of these melismas take place on an "a"

---

[8] For example, pitched sources Ben. 34 and Albi do not include a torculus in *Alleluia Laudate Dominum omnes gentes*, but Einsiedeln 121 does also include it.

sound, which is one similarity between the two melismas as well as in the other iterations of melody 203. As well, they occur in close proximity in the manuscript, 203 on page 149 and 211 on page 150 with only two chants separating them. The two examples do not share considerable similarity elsewhere in the chant, other than this shared melismas. This example is another instance of two melismas of different modes sharing a portion of a melisma at the same pitch level, which would have been difficult to locate in a manual process.
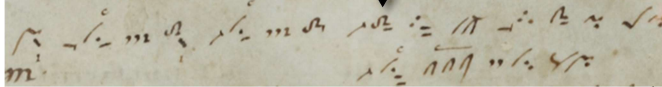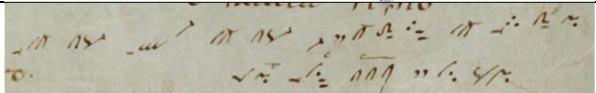
Table 3.8: Shared Endings of Melody 203 (*Alleluia Paratum cor meum deus*) and Melody 211 (*Alleluia Laudate Deum*)

Melody	Neumation	Pitches of Shared Material from the GT
203	 me-A (end of verse)	
211	 al-le-lu-IA (*jubilus*)	

A very long shared ending between two melismas is found in melodies 375 and 360, both mode 7 chants, of which both come from the final melisma of the verse, on the final syllable, as seen in table 3.9. The shared portion between the two melismas forms over half of the melisma, and 44 pitches. Clearly these two chants are melodically connected through such a strong, extended commonality. Like the earlier example, neither of these chants is assigned to a specific liturgical occasion in the Cantatorium, both being placed in the collection of alleluias at the end

of the manuscript. Again like the earlier example, the chants are located very close to one another in the manuscript: melody 360 occurs on page 147 and melody 375 on page 148. As well, there may be some textual similarities between the chants: both of them specifically have to do with praising the Lord. Additionally, while the mode is the same between the two chants and they share the same ending of the *jubilus*, there are no extended portions of shared material between the two chants until this part of the melisma, which is shared between the two chants. This shared material may indicate that this particular sound was connected with praise, in some way, in the sonic memories of the people singing it. These musical connections become clearly visible by searching by contour across the large sample of melismas, even though the two belong to separate melody types.

**Table 3.9: Shared Endings between Melody 360 (*Alleluia Te decet hymnus*) and Melody 375 (*Alleluia Venite exsultemus)*

Melody	Neumation	Pitches of Shared Material from the GT
360	 jer-u-sa-LEM	
375	 nos-TRO	

These two examples demonstrate that connections can be found between chants of different melody types, or even different modes, by searching the melodies by contour. In both cases, we see extended periods of shared material at the end of the melisma. In the case of melody 360 and 375, this similarity forms more than half of the melisma and occurs at the end of the verse. Conversely, melody 203 and 211 demonstrate placements within the chant. The earlier discussion of melisma openings demonstrates that these similarities in neumation do not necessarily mean a similarity in pitches. This observation is also true in endings of melismas, as we saw in the endings of each *jubilus*. These examples that also have shared pitched structures demonstrate that similar pitches can be found using this method, even though it is not guaranteed, confirming that the methodology works to find patterns of similar material out of a large data sample.

Results of Using this Methodology on St Gall Neume Notation

In applying this methodology to St Gall neume notation, it is clear that it brings about many useful results, pointing to numerous repeated melismas in the repertory. This methodology correctly identifies patterns of similar contour, which often equates to similar neumation, and sometimes to similar pitch structure, allowing the researcher to locate repeated material within a large data sample. Additionally, using this methodology in St Gall notation demonstrates that sometimes neumations may look the same and be used in the same context, but not contain the exact same pitch structure, such as the neume patterns found at the ends of the alleluias. It is only possible to know if two similar passages of identically neumed material are the same intervallic pitch structure by comparing them to pitched sources. This finding cautions the researcher to never equate the same neumation with the same pitch structure, as these things, while correlated, are not always equivalent. These findings both confirm the usefulness of this methodology in the

study of repertories outside of Old Hispanic chant, while indicating that results from it must also be tested against pitched sources whenever possible.

There are some considerations with the contour encoding that must be addressed, including how the neume shapes are grouped. While it is often the case that two stretches of similar contour will also have the same neumation, this is in part a result of how the methodology groups the neumes when labelling their contour. Labelling the starting pitch of each neume as N rather than H, L, or S, limits the possibilities of different neumations. For example, while a porrectus subbipunctis and a porrectus followed by a clivis could have the same contour, these neumes would not be matched with this methodology because we do not know the clivis's relationship to the porrectus, and thus they would be named differently. In that sense, the methodology weeds out instances of different neumation that could potentially share a contour. This characteristic of the methodology means that when two passages share the same contour, they are also likely to share the same neumation, because of how the contours are designated. Perhaps this was a feature of the methodology, making it easier to find sections of melismas that more closely resemble one another. However, it also left out a lot of possibilities for similarity, by making the contour so closely related to the neumation, which is possibly not an altogether desirable trait. Still, the most important aspect of the contour groupings was the consistency. I used a legend to make sure my groupings were consistent across the sample, and this consistency is what allows findings to be possible at all (see Appendix C). I used the scribe's consistency in spacing to choose the neume groupings, and when it was unclear, I grouped the neumes how they were grouped elsewhere in the manuscript. In this way, the groupings were effective in finding similar material across a large repertory, even though my data do not include all the contour possibilities.

Another consideration going forward is the contour encoding itself. While it works to use N, H, L, S, or Q, there are many other aspects of the notation that could also easily be encoded. For instance, the number of loops in a quilisma could easily be included by using an upper case or a lower case Q (for two or three loops respectively), instead of always an upper case. As well, like the quilisma, some other neumes may have instances where they could denote more than one contour (like the trigon could include an H or an S following the N). These could also be given their own letters, as done with the quilisma. Additionally, it would be incredibly useful to include episemas, significative lettering, and oricuses which could be indicated in parentheses after the letter and liquescents, which could be indicated by whether or not the letter is capitalized. That way, it would be immediately clear where these elements arise (such as in opening contexts), and search for neumations that are identical, including these elements. This feature would allow the use of episemas in opening contexts to be compared to how they are used across the inner parts of the sample, to see whether or not it is significant when compared to the sample as a whole. A separate spreadsheet could include these details, while an original data sample could be kept without them. Alternatively, the matching program could be changed to search both with and without these new additions. This improvement would allow for more nuance in the findings, while maintaining the old data set. Other information could be encoded in a similar manner, such as the exact details of the neume shape, or any other pertinent details. This method of encoding would more closely preserve the original neumes, and allow searching by neume shape to be possible. Similar ideas are being applied to Old Hispanic chant, in the Old Hispanic Office Project's Chant Editing and Analysis Programme (CEAP).[1] It would make sense to transfer these ideas into St Gall neume notation as well, since that would expand the possibilities to explore these repertories. Similarly, in the Optical Neume Recognition Project and in Cantus Ultimus,

---

[1] https://www.bristol.ac.uk/arts/research/old-hispanic-liturgy/ceap/

researchers are working on the development of optical music recognition for early neumes as well as a neume module for the Music Encoding Initiative that, when fully functional, should make these kinds of searches possible.[2] The manual approach to searching manuscripts is too time intensive, and to study larger repertories a computational approach is necessary. With OMR, all kinds of new approaches, including those like this approach, are possible. With OMR, it might be possible to search for neume shape without necessarily including that in the NHLS methodology, making this methodology more useful for looking at contour specifically. As my results have shown, both these projects have the potential to open up fruitful avenues for musicological discovery.

There is also some research that might be accomplished using the methodology and programs as they currently stand. For example, one might want to see how many times a NL-NL-NLL figure appears in the sample. In this case, one would find that it appears nineteen times and often appears as part of type melody 271. Interestingly, it appears twice in melody 38, at different pitch levels each time. One might also want to see what the most common string of a certain length is, and it is also possible to search for this using the computer program.[3] These techniques could again be used to compare large amounts of musical data, looking for similarities between smaller passages or observing larger trends in the data.

These further steps would build on the results that I have shared in this thesis. By testing this methodology in a new environment, it is clear that it has the ability to identify portions of shared melismas. Furthermore, these findings prove that the shared neumations may sometimes be the same pitch structure. While caution is necessary to evaluate whether two melismas share

---

[2] https://cantus.simssa.ca/

[3] The most common string of three neumes is NL-NL-NL, which appears 24 times, including in each iteration of type melody 271.

the same pitches, it is certainly possible to locate melismas with shared material with reasonable accuracy, even though they may not always have the same pitches. Particularly with longer portions of melismas, the results demonstrate a strong correlation between similar melismas and pitch structure. This finding indicates the potential for finding similar material across a wider repertory. The next step in this research would be to apply these techniques to a larger data set: for example, the entire contents of the St Gall Cantatorium. Using these techniques in this repertory would make it possible to find relationships across genres, not just within a single genre like I have done. Further expanding this research to other manuscripts would enable the researcher to find connections across an even wider sample, and study the relationships between the manuscripts. In doing so, this contour analysis might find more points of similarity across a larger sample which might otherwise go undiscovered. My research has provided the foundation for studies using this methodology in this repertory, proving the effectiveness of this method in this area of study, and indicating that it is worthwhile to expand these techniques to wider samples.

Chapter Four: Conclusion

In examining the role of melismas in the repertory of alleluias found in the St Gall Cantatorium, it is clear that melismas are crucial in the construction of the alleluia repertory. The structural function of alleluias in the construction of type melodies makes them a point of consistency throughout the repertory, appearing unchanged between iterations for each melody type. In the repertory more generally, the melismas often also repeat in new melodic contexts, demonstrating their unifying nature in the repertory more broadly. Additionally, in examining melismas, it is clear that Hornby and Maloy's contour methodology is effective in locating melismas that are repeated across the larger repertory of alleluias found in the St Gall Cantatorium. Both of these methods of studying the melismas demonstrate their importance and their repeated use in the repertory.

In chapter one, I provided a close analysis of type melodies that showed that the placement of the melismas, as well as the content of melismas was the same throughout all the iterations of each type melody, demonstrating the stability of melismas in the adaptation of melodies. The notation of these melismas was also largely consistent, with some small differences involving significative lettering in many cases, and, in melody 27 where the two clivises at the end of the final melisma are sometimes connected into a porrectus flexus. These differences demonstrate small changes in scribal habit, but the same overall neumation demonstrates the consistency of the scribe in depicting these very stable melismas.

Melody 271 was the most stable melody type of the three I examined. The placement of the melismas is highly consistent: the first and third melismas always occur on the penultimate or antepenultimate syllable of the musical phrase depending on syllable stress, while the second melisma only occurs on the penultimate syllable of the phrase. In all cases, the final melisma

occurs on the final syllable of the verse. While there is slight variation to account for syllable number and stress, the general placement is consistent, with these melismas acting as an end to the phrases. As well, the content of the melismas is consistent throughout the iterations. The iterations more generally also saw less variation than the other two melody types, even within the phrases, making the melody type as a whole more stable than the other two.

I also examine melody 27 which, much like melody 271, is also very stable. Unlike melody 271, it had some shorter melismatic passages, which demonstrated how melismas can be broken up. They are broken up in a consistent way between the iterations, showing the melisma's continued stabilizing influence. We also see an example of a melisma occurring two times in the same alleluia, which provided a space to examine melodic repetition in an instance where two melismas within a single chant share contour, neumation, and pitch structure.

In melody 205 we saw a melody that is a lot less stable. However, the melismas still remain secure points, giving the melody more consistency in iterations in the second half of the verse. As well, while Schlager considers *Alleluia Lauda, Jerusalem* to be a melody 205 alleluia, its dramatically different verse throws that into question. Additionally, the designations of melody 28 and 27 seem to contradict this assertion, as they also share an alleluia call but not a verse, and yet are labeled by Schlager are two different melodies.

All three of these examples demonstrate the stabilizing presence of extended melismas in the adaptation of type melodies. Even in melody 205, which is the least stable, the presence of extended melismas in the second half of the melody stabilizes the melody in those sections, with very little variation between iterations during those parts.

In chapter two, I established that the Hornby and Maloy methodology is successful at locating instances of shared content in a sample of 532 melismas from the St Gall Cantatorium, demonstrating its usefulness in repertories outside of Old Hispanic chant. The effectiveness of the technique is proven first by its ability to identify type melodies by comparing the contours of the melismas. This result means that this methodology can successfully identify new relationships between chants in a given sample by comparing the contours. The ability to locate type melodies also shows that similar contours can sometimes mean the same pitches.

Additionally, through an examination of melismas sharing contours and neumations, it is clear that shared contours and neumations do not always mean a shared pitched structure. Examples of openings of melismas demonstrate that small melismas that might seem identical might vary in their actual pitches. As well, the variation in pitch structure between ending figures also shows that pitch structures are not specific to a certain neume pattern or contour.

This chapter also shows that repeated material can be found outside of Schlager's type melodies, demonstrating the necessity of examining the melismas in the alleluia repertory through this new methodology. There are melismas repeated within a single chant, such as in melodies 27 and 337, as well as shared melismas between melodies, such as in melodies 121 and 178. Additionally, the endings of melismas can be shared, such as in melodies 203 and 211. By looking beyond Schlager's melodies, it is clear that different melodies can also share substantial passages, and these similarities would not be found by only looking at similarities found in type melodies. These similarities in melismas demonstrate the necessity to look beyond type melodies for similarities, since they might exist across melody types.

These findings demonstrate the importance of using multiple methodologies when examining chant, particularly melismas within the alleluia repertory of the St Gall Cantatorium. By using these two contrasting methodologies, it is possible to see the role of melismas between iterations of type melodies, determining that they are structural features of these chants, as well as more broadly across the repertory. The Hornby and Maloy contour methodology is extremely effective in locating similarities across a large repertory of alleluia melismas, finding similarities that could not be seen by investigating type melodies alone, or by searching for them manually. In this way, the vital role of the melisma in the alleluias of the St Gall Cantatorium is clear: they are a stabilizing force in type melody adaptation, as well as a unifying force between otherwise dissimilar chants. Both their structure and their content is important, in both type melodies and non-type melodies alike. This study in the Cantatorium lays the foundation for more research using the Hornby and Maloy methodology, possibly for entire chants rather than purely melismas, as well as for wider repertories. This research can be built upon and expanded to learn more about alleluias, and their relationship to other genres, using large amounts of data for comparison. The Hornby and Maloy methodology is thus a useful tool for further studies in plainchant, in new repertories, and new contexts.

BIBLIOGRAPHY

<u>Primary Sources:</u>

<u>Manuscript Sources</u>

Benevento, Biblioteca Capitolare 34. Paléographie Musicale, I/15. Solesmes, 1992

Einsiedeln, Stiftsbibliothek, Codex 121(1151): Graduale – Notkeri Sequentiae (https://www.e-codices.unifr.ch/en/list/one/sbe/0121).

Paris, Bibliothèque nationale de France 776. JOPPICH, Godehard Das Graduale von Albi. Onzième/douzième siècle

Porrentruy, Bibliothèque cantonale jurassienne, Ms. 18: Gradual (https://www.e-codices.unifr.ch/en/list/one/bcj/0018).

St. Gallen, Stiftsbibliothek, Cod. Sang. 359: Cantatorium (http://www.ecodices.unifr.ch/en/list/one/csg/0359).

St. Gallen, Stiftsbibliothek, Cod. Sang. 390-391: Antiphonarium officii (Antiphonary for liturgy of the hours) (https://www.e-codices.unifr.ch/en/list/one/csg/0390).

<u>Scores</u>

Catholic Church. *Gradual novum - 1: De dominicis et festis*. Regensburg, 2011

Catholic Church. *Gradual novum - 2: De feriis et sanctis.* Regensburg, 2018.

Catholic Church. *Graduale triplex.* Solesmes, 1979

<u>Secondary Sources</u>

<u>General Reference:</u>

Apel, Willi. *Gregorian chant*. Bloomington: Indiana University Press. 1958.
Hughes, Andrew. *Medieval Manuscripts for Mass and Office: A Guide to Their Organization and Terminology*. 1st ed. Toronto, Ont.: University of Toronto Press, 1995.
Hiley, David. *Western Plainchant: A Handbook*. Oxford: Clarendon Press, 1993.

<u>Specific Sources:</u>

Blachly, Alexander. "Some Observations on the "Germanic" Plainchant Tradition." *Current Musicology*. 45 (1990): 85-117.
Boe, John. "The Beneventan Apostrophus in South Italian Notation, A.D. 1000-1100," *Early Music History* 3 (1983): 43-66.

Boynton, Susan. "Orality, literacy, and the early notation of the Office hymns". *Journal of the American Musicological Society* 56 (2003), 99-168

Cardine, Eugène. *Gregorian Semiology*. Sablé-sur-Sarthe [France]: Solesmes, 1982.

Catholic Church. *Cantatorium: IXe Siecle: No. 359 de La Bibliotheque de Saint-Gall*. Ed. André Mocquereau, Solesmes: Abbaye St.-Pierre, 1968.

Clark, James Midgley. *The Abbey of St. Gall as a Centre of Literature & Art*. Cambridge [Eng.]: University Press, 1926.

Hornby, Emma. "Melodic Style and the Transmission History of the Beneventan Easter Vigil Canticles." In *Chant, Liturgy, and the Inheritance of Rome* eds Dandiel J DiCenso and Rebecca Maloy, 2017. 217-44.

Hornby, Emma. "Musical Values and Practice in Old Hispanic Chant." *Journal of the American Musicological Society* 69, no. 3 (2016): 595-650.

Hornby, Emma. "The Transmission of Western Chant in the 8th and 9th Centuries: Evaluation of Kenneth Levy's Reading of the Evidence." *The Journal of Musicology* 21, no. 3 (2004): 418-457.

Hornby, Emma, and Rebecca Maloy. "Fixity, Flexibility, and Compositional Process in Old Hispanic Chant." *Music & Letters* 97, no. 4 (2016): 547-74.

Hornby, Emma, and Rebecca Maloy. "Melodic Dialects in Old Hispanic Chant." *Plainsong and Medieval Music*, 25, no. 1 (2016): 37-72.

Joppich, Godehard. ""Tenere bene" im Cantatorium". *Beiträge Zur Gregorianik,* v. 19 (1995) 7-28.

Karp, Theodore. *Aspects of Orality and Formularity in Gregorian Chant*. Evanston, Illinois: Northwestern University Press. 1998.

Kelly, Columba. *The Cursive Torculus Design in the Codex St. Gall 359 and Its Rhythmical Significance: A Paleographical and Semiological Study*. St. Meinrad, Indiana: St. Meinrad Archabbey, 1964.

Kelly, Thomas Forrest. "Melodic Elaboration in Responsory Melismas." *Journal of the American Musicological Society* 27, no. 3 (1974): 461-74.

Levy, Kenneth. "On the Origin of Neumes." *Early Music History* 7 (1987): 59-90.

Maloy, Rebecca: ´The roles of notation in Frutolf of Michelsberg´s tonary´, *Journal of Musicology* 19 (2002): 641-693.

McEwan, Neil. "Interpretive Signs and Letters in Gregorian Chant: The Rhythmic and Expressive Differences Between the *Episema* and *Tenete* in the Manuscript of the *Cantatorium*, Codex 359, St Gall." *Études Grégorienne.* 33 (2005): 107-51

McKinnon, James W. "Preface to the Study of the Alleluia." *Early Music History* 15 (1996): 213-49

Möller, Hartmut. "Deutsche Neumen, St. Galler Neumen Zur Einordnung Der Echternacher Neumenschrift." *Studia Musicologica Academiae Scientiarum Hungaricae* 30, no. 1/4 (1988): 415-30.

Nardini, Luisa. ""God is Witness": Dictation and the Copying of Chants in Medieval Monasteries." *Musica Disciplina* 57 (2012): 51-79.

Peattie, Matthew. "Chant Notation in Transcription and Translation." *Early Music* 44, no. 1 (2016): 125-140.

Peattie, Matthew. "Transcribing the Beneventan Chant." *Plainsong & Medieval Music* 19, no. 2 (2010): 139-167.

Rankin, Susan. "On the Treatment of Pitch in Early Music Writing." *Early Music History* 30, no. 1 (2011): 105-75.

Rankin, Susan. "The Earliest Sources of Notker's Sequences: St Gallen, Vadiana 317, and Paris, Bibliothèque Nationale Lat. 10587." *Early Music History* 10 (1991): 201-33.

Schlager, Karlheinz. *Thematischer Katalog der ältesten Alleluia-Melodien aus Handschriften des 10. und 11. Jahrhunderts, ausgenommen das ambrosianische, altrömische und altspanische Repertoire*. Erlanger Arbeiten zur Musikwissenschaft 2, Munich, 1965.

Steiner, Ruth. "Some Melismas for Office Responsories." *Journal of the American Musicological Society* 26, no. 1 (1973): 108-31.

Stingl, Anton, *Alleluia Dulce Carmen. Aspekte des gregorianischen Alleluia*. St. Ottilien: EOS-Verlag, 2018.

Treiter, Leo. "On the Structure of the Alleluia Melisma." *Studies in music history; essays for Oliver Strunk.* (1968): 59-72.

Treitler, Leo. "The Early History of Music Writing in the West." *Journal of the American Musicological* Society 35, no. 2 (1982): 237-79.

Treitler, Leo. "The Unwritten and Written Transmission of Medieval Chant and the Start-Up of Musical Notation." *Journal of Musicology* 10, no. 2 (1992): 131-91.

Wiesli, Walter. *Das Quilisma im Codex 359 der Stiftsbibliothek St. Gallen. erhellt durch das Zeugnis der Codices: Einsiedeln 121, Bamberg lit. 6, Laon 239 und Chartres 47. Eine paläographischsemiologische Studie*. Immensee: Verlag Missionshaus Bethlehem, 1966.
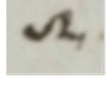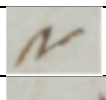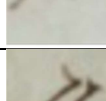
APPENDIX A: TABLE OF SAMPLE OF ALLELUIAS, THEIR SCHLAGER NUMBERS, THEIR PLACE IN THE CANTATORIUM, AND THEIR PLACE IN THE *GRADUALE TRIPLEX*
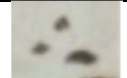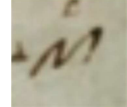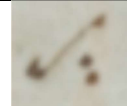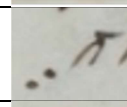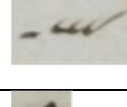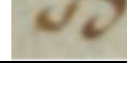
Schlager No.	Incipit	Mode	Cantatorium Page No.	*Graduale Triplex* Page No.
26	Eripe me	2	146	308
27	Dies sanctificatus	2	40	49
27	Vidimus stellam	2	46	58
27	Inveni David	2	152	446
27	Sancti tui…benedicent	2	153	463
27	Iustus non conturbabitur	2	153	479
27	Tu es Petrus	2	123	576
27	Video caelos apertos	2	41	634
27	Hic est discipulus	2	42	636
27	Surrexit Dominus vere	2	108	
27	Obtulerunt discipuli domino partem	2	109	
27	Justum deduxit dominus per	2	153	
28	Redemptionem	2	149	223
28	Elegit te dominus	2	152	
28	Pretiosa in conspectu Domini	2	154	
30	Ipse praeibit ante illum	2	121	
34	Dominus regnavit decorem	2	39	46
38	Iustus ut palma	1	152	516
58	Confitemini… et invocate	2	149	340
62	Beatus vir qui suffert	1	153	511
74	Surrexit Dominus (altissimus) de sepulcro	1	109	203
74	Posuisti Domine	1	153	480
74	In omnem terram exivit	1	157	
77	Iusti epulentur	1	155	461
113	Laetatus sum	1	150	19
121	Qui timent Dominum	1	150	352
123	Cantate domino canticum novum	1	110	
123	Eduxit dominus populum suum	1	111	
128	Mirabilis Dominus	1	154	462
144	Omnes gentes	1	146	298
178	Gaudete iusti	4	154	430
184	Dextera Dei	4	150	226
185	Domine Deus salutis meae	3	148	317
185	Caeli enarrant gloriam dei	3	156	

186	Laudate pueri	4	111	215
198	Iubilate Deo	3	149	258
202	Qui sanat contritos corde	3	151	
203	Veni Domine	3	37	36
203	Paratum cor meum	3	149	344
203	Adducentur	3	157	500
205	Excita Domine	4	28	23
205	Ascendit Deus	4	116	236
205	Emitte Spiritum tuum	4	117	253
205	Laudate Deum	4	48	262
205	Lauda Ierusalem	4	152	358
205	Qui posuit fines	4	151	364
206	Spiritus domini replevit orbem	3	117	
211	Laudate Dominum	3	150	273
211	In te Domine speravi	3	146	296
223	Vox exsultationis et salutis	6	154	
224	Attendite popule meus in	5	147	
225	Memento, Domine, David	5	152	490
227	Beatus vir qui timet	5	152	511
228	Diligam te domine virtus	5	145	
254	Confitemini domino quoniam bonus	8	106	
271	Ostende nobis	8	26	16
271	Dominus dixit ad me	8	38	43
271	Haec dies	8	111	214
271	Dominus in Sina	8	116	236
271	Dominus regnavit, exsultet	8	149	266
271	Lauda anima mea	8	151	355
271	Diffusa est gratia	8	157	413
271	Specie tua	8	157	416
271	Nimis honorati sunt	8	156	431
271	Memento nostri domine in	8	36	
271	In resurrectione tua Christe	8	112	
277	Confitemini… quoniam bonus	8	113	239
288	Deus iudex iustus	8	145	286
302	Benedictus es Domine	8	139	375
337	Exsultate Deo	7	147	312
346	Pascha nostrum	7	107	197
353	Confitebor tibi domine in	7	151	
355	Gloria et honore coronasti	7	153	
360	Te decet hymnus	7	147	305
362	Exsultabunt sancti in gloria	7	154	
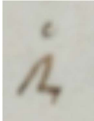
375	Venite exsultemus	7	148	324
377	Quoniam Deus	7	148	327
380	De profundis	7	151	367
382	Adorabo	7	53	270
383	Domine refugium	7	148	321
387	Vos estis lux huius mundi	7	157	
184	Dextera Dei fecit virtutem	4	150	226
397	Te martyrum	5	155	465
Additional verse	Stantes erant pedes nostri in	1	150	
Additional verse	Praeoccupemus faciem ejus in	7	148	
Additional verse	Dinumerabo eos et super arenam	8	156	
Additional verse	Sit nomen domini benedictum ex	4	111	
Additional verse	Replebimur in bonis domus tuae	7	147	
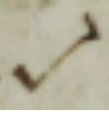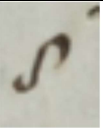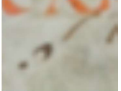
APPENDIX B: NEUME TABLE OF BASIC SHAPES
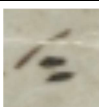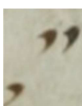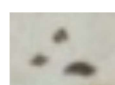
Neume Shape	Name	NHLS
	Tractulus	N
	Virga	N
	Oriscus	N
	Clivis	NL
	Pes	NH
	Pes quassus	NH
	Virga strata	NS
	Torculus	NHL
	Porrectus	NLH
	Scandicus	NHH
	Salicus	NHH
	Climacus	NLL
	Pressus maior	NSL
	Bivirga	NS
	Distropha	NS
	Tristropha	NSS
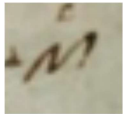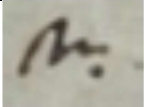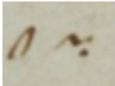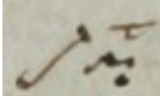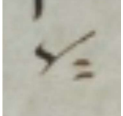
		Trigon	NSL
		Porrectus flexus	NLHL
		Pes subbipunctis	NHLL
		Scandicus flexus	NHHL
		Quilisma (with pre-punctum)	NQH
		Cephalicus	NL
		Ancus	NHLL
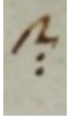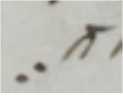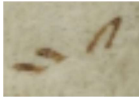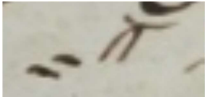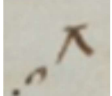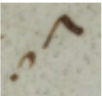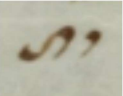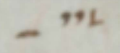
APPENDIX C: LEGEND
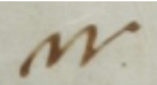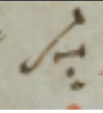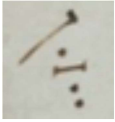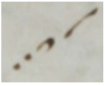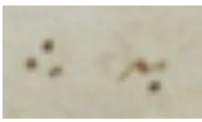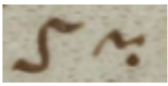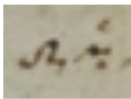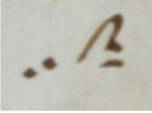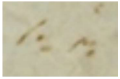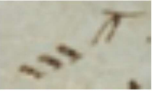
Neume Shape	NHLS Designation
	N
	N
	N
	N
	NL
	NL
	NL
	NL
	NH
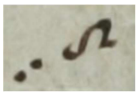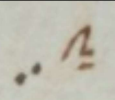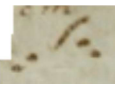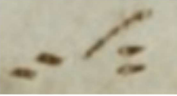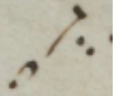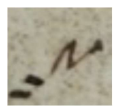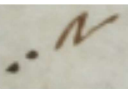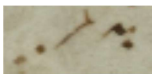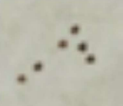
	NH
	NH
	NH
	NS
	NHL
	NHL
	NHL
	NLH
	NHH
	NHH
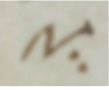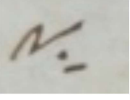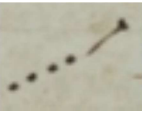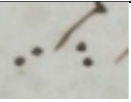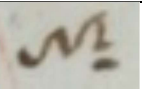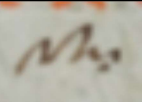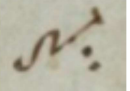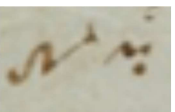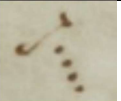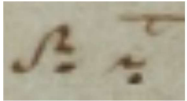
	NLL
	NLL
	NLL
	NSL
	NSL
	NS
	NS
	NSS
	NHS
	NSL
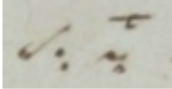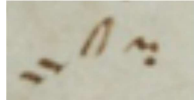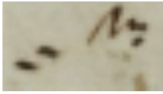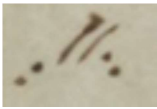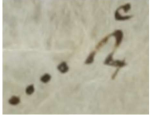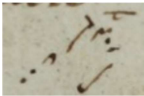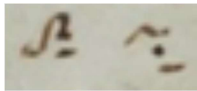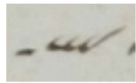
	NSLL
	NLHL
	NHLL
	NLSL
	NLSL
	NHSL
	NHSL
	NHLL
	NHLL
	NHLL
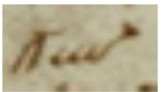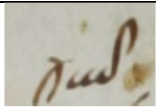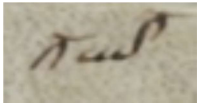
	NLLL
	NLLL
	NHHH
	NHHL
	NHHL
	NHHL
	NHHL
	NHHL
	NHLS
	NHSS
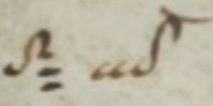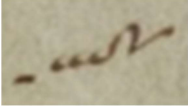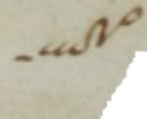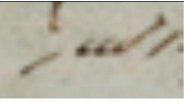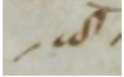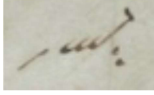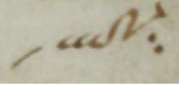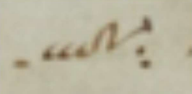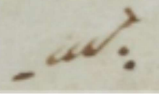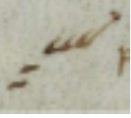
	NLHLH
	NHLLL
	NLLLL
	NHHH
	NSLSL
	NHLSL
	NHLSL
	NHHLL
	NLLSL
	NHHHL
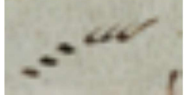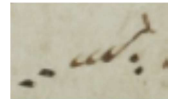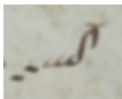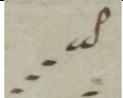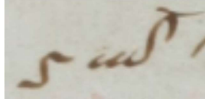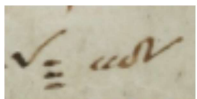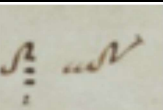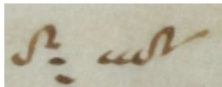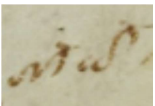
	NHHHL
	NHHHL
	NHHLL
	NHHLL
	NHHLL
	NHHLL
	NHHLH
	NHHLH
	NHHSL
	NHHSLL
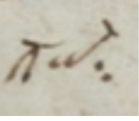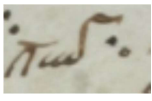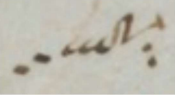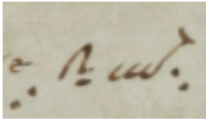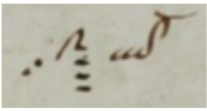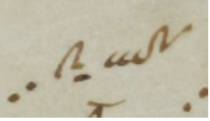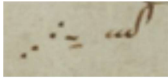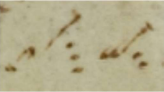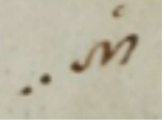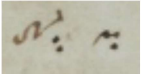
	NLHLL
	NLHLL
	NHHHH
	NHHLL
	NHLHLL
	NLHLSL
	NHLHLL
	NHLHSL
	NHLLLL
	NHLLSL

	NHLLSL
	NHHLSL
	NHHLSL
	NSLLLL
	NHHSLL
	NHHHHL
	NHHHHLS
	NHHHSL
	NHLLSLL
	NQH
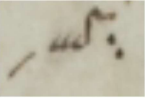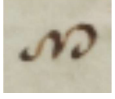
	NQHL
	NLQH
	NLQHL
	NLQHL
	NLLQHL
	NLLQHL
	NLLQHLL
	NHQHLL
	NLQHLL
	NLQHLH

	NHLLLQHL
	NQHLH
	NQHLHL
	NQH
	NQHL
	NQHLL
	NQHLHLL
	NQHLHLL
	NQHLL
	NHQH

	NHHQH
	NHQHLL
	NHQHLLL
	NHQHL
	NHHQHL
	NHLQHL
	NHLLLQHLH
	NHLLLQHLH
	NHLLLQHLH
	NLHLQHL

	NLQHLL
	NLQHLL
	NHQHLHLL
	NHHLLQHLL
	NHHLLLLQHL
	NHHLLQHLH
	NHHSLLQHL
	NHHLLLQHLL
	NHHHLHL
	NHLHLLSL

	NL
	NHL
	NHLL
	NLHL
	NHLHL
	NHH
	NHH?
	NLHL?
	NHL
	NHSSSL

	NQHLL
	NHLHLL

APPENDIX D: LIST OF MUSIC EXAMPLES