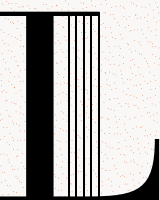


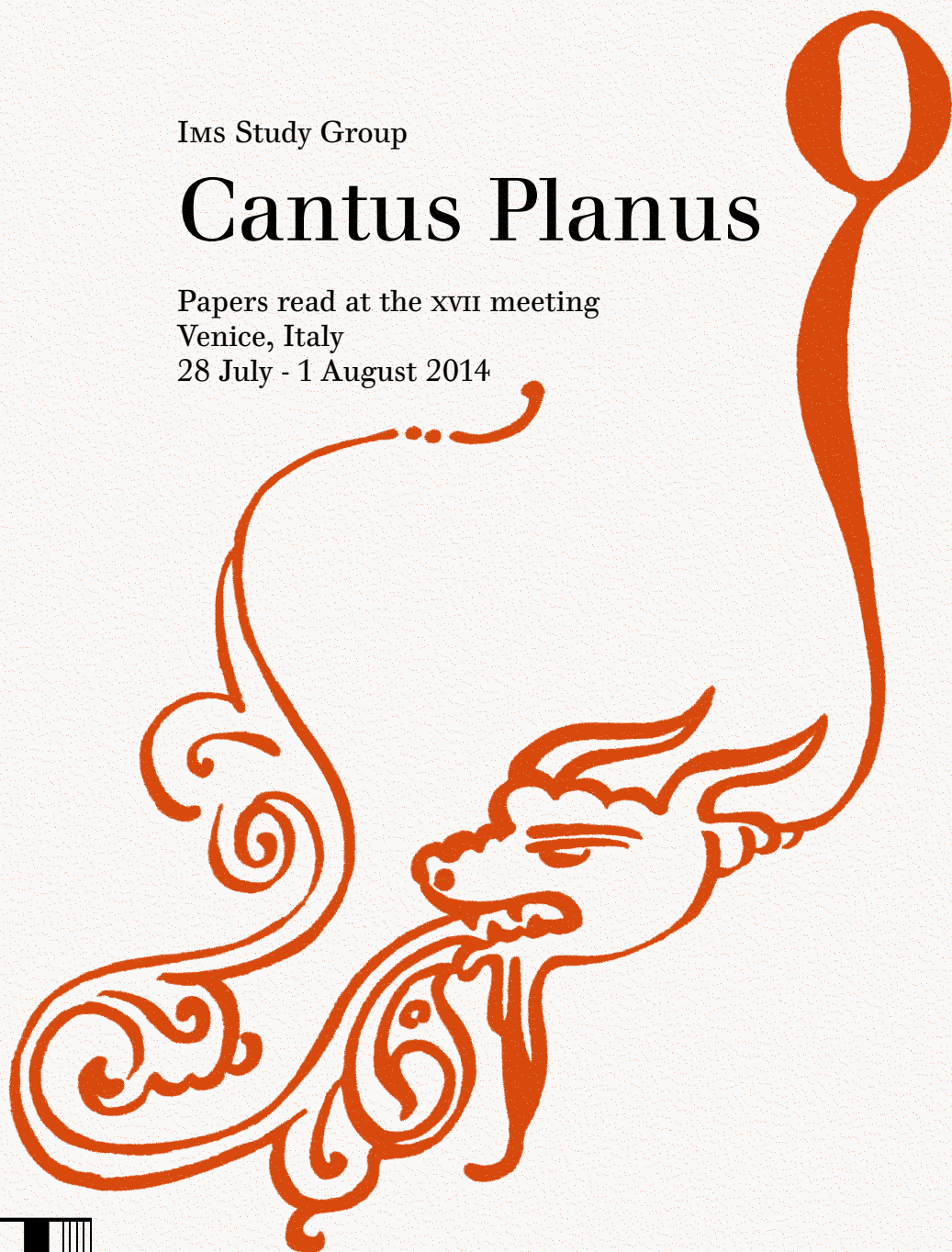
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Cantus Planus

Papers read at the xvii meeting
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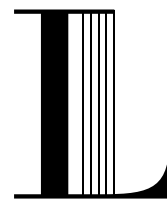
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edited by James Borders



Edizioni Fondazione Levi
Venezia 2020

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Fondo Antico, Lat. Z. 506 (=1611) fol. 41r

Biblioteca Nazionale Marciana, Venezia

Ringraziamenti

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S. Marco 2893, Venezia

Tutti i diritti riservati per tutti i paesi

edizione on-line

<https://www.fondazionelevi.it/editoria/cantus-planus>

ISBN 978 88 7552 058 8

Cantus Planus

IX Presentation

Davide Croff

XI Preface

Roberto Calabretto - Luisa Zanoncelli

XIII Foreword to the Meeting

James Borders

XIV Opening address

Nausica Morandi

XVI Abbreviations

I Notation

5 Zur Bedeutung von Oxeia/Acutus/Virga in den griechischen und lateinischen Neumenschriften

Andreas Pfisterer

9 From France to northern Italy: specific features in 'Comasca' notation

Laura Albiero

19 A methodology for studying Old Hispanic notation: some preliminary thoughts

Elsa De Luca

II Manuscripts, fragments, and sources

45 The 'codification' of new Latin song in early twelfth century: codicological insights into F-Pn fonds latin 1139

David Catalunya

49 Manuscripts in Cortona: fragments and liturgical books in the Archivio storico diocesano

Marco Gozzi

61 The Birgittine Abbey of Maria Refugie: Five hundred years of manuscript production

Karin Strinnholm Lagergren

75 Liturgical fragments of the diocese of Sigüenza (eleventh-sixteenth centuries)

Santiago Ruiz Torres - Juan Pablo Rubio Sadia

85 Imposing European culture on the Cape Colony: medieval manuscripts in the Grey collection

Rebekka Sandmeier

- 95 A northern Italian intermediary between Avignon and Rome?
Oxford, Bodleian Library, MS. Canonici Liturgical 375
and the chants of the 1485 *Pontificale Romanum*
James Borders
- 107 The antiphoner of Izola
Jurij Snoj
- 117 Der Seckauer Liber ordinarius von ca. 1595 (A-Gu 1566) als letztes Dokument
der mittelalterlichen Salzburger-Seckauer Liturgie und Musik
Réka Miklós
- III Editing medieval monophony: between the old and new philologies**
- 137 Towards a semiotically informed transcription practice
Andreas Haug
- 145 Reconstructing acts of writing. Editorial consequences
of writing scenarios assumed for the versus *Annus novus* in Paris 1159
Konstantin Voigt
- 151 Working realities of the New Philology:
considering the potential of technology in editing medieval texts
Elaine Stratton Hild
- IV Chant and computing**
- 157 Cantus for office and mass: building an online network of chant databases
Debra Lacoste - Jan Kolářček
- 165 A new way to see neumes: the optical neume recognition project in context and in action
Kate Helsen - Inga Behrendt - Jennifer Bain
- V Alleluias, tropes, sequences, and the mass ordinary**
- 171 Late flourishing of the alleluia repertory in central Europe
Gábor Kiss
- 187 Tropes in cantus planus sources from South Tyrol
Giulia Gabrielli
- 197 Kyrie chants in manuscripts from the German-speaking area
Marit Johanne Høye
- 213 Mensurally notated mass ordinaries from Cambrai and Tournai
Sarah Ann Long
- 225 Agnus pairing and disappearing: a contribution to the late chant tradition in Bohemia
Hana Vlhová-Wörner
- VI Saints offices: new themes and contexts**
- 241 In search of black swans:
a computer-assisted approach to interval-pattern recognition
Morné Bezuidenhout
- 253 Textinterpretation und Formelkomposition. Heiligenoffizien im Codex Hartker
Dirk van Beteray
- 267 The articulation of direct speech in responsories
Roman Hankeln
- 279 Simeon: the long journey to Trier and Sainthood
Danette Brink
- VII Regional and local traditions**
- 293 The vespertini as witnesses to the transmission of Old Hispanic chant in traditions A and B
Raquel Rojo Carrillo
- 311 Hirsau in Norditalien: Zur liturgischen Musikpraxis
des Benediktinerklosters Moggio im zwölften und dreizehnten Jahrhundert
Hanna Zühlke
- 323 The Office for Saint Cecilia in musico-liturgical manuscripts
from the Pontificia Biblioteca Antoniana of Padua
Nausica Morandi
- 337 Antichi testimoni dell'ufficio di san Prospero e tradizione nei codici reggiani
Stefania Roncroffi
- 345 Il canto del Passio presso alcuni ordini religiosi in fonti italiane tardive
Diego Toigo
- 359 Apostolicité et exports liturgiques en France méridionale, Gaule cisalpine
et Italie non romaine (855-1150)
Jean-François Goudesenne
- 377 Le sanctoral de la cathédrale de Sens
Océane Boudeau
- 389 The weekly commemorative office:
a twelfth-century witness from Saint-Denis in context
Tova Leigh-Choate
- 401 The Visitatio sepulchri as a Gospel Harmony in medieval Germany
Melanie Batoff
- 413 Singing the saints in Medieval Eichstätt:
the case of Wolfhard of Herrieden's office for Saint Walburga
Alison Altstatt
- 425 Learning gender roles from the Paschal and Mariological processions
of the brothers and sisters at Vadstena Abbey
Michelle Urberg
- 437 Venetian influence in fifteenth-century Portugal
Manuel Pedro Ferreira
- 451 The feasts of the Holy Virgin in the liturgy of the mass in Zagreb Cathedral
and its mediterranean context
Orsolya Csomó

VIII Chant and liturgy in latin Southern Italy

- 465 Ferial office in the Montecassino antiphoner and in Beneventan sources of the eleventh and twelfth Centuries
Thomas Forrest Kelly - Katarina Livljanić
- 481 The masses for the Dead in Beneventan manuscripts
Issues of formulary organization and chant manipulation
Luisa Nardini
- 495 Graphic difference and the interpretation of the *climacus* in Beneventan notation
Matthew Peattie
- 517 The hymn in Beneventan manuscripts
Bibiana Gattozzi

IX Byzantium and the East

- 533 The tropologion Vaticanus Graecus 771
Svetlana Kujumdzieva
- 549 The Byzantine musical manuscripts of the Veneto region:
overview of a current research project. One example (Bassan. gr. 34B19)
Silvia Tessari
- 565 The Byzantine tradition of the great doxology
Gerda Wolfram
- 569 *O quando in cruce – Ὅτε τῷ σταυρῷ* revisited
Nina-Maria Wanek
- 579 The classification of Russian sticheraria: a preliminary case study
Svetlana Poliakova
- 585 A schematic musical form for singing Buddhist hymns
in the ‘bilingual’ literary culture of early Japan
Elizabeth J. Markham
- 595 Cantus Planus 2014
Program of the meeting

Davide Croff

Presentation

Ten years or so ago, professor Antonio Lovato, the then President of the Scientific Committee, who had just returned from the Vienna edition of an important meeting of the International Musicological Society – Study Group ‘Cantus Planus’, recommended that, thanks to the Fondazione Ugo e Olga Levi, Venice should offer to host the following edition of the meeting, which had, until then, never been held in Italy.

The Foundation was honoured to accept the proposal and to take on the organization of the event, which appeared to be very challenging given the number of participants. At the moment of celebrating the meeting, Luisa Zanoncelli, the President of the Scientific Committee of the Levi Foundation, guided the entire staff of the Foundation, which moved to the Laguna, on the island of San Servolo, a venue that was perfect for hosting the event. Giorgio Busetto, Ilaria Campanella, Claudia Canella, Fabio Naccari, Alberto Polo and Anna Rosa Scarpa, along with the community service volunteers, Emilia Cervero and Filippo Gazzola, dedicated their time to the event, organizing, among other things, the organ concerts by Letizia Butterin and the Ensemble Oktoechos, directed by Lanfranco Menga in San Servolo and San Francesco della Vigna, where it was also possible to visit the important Franciscan Library and to witness the illustration of a number of codices delivered by Massimo Bisson. Another very important moment was the visit to the monumental Sansoviniane halls of the Biblioteca Nazionale Marciana where, for the occasion, a display of Byzantine codices with musical notation was prepared, and of which the Foundation Levi edited the catalogue. Sandra Martani guided the initiative, and Silvia Tessari prepared the labels. Since then, the Levi Foundation has worked closely with these researchers and has even just recently prepared important initiatives on Byzantine music. A collective volume edited by Tessari, which includes the proceedings of another conference held in the Foundation and is dedicated to the subject, is forthcoming.

We are now proud to announce that – after a long and difficult editing process, for which we must thank Luisa Zanoncelli, who tenaciously directed it, and those who collaborated with her in diverse manner: Lucia Boscolo, Paola Dessì, Alessandra Ignesti, Nausica Morandi, Silvia Tessari and Claudia Canella together with Ilaria Campanella – the volume of the Proceedings is now complete.

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Elsa De Luca

A methodology for studying Old Hispanic notation: some preliminary thoughts

The beginning of Catholicism in Iberian Peninsula is generally dated to the Council of Toledo of 589, when Arianism was rejected.¹ Among the various pre-Gregorian liturgies, the Old Hispanic liturgy is the one which held out the longest against the imposition of the Gregorian rite; however, in the Hispanic March the Franco-Roman rite had already replaced the local liturgy from the eighth century (Gutierrez 2013, pp. 547-548). The Old Hispanic and Gregorian liturgies co-existed for some centuries in the Iberian Peninsula before the Old Hispanic liturgy was eventually abandoned at the Council of Burgos of 1080, when the adoption of the Franco-Roman rite was finally formalized.² Within the larger picture of Western sacred music, Old Hispanic chant is the pre-Gregorian repertory which is preserved most completely and has few Gregorian contaminations (Randel 1985, p. 230). Its importance for chant studies lies in the fact that its study may unveil important information about Western liturgical chant before the Carolingian reform which is otherwise lost.

Today there are some forty surviving liturgical Old Hispanic manuscripts with music, fragments included (Randel 1973; Zapke 2007, pp. 250-427). There are two types of Old Hispanic notation usually distinguished according to the *ductus* of the neumes on the page; the so-called 'vertical notation' is found in manuscripts from Northern Spain and in three Toledan manuscripts; while 'horizontal notation' is found exclusively in Toledan manuscripts (Brou 1955, pp. 29-31; Zapke 2011). Old Hispanic notation falls within the family of 'Frankish neumes', broadly defined; notation is written *a campo aperto*, that is, the neumes are placed over the text and there are no dry point guide lines.

This paper presents the first results of my investigation into Old Hispanic notation carried out at the University of Bristol as Postdoctoral Research Assistant in the ERC-funded Research Project 'Shaping Text, Shaping Melody, Shaping Experience in and through the Old Hispanic Office' (grant 315133). Further developments of this research are currently part of a work in progress (De Luca, n.d.). I wish to thank Prof. Susan K. Rankin for her comments and feedback on this research, generously provided on several occasions. In addition, this research would have not been possible without the possibility of studying the Antiphoner in the Archive of León Cathedral. I am most grateful to Don Manuel Pérez Recio, Archivist of León Cathedral, for granting access to the manuscript and for his hospitality in the Archive.

1. Useful overviews on the origins, adoption and development of Catholicism in the Iberian Peninsula, and the preparation of the first liturgical books, can be found in Levy (1984 and 1987); Asensio Palacios (2008, pp. 135-145); Hornby and Maloy (2013, pp. 1-27); and Ferreira (2016, pp. 4-5). On the phenomenon of 'Mozarabism' see in particular Asensio Palacios (2008, p. 139).

2. For a list of the monasteries that abandoned the Old Hispanic rite for the Franco-Roman one during the twenty years before the Council of Burgos see Asensio Palacios (2008, pp. 146-147). While the replacement of the Old Hispanic rite with the Roman rite was not immediate, by the early twelfth century, only a few parishes in Toledo continued to follow the Old Hispanic rite. On the liturgical reform launched in 1080 see, *inter alia*: Fernández de la Cuesta (1985b); González (1985); Ruiz (1985); Rodríguez Suso (1992); Nelson (1996, pp. 12-15); Walker (1998); Vones (2007); Rubio Sadia (2011); Pick (2015); Henriot (2017).

The inclination of the pen-stroke simply indicates whether the melody goes up or down and does not indicate the size of the intervals (Hornby and Maloy 2013, pp. 315-326). The lack of pitched notation means that decoding the notational symbols presents a far more complex challenge; as a matter of fact, chants in the Old Hispanic manuscripts cannot be transcribed into modern notation. Modern palaeographers usually study chants in non-pitch readable notation by comparing them with their later versions written by more recent hands using a pitched notational system. For the Old Hispanic repertory, however, apart from a few chants – about twenty-five out of a repertory of a few thousand – there are no surviving later versions which could give any hint of the melodic content.

Despite the obstacle of the non-pitched notation and the peculiar history of the Old Hispanic manuscripts with respect to the development of music writing, scholars who turned their attention to Old Hispanic chant managed to clarify some important aspects of its musical tradition. Old Hispanic manuscripts received great attention in the 1980s with many articles and essays published in 1985 and an important congress held in Salamanca in the same year. Afterwards, the publication of the catalogue *Hispania Vetus* (Zapke 2007), and of the colour facsimile of the ‘León Antiphoner’ E-L MS 8 (Fernández de la Cuesta 2011) fostered a renewed interest in Old Hispanic musical manuscripts.³ Some scholars focussed on the persistence of some Old Hispanic melodies along the centuries and across liturgical repertories,⁴ while others preferred to investigate the Old Hispanic psalmody⁵ or the scale of Old Hispanic chant (Huglo 2003).

1. Old Hispanic melodies in diastematic notation

The Old Hispanic melodies which received most attention are those found also written in Aquitanian notation.⁶ The manuscript E-Mh Cod. 56 (from San Millán de la Cogolla, La Rioja) contains sixteen melodies from the Office of the Dead. E-SI ms. 4 (from San Prudencio de Monte Laturce, La Rioja) contains three antiphons for the Foot-Washing

on Maundy Thursday. The Franco-Roman Gradual of Gaillac F-Pn lat. 776⁷ contains some *preces* in Aquitanian neumes which can be also found notated in Old Hispanic neumes in E-Mh Cod. 56 (*Aemilianensis* 56, online) and E-SI ms. 4. To this group of Old Hispanic melodies in diastematic notation Rodríguez Suso added six pieces for the *ordo* of the dedication of the altar found in some Pontificals from Narbonne and other manuscripts whose melodic contour match the neumes found in the León Antiphoner for the same chants (Rodríguez Suso 1998 and 2004 pp. 95-99). Germán Prado (1934) focused on the music for some Lamentations found in E-SI ms. 9 from the Galician monastery of San Rosendo de Celanova; these melodies show unusual characteristics for the Franco-Roman repertory, sharing instead similarities with some melodies in Old Hispanic neumes found in some earlier Bibles (Asensio Palacios 2009, pp. 20-21).

The Old Hispanic melodies written in diastematic notation certainly provide some clues toward a better understanding of the Old Hispanic music, but this set of chants represents a small percentage in a repertory of a few thousand Old Hispanic melodies. Besides, these pieces are short, their music is quite simple and syllabic and there are none of the lengthy melismas which are so typical of Old Hispanic chant.⁸ From a methodological point of view, when we try to understand Old Hispanic notation by means of its Aquitanian transcription, we must consider a number of issues. Firstly, Old Hispanic and Aquitanian are two very different styles of notation. In Aquitanian notation a note is expressed as a position on a vertical scale while in Old Hispanic notation a note is expressed as a rising or descending pen-stroke. Compared to other notations, we recognise in Aquitanian neumes a loss of musical nuance; indeed, some neumes for special effects such as the virga, bvirga, trivirga, virga strata, the distropha, tristropha and the pressus are reduced to one or more dots when transcribed into Aquitanian notation (Huglo 2011, p. 166). Moreover, Aquitanian notation does not reflect the variety of neume shapes found in Old Hispanic notation. Indeed, groups of two, three, four or more notes written in Old Hispanic notation become simplified when transcribed into Aquitanian notation because there is no possibility of transcribing into this notation the different styles of neumatic connections, which are typical of Old Hispanic music writing. Furthermore, it may be also relevant to refer to Rodríguez Suso’s remarks on the analysis of the chants for the dedication of the altar found written in more than fifty manuscripts with different notational styles. She pointed out that every time a melody was transcribed into a different (and later) notational style, the new version maintained all the corrections made to the elements of the melody that were considered irregular in the previous adaptation. Hence, the grouping of melodies according to their notation is not a purely graphical matter but it involves some musical meaning as well, because to each notational group corresponded also a specific liturgical style and musical taste (Rodríguez Suso 1998, p. 17).

3. Hornby and Maloy 2013; 2016a; 2016b; 2017; Hornby 2016; Maloy 2014; Deswarte 2015; De Luca 2017a and 2017b; De Luca and Haines 2017.

4. For example, Huglo (1955) discussed some ancient Gallican-Old Hispanic *preces* which served as model for the *preces* that can be read in some eleventh-century manuscripts from Southern France, in some Missals and Graduals from northern Spain dated soon after the imposition of the Franco-Roman rite, and in the twelfth-century fragment P-G C 625. Fernández de la Cuesta (2013) made an analysis of the dissimilarities between the melodic profiles of the songs in the choir books of Toledo Mozarabic chapel and those of the oldest musical Old Hispanic manuscripts. Ferreira (2015) focussed on the responsory *Conclusit vias meas inimicus* (Cantus ID 006506) identified as a Gallican survival, itself dependent on an older Old-Hispanic version. Hagg-Huglo (2013) analysed the chants for the officium of St. Andrew that can be read in the Old Hispanic manuscripts I-VEcap cod. LXXXIX and E-L 8 and in other chant repertories. Gutierrez (2015) discussed the melodies of some hymns and *preces* preserved in tenth- and eleventh-century Old Hispanic manuscripts. These chants can be also found in later Gregorian books and in the sixteenth-century Cisneros cantorales. Ruiz Torres (2015) studied a newly discovered fragment of Antiphoner copied around 1100 which contains a hitherto unknown office for Saint James the Apostle. The author discussed the extent to which new Iberian composition for the Franco-Roman rite was open to Old Hispanic melodic structures.

5. On Old Hispanic psalmody see Randel (1969 and 1985); Zapke (1992); Rodríguez Suso (1998); and Ferreira (2006).

6. On these melodies, mostly of the La Rioja tradition, see: Aubry (1908, pp. 57-75); Prado (1928); Rojo & Prado (1929, pp. 66-82), present twenty-one pieces; alternative transcription of responsory verses in Randel (1969, p. 66); Brockett (1968, p. 109, alternative transcription of ant. *Memorare domine*). Asensio Palacios (1994) provides the same twenty-one pieces as in Rojo and Prado in slightly different transcriptions; Rodríguez Suso (1998); Asensio Palacios (2008, pp. 140-141 and 2009, pp. 19-21). Some of these references are taken from Ferreira (2006, p. 650, note 24).

7. Facsimile edition of F-Pn lat. 776 in Albarosa (2001).

8. See, for example, the long melisma running along the edge of fol. 205 in E-L MS 8.

2. Old Hispanic neumes: the palaeographers' point of view

Huglo and González Barrionuevo studied the relationship between Old Hispanic notation and other Western European early music writing systems (Huglo 1987 and González Barrionuevo 1995). Huglo focused on the problem of the origins and made a broad comparison of the structural elements of notation (ductus, neume shapes, ornamental neumes, etc.) among the main Western European early notations, acknowledging the absence of liquescence in Old Hispanic notation. He also discussed the extent to which Old Hispanic culture informed the Carolingian reform of liturgical chant, concluding that Old Hispanic notation may even be the precursor of Western European music writing (Huglo 1987, pp. 25-26).

González Barrionuevo is the scholar who made the most systematic and in-depth analysis of Old Hispanic notation, producing an extensive bibliography on some of its palaeographical features. Being an expert on Gregorian semiology, González Barrionuevo focused his attention almost exclusively on some hybrid manuscripts produced at the end of the eleventh century (during the transition period between the two rites). In those manuscripts the scribes used a set of symbols familiar to them – the Old Hispanic neumes – to represent the unfamiliar Franco-Roman melodies.⁹ González Barrionuevo focused especially on the notation of the Antiphoner from Silos GB-Lbl add. 30850, but also considered some notational aspects of the Benedictine monastic Breviary GB-Lbl add. 30848.¹⁰ He compared the Old Hispanic neumes found in these Franco-Roman manuscripts with the neumes found in other Western European Franco-Roman manuscripts written in different notations: I-Lc 601; I-Ra 123; CH-SGs 390-391; F-LA 239; GB-WO F. 160, and the Mont-Renaud Antiphoner with Noyon notation – private collection – (González Barrionuevo 1986; 1987a; 1987b; 1990; 1993; 1995; 1997; 2008).

This methodology has the advantage of providing clues to the musical meaning of the Old Hispanic neumes using as an interpretative key the neumes adopted in other notations for representing the music of the same Franco-Roman chants. However, this involves a methodological misconception. Even though Old Hispanic notation shares some basic symbols and general principles with other early notations, we cannot assume that the shared symbols represented the same musical meaning everywhere, especially if we consider the graphical richness of Old Hispanic notation compared to other early music writings. In fact, Old Hispanic notation has a wider array of signs used to represent music, and it transmitted more musical nuances and details than other contemporary

notations did.¹¹ Thus, it is wiser to allow the possibility that the same sign may have had different musical meanings in different notational systems, geographically distant but chronologically simultaneous. Furthermore, González Barrionuevo's methodology cannot clarify whether any shift occurred to the original meaning of the Old Hispanic neumes when they were used to accommodate the imported Franco-Roman melodies. In fact, the transcription of an earlier neumatic tradition into a fixed pitch may include some subjective choices made by the scribe, changing or editing the melody. Finally, this methodology does not advance our understanding of the melodic grammar of the Old Hispanic chant because it investigates *de facto* the music of the Franco-Roman repertory.

On occasions palaeographers devoted their attention to the analysis of a single Old Hispanic manuscript, such as the case of the León Antiphoner and the San Juan de la Peña Antiphoner (E-Zfm M-418, online), studied respectively by González Barrionuevo (2013) and Zapke (1995). González Barrionuevo (pp. 98-99) noted the elegance and calligraphic qualities of the Antiphoner's notation and its long neumes, usually found in chant genres such as the *sono*, *sacrificium* and responsory. He pointed out a certain tendency toward diastemacy in the manuscript, which seems to be demonstrated by the series of consecutive gravis, slanted virga, vertical virga, punctum, tractulus, and uncinus found written within the same piece. He presented also a semiological analysis of thirteen shapes of the clivis neume found in the León Antiphoner explaining their meaning by means of the comparison of the use of the same (or similar) shapes in other Western European early notations (pp. 99-102). Later in the essay, he attempted a further palaeographical and semiological analysis of the Antiphoner's neumes by means of the analysis of two antiphons whose music is also found written in Aquitanian neumes in the codex *Aemilianensis* (pp. 109-120). At the beginning of this section the author made explicit the methodology applied here, saying that the analysis of the two melodies is made in a broad comparative perspective which takes into account tenth- and eleventh-century Old Hispanic manuscripts, some Western European notated manuscripts, the later diastematic versions of the same melodies and also the rhetoric of the text, phrase division, punctuation, and accents (p. 109). From the present author's point of view, the limitations of using later Franco-Roman manuscripts (Iberian and non-Iberian) to infer the meaning of the early-tenth-century neumes of the Antiphoner are essentially two. Firstly, eleventh-century Old Hispanic manuscripts no longer reflected the graphical variety of the earlier sources, such as the early tenth-century León Antiphoner.¹² Secondly, the pitch-readable chants all survive in manuscripts used in the central-northern parts of Spain (in or near Santo Domingo de Silos, or in the La Rioja region). While the melodies of

9. On these manuscripts see Huglo (1985, pp. 255-256). There still survive some fragments written in Visigothic script and Aquitanian notation which reveal the confusion of Old Hispanic scribes during the transitional period. See, for example, the two-folio fragment of a Franco-Roman Antiphoner now attached to E-Tc Ms. 10.5 (Nelson 2007-2008); about some fragments from Zamora with similar characteristics, see Nelson (2002). Some more fragments are freely consultable in the Portuguese Early Music Database P-Cua IV 3^aS-Gv. 44 (20) and 44 (21); P-LA Caixa 1, Fragm. 10; P-BRad Pasta dos documentos visigóticos, s.s., (fragment now lost); E-TUY Fragm. 5.

10. On GB-Lbl add. 30850 see Fernández de la Cuesta (1976 and 1985a). Palacios (2009, pp. 23-24). GB-Lbl add. 30848 is said to be written with Aquitanian notation in Zapke (2007, p. 376), however, it is written with Old Hispanic notation with a strong tendency towards diastemacy, as it can be seen from the full-page image on p. 377.

11. See, for example, the tiny pen-strokes placed at the top-left corner of neumes in E-L Ms. 8, fol. 57v.

12. Regarding the dating of the León Antiphoner, the majority of scholars believe it was written in the middle of the tenth century. See, *inter alia*, Millares (1999, p. 69); Zapke (2007, p. 252); Deswarte (2013, p. 69). Earlier datings have been proposed by Díaz y Díaz (2007, p. 99: first third of the tenth century); and Menéndez Pidal (2003, pp. 148-151): ca. 906. Two scholars dated the León antiphonary to 1069: García Villada (1923, p. 198); and Gómez Moreno (1954, pp. 314-317). Zapke in a recent essay (2011, p. 94) preferred a more general eleventh century dating. For a reassessment of the dating of the manuscript to the years 900-905 see De Luca (2017a and 2017b).

these regions are related in broad terms to the more Western Iberian tradition preserved in the León Antiphoner, the note-by-note relationship is not always very close (Randel 1969). This means that apparent divergences between the pitch-readable notation and the Antiphoner's signs very likely reflect different versions of the melodies rather than pointing towards a counter-intuitive but melodically identical way of interpreting a León Antiphoner sign. Further, since the Antiphoner has many ways of showing many melodic movements within a single pen-stroke (for example, a combination of a note followed by a higher note, conventionally known in the scholarship as a *pes* or *podatus*), an explanation of the graphic differences found in the León Antiphoner cannot be found through comparison with chants in pitch-readable notation, which uses a much smaller set of signs. In addition, the disadvantage of using external evidence for palaeographical research may cause important information concerning the manuscript being investigated to be lost. In fact, when González Barrionuevo discussed the Antiphoner's notation, he stated that a single person wrote the manuscript; moreover, while discussing some changes to the original layer of notation, he referred to the 'notator or corrector' without openly clarifying whether it was the same person (pp. 104-105). As will be discussed below, the Antiphoner shows instead the presence of at least four music scribes and multiple later hands.

Zapke (1995) adopted a similar approach in her study of the San Juan de la Peña Antiphoner and, also in this case, the palaeographer used the traditional Latin terminology to refer to the neumes (*virga*, *clivis*, *porrectus* etc.). Each neume shape found in the eight-folio fragment is presented along with its semiological explanation, the latter being based on the analysis of the occurrence of the neume shapes with respect to text accentuation. A short comparative analysis is presented; in this case it is made using as a comparison the twelfth-century Antiphoner of Santa Cruz de La Serós in Aquitanian notation.

3. A different methodological approach

As an alternative to the methodologies applied in previous research on Old Hispanic notation, I propose the investigation of Old Hispanic neumes when they were used to represent Old Hispanic melodies, without constantly referring to other chant repertoires or notations. This approach emphasizes the value of the study of early notations in terms of their own way of functioning and focuses on a single manuscript at a time.

One of the first challenges Old Hispanic notation poses to modern readers is the terminology to be adopted to describe its neumes. In Old Hispanic notation we have to identify and classify, for the first time, some peculiar palaeographical features whose musical meaning is totally obscure. What we know is that those palaeographical features were used throughout all – or most of – the earlier manuscripts consistently and, apparently, for a functional purpose. The well-known Latin names for neumes (*podatus*, *torculus resupinus* etc.) often carry a specific meaning referring to intervals, rhythm or performance (Cardine 1970). For the Old Hispanic repertory however, it does

not seem entirely correct to use the Latin terminology to describe the neume shapes shared with other Western European notational styles, because we cannot assume that those shapes conveyed the same musical meaning in each early notational system. Latin names for neumes are useful labels given *a posteriori* to pinpoint musical signs and the use of these names for earlier tenth century manuscripts is anachronistic. Indeed, the Latin names for musical signs were created by medieval theorists who needed a terminology that would allow them to talk about music in their treatises. The Latin names are first found in music theory manuscripts written in the eleventh and twelfth centuries and, when we compare the lists of neume names found in those sources, they do not always match (*ibidem*, pp. 54 ff.).

Further, while there are conventional, and widely understood, names in use for neumes of up to three notes (e.g. *pes*, *clivis*, *torculus*, *porrectus*, *scandicus*, *climacus*), the language becomes more clumsy when four notes are present (for example, *torculus resupinus*; *scandicus flexus*; *pes subbipunctis* etc.). For the longer neumes, so characteristic of the León Antiphoner's notation, this naming of neumes becomes impossible according to these conventions. There is simply no name for a single pen-stroke with eight, nine, or even more notes.¹⁵ Because of this, and because I am concerned with deciphering the melodic contours of the neumes and their nuances, I have adopted a terminology based on those melodic contours. This approach was already adopted by Hornby and Maloy (2013) but it is here ironed out. In Old Hispanic notation the motion of the melody is the key element. The inclination of the pen-stroke tells us whether the melody goes up or down. With a few exceptions, the ascending and descending movement of the pen-stroke represents rising and falling pitch (although of course specific intervallic content is not communicated). One complicating factor in this notation is that the relationship between the last note of a neume and the first note of the next is not always directly signalled by the inclination and direction of the pen-stroke at the beginning of the second neume. As a general rule, the first note of any neume has to be interpreted as 'neutral' (N) because we do not know the pitch or its relationship with the previous neume. However, it is almost always possible to identify the melodic contour of the following notes of a neume using the direction of the pen-strokes: each note is either higher than (H), lower than (L), or the same as (S) the previous one. Thus, while in the usual modern terminology a *torculus* consists of a note followed by a higher and then a lower note, I prefer to identify such a shape as 'Neutral-High-Low' . Similarly, modern terminology for a note followed by two higher notes and then a lower one would be *scandicus flexus*, but I have preferred the label 'Neutral-High-High-Low' . A pair of vertical *virgae* written closely together would be labelled as *bilineola*; I have labelled them 'Neutral-Same' . These labels, then, are directly derived from the melodic contours of the neumes, and are nuanced, where necessary in the context, by further information about the palaeographical features of the neume in question.

15. See, for example, the twelve-note neume whose melodic contour is Neutral-High-High-High-Low-High-Low-High-Low-High-Low found in the León Antiphoner on fol. 257v, 16.

The methodology presented here is based on the study of a single manuscript at a time. The first step in approaching the Old Hispanic notation of a manuscript which is the object of research is to observe the range of neume shapes used. This initial stage consists of the examination of each neume individually, scrutinising their morphology. This approach can gradually lead to an understanding of the shapes' constituent palaeographical elements, and of how those elements are joined together to create the varied neume shapes of the source. The next step is to engage not only with the graphical shapes of the signs, but also with their spatial placement and proximity, both vertical and horizontal. It is also important to investigate how the neumes are combined together, creating short, medium and long melismas on a single syllable or creating standard melodic patterns sung on more than one syllable at cadence points or repeated within the same or between different chants. Another kind of internal comparative evidence within the source being investigated is chants written down more than once.¹⁴ Obviously, internal comparison provides more information when the source being investigated is in book format, rather than a fragment. All of these categories of evidence can be scrutinised to match neume shapes, melodic contour, and the neumes' spatial placement and proximity, both vertical and horizontal. It is crucial to check for variations in the precise neume shapes, and then make a careful evaluation of the nature of any varying note forms. For example, variation in specific neume shapes unveiled the presence of several music scribes in the León Antiphoner.

Finally, another piece of evidence is provided by changes to the manuscript made after its initial copying. These changes may consist of marginal additions to the manuscript, or they can be a new neuming superimposed on a still-visible original. Some of these changes seem to represent a different understanding of the performance nuances and/or note groupings which can help us to deduce the meanings of certain signs.






Focusing on a single source at a time, it is possible to become familiar with the scribes' usual pen-strokes. This enables one to identify variants in neume shapes that result from the vagaries of an individual scribe's hand, rather than those which have a specific musical meaning. In addition to this, the identification of different scribes who participated in neuming a single source is a crucial preliminary step for musical analysis, because there may be the presence of writing habits peculiar to individual scribes which need to be identified and taken into account while seeking for related neume patterns in cadences, melismas and single notational shapes. This is important due to the great component of orality involved in the transmission of Old Hispanic music. In fact, orality was the main means of musical transmission (learning, diffusion and preservation) until the mid-eleventh century in all Western Europe (Asensio Palacios 2009, p. 21).

The resulting deep knowledge of the constituent palaeographical elements of the Old Hispanic manuscripts analysed can be used to: pinpoint the notational features shared among different sources; identify those features which were discarded; and identify groups and families of sources which share common features. A major advantage of this methodology is that it permits an understanding of the changes that occurred in the Old Hispanic notational system over the centuries during which it was used. Furthermore, the combined use of the few securely dated sources and of the knowledge derived from the palaeographical examination I propose for the Old Hispanic manuscripts will likely result in a new understanding of the geography and chronology of the manuscripts.¹⁵

4. The notation of the León Antiphoner as case-study


Being the most substantial notated Old Hispanic manuscript, the León Antiphoner is the best candidate for making a palaeographical analysis of the Old Hispanic notation. Furthermore, the inner quality of the Antiphoner's notation promises great potential for palaeographical discoveries. Indeed, the Antiphoner's notation has a unique degree of complexity on account of the wide variety of signs used. The complexity of the León Antiphoner's notation derives from the number of graphical variations in the basic neume shapes – for example, to notate a three note neume Neutral-High-Low, more than fifty different shapes are used – and from the presence of graphical elements placed near the notation with the purpose of adding musical information. All the neume shapes found in the León Antiphoner derive from the combination of these factors: palaeographical parameters of the pen-stroke (I define a pen-stroke as a single movement of the pen on the page): orientation, inclination, length; different kinds of connections between notes within a neume: gapped, angular, curved, and looped.


The second factor applies only to compound neumes, that is, neumes containing two or more notes, whereas a simple neume can be described in palaeographical terms only according to the parameters of its pen-stroke. In exploring the ways these factors change the morphology of the neumes, I discuss the different kinds of connection first, followed by the parameters of the pen-stroke.










I define connection as the way two single pitches are joined together within a neume. There are four different kinds of connections: gapped , angular , curved , and looped . Often more than one of these is in evidence at different points within a single pen stroke . The consistent use of the connections among the Old Hispanic musical manuscripts tells us that behind each graphical connection there was a musical meaning, now lost.




14. Occasionally chants have been found notated in full two or more times, or (providing more limited information) notated in full once and then signalled a second or more times in the manuscript with a notated incipit. See Randel (1975).






15. The few Old Hispanic manuscripts securely dated are: E-L 8; E-SI 3, 4, 5; E-SAu 2668, is a *Liber canticorum et horarum*, known as the 'Breviary of the Queen Sancha'; E-SCu 609 Res.1 known as the 'Book of Hours of Ferdinand I'; E-Tc 35.4. Visigothic manuscripts are described in Millares (1999). On the two eleventh-century royal manuscripts see Pick (2015).

The importance of classifying the graphical connection of Old Hispanic notation can be better understood if we consider that often we encounter neumes which have the same number of notes and the same melodic contour but different graphical connections (for example, these two-note Neutral-High neumes ). The classification of the neumes according to their connections allows us adequately to describe and differentiate all the neumes, even if they represent the same melodic contour.




Some neumes are formed of an unbroken pen-stroke; the notes signified within such neumes are, incontrovertibly, part of the same neume. Other neumes are formed of two or more lines of ink on a single syllable, with small gaps between them . This gapped connection is already known in the literature as a way of expressing a vocal articulation (Cardine 1970; González Barrionuevo 1995). I do not necessarily accept that interpretation, but I recognise the phenomenon of the gapped connection within a single neume. We can only identify separate pen-strokes as part of the same neume under specific and limited circumstances, depending in part on the proximity of the pen-strokes, in part on the way they are combined.

An angular connection joins straight lines which can have different lengths and inclinations. In the León Antiphoner we have observed three categories of angular connection: plain ; v-shaped ; and staircase . These categories seem to be functionally equivalent, with the difference that, if the figure rises or falls for three or more notes in the same direction, and has an angular connection throughout, then it will use the staircase shapes; if there is a two note rise, it uses a plain shape or a ‘v’ shape (which can be combined with further connections to make a longer shape). A two-note fall can be given with a plain angular connection . However, if the two-note fall is followed by a further lower note, the whole neume may assume the shape of a downward staircase . Plain and staircase connections can be combined within a single neume . The v-shaped connection  is very common in the León Antiphoner although it is used only for upward melodic movement and always connects the first and second notes of a neume (González Barrionuevo 2008). Although both the plain  and the v-shaped  connection are angular, I do not see them as performatively equivalent, since considerable scribal effort has gone towards differentiating between the two.

There is great variety in the shape of curved connections within neumes. I have divided the curved connections into two categories: in the first, the pen-stroke (assuming it is written left to right across the page) curves in an anticlockwise manner (); in the second, the pen-stroke instead curves in a clockwise manner (). The anticlockwise curved connection is much more common than the clockwise one; Neutral-High curved neumes, for example, only appear with an anticlockwise connection . In the same way, there is no Neutral-High-Low curved neume with a clockwise connection between the first two notes; this connection is always

anticlockwise. However, either anticlockwise or clockwise connections can be used to join the second and third note of a Neutral-High-Low curved neume ( or ). They differ in the orientation of the final part of the pen-stroke (right to left in the first example, against the norm, and left to right as usual in the second example). Both anticlockwise and clockwise curved connections are used mainly for combinations of notes whose melody rises. A curved connection can be used to join a note to a lower one (as in the Neutral-High-Low neumes shown above), but no neume exists in the León Antiphoner with a curved connection that includes a fall of two or more consecutive notes. Neumes with Low-Low shapes (or even with more consecutive Ls), use angular (staircase)  or gapped connections  for these falls or both gapped and plain angular .

Some neumes with curved connections resemble the shapes found in other notations as a quilisma (an ornamental neume). There is still lively scholarly debate about how quilismas were performed. However, there is no direct contemporary theoretical commentary on Old Hispanic notation to confirm that these curved connections were ornaments in this culture. Nevertheless, the lack of multiple-note falls with curved connections might lend weight to the association of the curved connection with the quilisma.

In the León Antiphoner, some neumes have a looped connection at the junction where the pen-stroke changes direction. When the pen-stroke turns anticlockwise into a loop, the following note is always lower ; when the pen-stroke turns clockwise into a loop, the following note is always higher . A wavy punctum  is always connected to a higher note by means of looped connection (neutral-Low neumes never have looped connection between the two pitches).

There is huge variety in the appearance of different pen-strokes within the León Antiphoner. Orientation (rightwards or leftwards), inclination (from vertical to horizontal), and length are the parameters of the pen-stroke and they can affect the graphical appearance of the connections produced by the encounter of two sections of the pen-stroke or by two separated pen-strokes. If a pen-stroke encompasses multiple notes, each change of direction results in a new value for each of those parameters. For example, in a compound neume written with a single pen-stroke, the pen-stroke changes inclination to signal each new note. Each change of direction results in an angle between two lines going in different directions. The width of the angle depends on the varying inclination of the pen-stroke as it approaches and leaves the connection. The length of the pen-stroke does not affect the connection, but it can change the size and proportion of a neume. It is important to remember that variations in the palaeographical parameters of the pen-stroke do not change the number of notes involved in a neume shape. Instead, the parameters appear to reflect different performance possibilities possibly related to vocal articulation, ornaments, rhythmic nuances etc.

The notation of the León Antiphoner routinely goes from left to right across the page. As already mentioned in the section on clockwise and anticlockwise curved connections, above, in certain circumstances the pen-stroke can go leftwards across the page rather than rightwards (↶ rather than ↷). There are other instances where curved connections can go leftwards rather than rightwards on the page (e.g. ↶ rather than ↷) and the same goes for plain angular connections in neumes with the shape Neutral-Low-High-Low (e.g. ↶ rather than ↷) or Neutral-Low-High-Low-High (↶ rather than ↷).

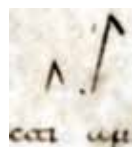


Example 1



Example 2

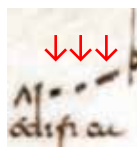
To have different inclination of the pen-strokes in different notations of similar neumes does not change the kind of connection but it can determine the width of the connection angle. In examples 1 and 2 the neumes have both the same number of notes and melodic contour (respectively Neutral-Same/High-Low and Neutral-High-Low) but the inclination of the pen-stroke or of some portions of the pen-stroke varies.



Example 3. Fol. 93, 5



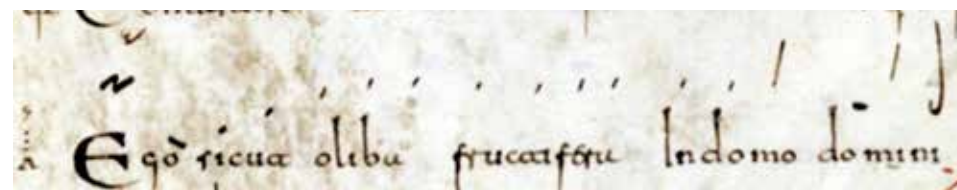
Example 4. Fol. 155v, 4



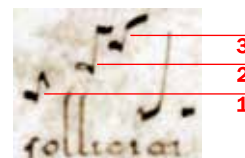
Example 5. Fol. 259v, 13

Changes in the length of a pen-stroke (or in portions of the pen-stroke) can change the shape of a neume. In example 3 the two consecutive neumes represent the same melodic contour (Neutral-Low) and both have angular connection between the two pitches. What differs between the two neumes is the length of the first section of the pen-stroke. Similarly, example 4 (see arrows) shows two three-note Neutral-High-Low neumes that differ for the length of the intermediate pen-stroke. While in examples 3 and 4 it seems possible to recognize an intentionality in differentiating the two neume shapes, the same cannot be said for the lengths of the three consecutive Neutral neumes in example 5 which may be simply on account of the ductus of the hand on the page.

The inclination and length of the pen-stroke are part of the graphical alphabet of Old Hispanic notation and they were used to differentiate the neumes graphically, as we can observe in the series of one-note Neutral neumes in example 6. Similarly, we observe in example 7 that neumes 1, 2, and 3 all represent the same melodic contour (Neutral-High-Low) but they are graphically differentiated by their intermediate and final pen-strokes which have, respectively, different lengths and different inclination and lengths.

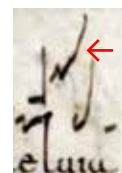


Example 6. Fol. 120v, 8

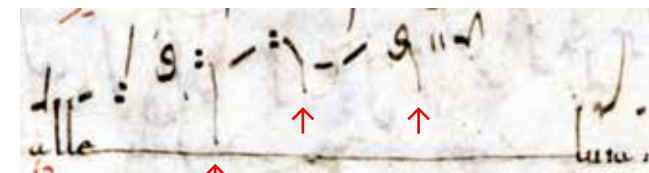


Example 7. Fol. 157, 2

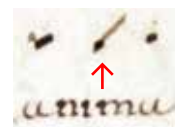
Is there a way to work out the importance of the graphical differentiation due to length and inclination of the pen-stroke in the notation of the León Antiphoner? In some cases changes to original neuming can give us some clues. The changes found in the León Antiphoner can be grouped as it follows: erasure that shorten the original neume shape; erasure of a portion of a chant (which is not replaced with another version); erasure of the original neuming and addition of new neume/s; correction made by overwriting the new neume on the original neuming (which can still be recognized); neume/s added next to the original neuming, which is still readable over the text; marginal additions that correct neume/s written over an erasure; dubious corrections: the changes seem to be unrelated to the music content of the page. Let us examine some examples first. Examples 8, 9, 10 and 11 show some interventions made to the length of the original neume. In examples 8 and 9 the pen-stroke is lengthened by means of a new section added at the end of the neume. In examples 10 and 11 a new single-note neume is written above the original one.



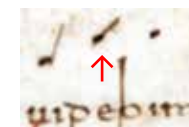
Example 8. Fol. 284v, 13



Example 9. Fol. 269, 16

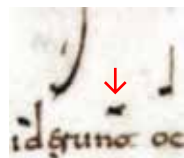


Example 10. Fol. 78v, 2



Example 11. Fol. 112v, 2

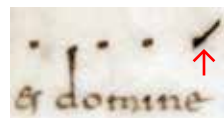
Examples 12, 13, 14, and 15 instead show some changes to the original neuming that involve both the length and inclination of the pen-stroke. Finally, in example 16 not only was the length of the original Neutral-High neume changed, but also its connection, which was angular and became curved anticlockwise in the revision.



Example 12. Fol. 80, 4



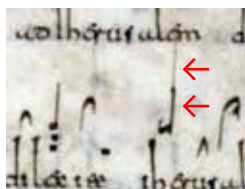
Example 13. Fol. 84, 14



Example 14. Fol. 96, 3



Example 15. fol. 96, 10



Example 16. Fol. 269, 2



All these changes are extremely important for our modern understanding of the parameters of the pen-stroke in the León Antiphoner's notation as they demonstrate that scribes used these parameters to convey purposefully some musical meaning to the reader.¹⁶ Besides, they demonstrate that the scribes put a great deal of effort trying to capture as much information as possible in the notation in order to guide the reader in useful directions. Finally, I have already acknowledged that the variations found in the basic neume shapes in the León Antiphoner's notation are greater than what is customary in other western notations. Now, it can finally be clarified that this graphical variety is due to the wide range of application of the parameters of the pen-stroke.


The methodology discussed here, applied to the study of the León Antiphoner, led to the discovery of the presence of several scribes in the León Antiphoner (De Luca, n.d.). The overwhelming quantity of graphic details in the Antiphoner's notation is probably the reason why previous scholars did not identify the presence of multiple music scribes. In fact, if we juxtapose two images rich in graphic details, it can be a challenge finding any idiosyncrasies within them. A team of highly skilled scribes was recruited to write the León Antiphoner. The main body of the Antiphoner was the product of a small group of people, presumably within a relatively short space of time. Scribes A, B, C, and D were the original notators; however, the analysis of the original layer of notation of the Antiphoner is still in progress and it cannot be excluded that there will be more scribes who participated to the original neuming. The original neuming of

the Antiphoner suffered massive manipulations; later hands intervened heavily on the original layer of notation and left no page untouched – some marginal additions and erasures were already discussed by Brou (1954), and Randel (1969, p. 11 ff.).


It is possible to identify at least six later hands who made changes to the original neuming: Scribes E, F, G, H, I, and J; but also Scribes A, B, C and D made changes to their neuming. At the current stage of research, the folios of the León Antiphoner that can be securely attributed to the ten identified scribes are:

Scribe A	fols. 29-36, 40-48v
Scribe B	fols. 36v-40
Scribe C	fols. 77- 92v, 94, 232v-234
Scribe D	fols. 123, 129-131v, 160v-165, 181-211v, 269, 271v, 273v, 275v
Scribe E	fol. 1v
Scribe F	fol. 3v
Scribe G	fols. 5 top, 305v-306 (chants added over erasure), 64 (melisma on the side), 72v, 3 (melisma), 74v (<i>sacrificium</i> over erasure), 132 (melisma), 189 (melisma), 251 (<i>sono</i>)
Scribe H	fol. 5 (bottom)
Scribe I	fols. 108v (melisma), 195 (melisma)
Scribe J	fols. 191v, 207v, 210v, 224 (melismas on the side on all four pages).


Although the original notators (Scribes A, B, C and D) share very similar handwritings and were very disciplined, there are still some graphical details that permit us to identify and distinguish them. One of the differences between three of the Antiphoner's original music scribes is the way they wrote the melodic movement represented by an angular downward staircase. Scribe A usually wrote a deep curve at the top of the staircase , and only occasionally wrote even steps , which are a peculiarity of Scribe D, who always put special care into writing even steps and is very consistent in his handwriting.

On the contrary, Scribe B turned the angular steps into curves  and never wrote an angular step. Unlike Scribe A, Scribe D's folios never contain neumes with a deep curve at the top of the staircase. Scribe D has a very elegant script, a steady hand, and perfect control of the space and the size of the neumes. His neumes are generally small and carefully written. Scribe B is the least skilled of the Antiphoner's scribes. He barely wrote three folios and it appears that he was soon fired, probably because of his lack of experience. Indeed, Scribe B's (few) folios show many signs of erasures and corrections. Scribe B sometimes made those corrections himself; on occasions they

16. Further examples of changes to the length and inclination of the original neuming *inter alia* can be found on fols. 121, 15 (*ad te*) 127, 16 (*factus es*) 173, 15 (*consurgit*) 177, 3 (*alleluia*) 180, 3 (*quoniam*); 261v, 10 (*deus*) 272, 12 (*elegite*).

were made by Scribe A and at other times by later scribes. Scribe B also had trouble writing this neume . He always wrote the vertical stem first and then added a circle to the right. The other scribes instead wrote the same neume with a single pen-stroke (on occasions, also Scribe D wrote this neume with two separate pen-strokes). Scribe C has a peculiar way of lengthening some neumes that end with a higher note and he often oversteps the space devoted to notation, even crossing the text line above. Scribe C's way of crossing the vertical notation space is visually striking and, to a certain extent, even disturbing, as it clashes with the beauty and elegance of the rest of the Antiphoner (for example, fol. 77v written by Scribe C). The close similarities between the scribes' handwritings hint that they may have been trained in the same scriptorium. Scribe B was probably the youngest, while Scribe A was possibly the oldest. Perhaps at some point poor Scribe A passed away because after he started the copy of the Antiphoner and wrote about sixty pages (with a short hiatus where we encounter Scribe B) we never see his idiosyncratic neumes again. Instead we encounter for the first time Scribe C, who wrote about five quires before Scribe D took over. Scribe D wrote the vast majority of the Antiphoner but he benefitted from the help of Scribe C and other – possibly one or two – scribes to complete the task. When, for example, later in the Antiphoner we encounter Scribe C again (e.g. fols. 232v-234), it can be seen that the extra length of his neumes is less pronounced. One can still recognize his habit of crossing the text line above, but it happens less often. One also receives the impression that the size of the neumes is under much greater control.

The astonishing similarity between duplicated chants written either by different or the same original notators demonstrate that they were carefully copying from a model (or from models), and that the scribes of the León Antiphoner were very disciplined. As a rule, musical differences between cognate versions (written either by the same or different scribes) do not alter the number of notes, or the melodic contour, which usually match. The differences are limited to the choice of neumatic connection and to the presence of the ornamental neume wavy punctum.

Among the later hands, Scribe G deserves a special mention. He can be considered as the main corrector of the León Antiphoner because he is the later scribe who made the largest number of alterations to the notation. Scribe G has a very peculiar writing style – he tended to write very angular lines, thick pen-strokes, and rigid neume shapes. Peculiar also was his way of writing the Neutral-Same curved-gapped neume  (the rounded and symmetric pen-strokes we would expect are turned into sharp angles by Scribe G). Scribe G is not only the scribe who intervened most in the original notation of the León Antiphoner but further comparative palaeographical analysis demonstrated that he was also the music scribe of the eleventh-century *Liber canticorum et horarum* of Queen Sancha.¹⁷

17. On E-SAu 2668 see above, note 15. The analysis of Scribe G in E-L 8 and E-SAu 2688 can be found in De Luca (n.d.).

Conclusions

As with other early notations, Old Hispanic notation entails a large component of orality. Previous scholars circumnavigated the obstacles posed by the non-pitch readable Old Hispanic notation by focusing their attention on the Old Hispanic melodies found in diastematic notation and using as an interpretative key the neumes found in the eleventh-century Franco-Roman manuscripts written with Old Hispanic notation and in some other coeval manuscripts written with other notational styles. In this chapter I discussed the strengths and weaknesses of the methodologies previously applied to the study of Old Hispanic notation. Subsequently, I proposed an alternative methodological approach based on the study of Old Hispanic neumes when they were used to represent Old Hispanic melodies (without constantly referring to other chant repertoires or notations). Pinning down the palaeographical features of each Old Hispanic manuscript and identifying how the neumes were combined together to create repetitive neumatic patterns at cadences and melismas will ultimately lead us toward a better understand the melodic grammar of the Old Hispanic chant itself.

The new methodology discussed here has been applied to the study of the León Antiphoner. This palaeographical investigation allows us for the first time to discuss in great detail some characteristics of its notation and its scribes. The level of detail and care put in the León Antiphoner's notation was shown to be exceptional. While the precise melodic meaning of many of the palaeographical elements of the León Antiphoner remains inaccessible to us, the graphical richness of the Antiphoner's notation hints that the scribes were purposefully using connections and the parameters of the pen-stroke to help the reader recall the melody to be sung. Furthermore, the presence of multiple music scribes (both original notators and later hands) undermines the previous assumption of considering the Antiphoner a whole and homogenous witness of Old Hispanic chant and demonstrates instead the importance of peeling away all the chronological layers of musical changes and reconstructing their specificities one by one.¹⁸

18. As said (p. 19, note), the preliminary research for this article has received funding from the European Research Council under the European Union's Seventh Framework Programme (FP7/2007-2015)/ERC grant agreement no. 515155. Further research was funded by the Centro de Estudos de Sociologia e Estética Musical (CESEM - Nova FCSH) as part of the project UID/EAT/00695/2015 (funded by the FCT/MCTS) and by the Social Sciences and Humanities Research Council of Canada (SSHRC).

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