

nova série | *new series* 1/1 (2014), pp. 33-52 ISSN 0871-9705 http://rpm-ns.pt

Editing the *Cantigas de Santa Maria*: Notational Decisions

Manuel Pedro Ferreira

Resumo

Este artigo começa por apresentar as principais questões metodológicas com as quais o editor musical das Cantigas de Santa Maria inevitavelmente se confronta; passa então a discutir os problemas de transcrição rítmica e a propor uma abordagem inovadora da notação, baseada em indícios involuntariamente providenciados pelos copistas (hesitações, emendas) quando instados a fixar por escrito, dentro dos condicionalismos do século XIII, o que ouviam ou cantavam. Exemplifica-se o uso de padrões, regulares ou variados, de origem árabe ou parisiense, e casos de ambiguidade notacional que testam os limites do raciocínio filológico. Defende-se que a escolha de uma figura notacional pelo copista não dependia necessariamente da sua velocidade de execução, e que a tensão entre o facto musical e a convenção notacional podia implicar opções notacionais ao arrepio da intuição. Admitem-se, entre as soluções de transcrição requeridas pela notação das *CSM*, subdivisões ternárias num enquadramento métrico binário (ou vice-versa) e a equivalência temporal de metros diferentes, por exemplo 3/4 e 6/8 (terceiro modo compacto). As vantagens desta abordagem são demonstradas com base em Cantigas exemplares.

Palavras-chave

Cantigas de Santa Maria; Ritmo e tempo; Notação medieval; Emendas; Transcrição moderna.

Abstract

This paper presents at first the main methodological questions that the musical editor of the *CSM* must confront; then it discusses rhythmic transcription and proposes a novel approach to the notation, based on clues unwillingly provided by the copyists (hesitation and emendation) when trying to capture what they heard or sung under 13th-century notational constraints. It illustrates the use of regular or varied Parisian or Arabic patterns and instances of notational ambiguity that expose the limits of philological reasoning. It is argued that the choice of a notational figure did not necessarily depend on its performing speed, and that tension between musical input and scribal convention could imply counter-intuitive notational choices. Ternary subdivisions within a binary framework (or vice-versa) and temporal equivalence of different kinds of metre, e.g. 3/4 and 6/8 (compressed third mode), are admitted in the range of transcription solutions called for by the notation of the *Cantigas*. Exemplary songs are discussed to demonstrate the advantages of this approach.

Keywords

Cantigas de Santa Maria; Rhythm and tempo; Medieval notation; Emendation; Modern transcription.

HE CANTIGAS DE SANTA MARIA is one of the most rich and imposing medieval song repertoires, loved by performers and audiences alike, though the lyrics may be hard to understand. A personal project of King Alfonso X of Castile and León (1221-84), this

collection of more than four hundred songs was written in Galician-Portuguese verse and fully notated in books carefully or exquisitely produced. Yet modern musicology has been slow to acknowledge its historical and aesthetical significance. Case studies have been rare, and in spite of the fact that, after the musical edition by Higinio Anglés published in 1943, two complete and two partial editions have come to light since the year 2000, a truly critical edition does not exist yet.

By critical edition I mean one in which all of the relevant information is presented and evaluated, and where the musical version or versions proposed take into account all of the sources, their characteristics and their relationship, as well as the full text and the issues associated with it. Typically, a critical edition involves choices; these should clarify—not obscure—the musical object and allow the user to confront or develop alternative interpretations.³

These two last requirements may, however, conflict when there is no consensus concerning the need for and the kind of musical transcription. Compared to other medieval repertoires for which different editorial approaches have been tried—sometimes according to current fashion rather than philological insight—the *Cantigas de Santa Maria* is especially problematic. Unlike most troubadour music, the *Cantigas* does offer rhythmic notation and all of its manuscripts were written in the cultural circle of their mentor and during his lifetime (or shortly thereafter). This seems to be an advantage, but, unlike contemporary French polyphony, its notational rules have not been explained in theoretical treatises, and one cannot confirm the validity of rhythmic hypotheses

A preliminary, shorter version of this paper was read at the Conference 'Early Music Editing: Principles, Techniques, and Future Directions' (Utrecht University, 3-5/7/2008).

A notable exception is David Wulstan, who has been studying the repertoire for many years and is convinced that 'mediaeval song was sung according to rhythmic patterns of the type displayed in the Alfonsine Cantigas': David WULSTAN, *The Emperor's Old Clothes: The Rhythm of Mediaeval Song* (Ottawa, The Institute of Mediaeval Music, 2001). The *Cantigas* collection is typically ignored, despite its unusually rich notation, e.g. in Rembert WEAKLAND, 'The Rhythmic Modes and Medieval Latin Drama', *Journal of the American Musicological Society*, 14 (1961), pp. 131-46, and Bryan GILLINGHAM, *Modal Rhythm* (Ottawa, The Institute of Mediaeval Music, 1986). The 20th-century scholarly reception of this repertoire is analysed in Manuel Pedro Ferreira, 'The Periphery Effaced: The Musicological Fate of the *Cantigas*', in 'Estes Sons, esta Linguagem', Essays on Music, Meaning and Society in Honour of Mário Vieira de Carvalho, edited by Gilbert Stöck, Paulo Ferreira de Castro and Katrin Stöck (Leipzig - Lisbon, Gudrun Schröder-Verlag - CESEM, 2013), in press.

² Higinio Anglés, *La música de las Cantigas de Santa María del rey Alfonso el Sabio*, 3 vols. (Barcelona, Biblioteca Central, 1943-64). Martin G. Cunningham, *Alfonso X, o Sábio: Cantigas de Loor* (Dublin, University College Dublin Press, 2000)—reviewed by Manuel Pedro Ferreira, *Revista Portuguesa de Musicologia*, 11 (2001), pp. 203-8. Roberto PLA SALES, *Cantigas de Santa María*, *Alfonso X el Sabio: Nueva transcripción integral de su música según la métrica latina* (Madrid, Música Didáctica, 2001). Chris Elmes, *Cantigas de Santa Maria of Alfonso X el Sabio: A Performing Edition*, 4 vols. (Edinburgh, Gaïta, 2004-13). Pedro López Elum, *Interpretando la música medieval del siglo XIII: Las Cantigas de Santa María* (Valencia, Publicacións Universitat de València, 2005)—reviewed by the author in *Alcanate: Revista de Estudios Alfonsies*, 5 (2006-7), pp. 307-15. Volumes 2 and 4 of Elmes' edition were not available to the author when writing this paper.

The general problems facing the editors of the Cantigas have been summarized in Stephen Parkinson, 'Editions for Consumers: Five Versions of a Cantiga de Santa Maria', in Actas do IV Congreso Internacional de Estudios Galegos, Universidade de Oxford, 26-28 Setembro 1994, edited by Benigno Fernández Salgado, vol. 1 (Oxford, Centre for Galician Studies, 1997), pp. 57-75; and Manuel Pedro Ferreira, 'Understanding the Cantigas: Preliminary Steps', in Liber amicorum Gerardo Huseby, edited by Melanie E. Plesch (Buenos Aires, Gourmet Musical Ediciones, 2013), pp. 127-52.

applied to one voice part by testing their durational and harmonic compatibility with the remaining parts. Consequently, the character and meaning of the notation has incited some scholarly disagreement.4

If we believe that musicology has the role, among others, of clarifying the internal logos of music, these difficulties should not prevent us from arriving at objective, historically sound, and musically plausible (even if tentative) interpretations. In fact, as in other sciences that seek both true and elegant equations, in musicology the search for neat historical hypotheses and neat aesthetical solutions go hand-in-hand and feed each other. Thus, the editor must seek a balance between philological faithfulness and historically-informed musical sense. Defining 'faithfulness' here is almost as difficult as defining 'musical sense', yet, in the remainder of this article, I will endeavour to clarify the meaning and practical application of these qualities when editing the Cantigas.

One cannot be faithful to the sources of the Cantigas by merely adhering to its medieval notation and keeping its ambiguity because in the three extant musical sources To, T, E, there are two kinds of notation, each with different musical implications and ambiguities.⁵ One cannot be faithful to the sources by merely choosing the best of them because each contributes specific information and records particular variants that can seldom be regarded as better or worse. Moreover, the one source most likely to be closest to the King in his final years and the most informative in its notation, the Escorial códice rico manuscript (T), records less than half of the repertoire. When the sources in the Escorial (T and E), which share the same kind of notation, diverge substantially from Toledo MS (To), the two versions should be given in parallel. Still, the interpretation of each of them has to take into account the whole notational picture.

A good synthesis of the scholarly debate concerning the notation of the Cantigas can be found in Alison CAMPBELL, 'Words and music in the Cantigas de Santa Maria: The Cantigas as song' (MLitt thesis, University of Glasgow, 2011), pp. 82-5, 91, available at http://theses.gla.ac.uk/2809/. The notation is discussed from different points of view in CUNNINGHAM, Alfonso X (see note 2), pp. 19-58; and David WULSTAN, 'The Rhythmic Organization of the Cantigas de Santa Maria', in Cobras e Som: Papers from a Colloquium on the Text, Music and Manuscripts of the Cantigas de Santa Maria, edited by Stephen Parkinson (Oxford, Legenda, 2000), pp. 31-65, at pp. 32-41. For further discussion of musical context, authorship and notation, see Manuel Pedro FERREIRA, Aspectos da música medieval no Ocidente peninsular, vol. 1: Música palaciana (Lisboa, Imprensa Nacional-Casa da Moeda - Fundação Calouste Gulbenkian, 2009).

Musical sources: Madrid, Biblioteca Nacional de España, Mss 10069 (siglum: To), beforehand in Toledo, colour reproduction available at http://bdh-rd.bne.es/viewer.vm?id=0000018650; El Escorial, Biblioteca del Real Monasterio, MS. T. I. 1 (siglum: T), 'códice rico'; MS. b. I. 2 (siglum: E), 'códice de los músicos', imperfect, B&W facsimile reproduction available at http://botiga.bnc.cat/publicacions/2510 Angles.%20Cantigas%20Facsimil.pdf>. On the differences between them, and their respective ambiguities, see FERREIRA, Aspectos da música medieval, (see note 4); Manuel Pedro FERREIRA, 'Ambiguidade, repetição, interpretação: o caso das Cantigas de Santa Maria 162 e 267', in Estudos de edición crítica e lírica galego portuguesa, coordinated by Mariña Arbor Aldea and Antonio F. Guiadanes (Santiago de Compostela, Universidade, Servizo de Publicacións e Intercambio Científico, 2010), pp. 287-

Manuel Pedro Ferreira, 'A música no códice rico: formas e notação', in Alfonso X El Sabio (1221-1284), Las Cantigas de Santa María: Códice Rico, Ms. T-I-1, Real Biblioteca del Monasterio de San Lorenzo de El Escorial, Estudios, vol. 2, coordinated by Laura Fernández Fernández and Juan Carlos Ruiz Souza, Colección Scriptorium (Madrid, Testimonio, 2011), pp. 189-204.

Thus, a complete critical edition must be based on a conflation of notations and often, a conflation of sources as well. This is no problem if there is easy access to the musical notation in the three manuscripts, for everyone to see. A full palaeographical transcription, prepared under a project funded by the Portuguese Agency for Scientific Research (FCT), will be soon available on the internet in PDF or e-book format; it could be put onto a CD-ROM, which in turn could be published with a future critical edition on paper, freeing the editor from reproducing it all. With this accessibility in mind, at what kind of critical faithfulness should we aim in a critical edition? The ideal answer, it seems, is a kind of notational presentation that allows the sources to speak fully when they speak and to be mute when they no longer tell us the full story.

With so many aspects to take into account, from formal to melodic variants, in the following I will concentrate on just one question, and a vexed one at that: rhythmic interpretation. To go straight to the point, I favour a notational compromise allowing one to translate into modern rhythmic values what is translatable, to the extent that it is translatable (and providing alternatives whenever these make sense). For instance, the twelfth song of the Festas de Santa Maria (CSM 422) is based on the melody of the Song of the Sybil; it is written mostly with longs, suggesting a slow tempo, in its latest source (MS E). Considering that the melody is borrowed from plainchant and the text alludes to the Judgement Day as does the Song of the Sybil, and that most ligatures occupy at least a long but are otherwise ambiguous in mensural meaning, there is no objective reason to prefer a three-beat long to a two-beat long, or to choose an isosyllabic rendition of the ligatures instead of note-equality or another solution. Although there is clearly a mensural intent here (presence of a quaternary ligature cum opposita proprietate (presence of a rhythmic transcription. Use of black note-heads, together with editorial suggestions above the staff, is enough. But, most Cantigas are rhythmically differentiated and require the corresponding editorial decisions.

When, many years ago, I transcribed the troubadour songs by King Dinis of Portugal, surviving in a single source, notes with uncertain rhythmic quality were left as black note-heads, the quality of long was signalled by a void note-head, and implied quantities of long or breve were translated into modern note-values of (dotted or undotted) minim and crotchet, respectively. Small strokes above

Manuel Pedro Ferreira (dir.), 'Cultural Confluences in the Music of Alfonso X' (2005-2008), project POCTI/EAT/38623 /2001. Research assistant: Rui Araújo.

Since the music of the *Cantigas* was written down on a staff provided with letter-clefs, melodic transcription is apparently unproblematic. Yet, apart from the significance of some of the vertical tails attached to single note-heads (plicae), one should also take into account possible unwritten pitch adjustments. The melodic issue is dealt with in Gerardo V. HUSEBY, 'El parámetro melódico en las *Cantigas de Santa María*: sistemas, estructuras, fórmulas y técnicas compositivas', in *El Scriptorium Alfonsí: de los libros de Astrología a las 'Cantigas de Santa Maria'*, coordinated by Jesus Montoya Martínez and Ana Dominguez Rodríguez (Madrid, Editorial Complutense, 1999), pp. 215-70; WULSTAN, *The Emperor's Old Clothes* (see note 1), pp. 303, 317-9; FERREIRA, 'Ambiguidade, repetição, interpretação' (see note 5).

the staff suggested metrical groupings (Example 1). The appearance mirrors the distinction between what can be surmised and what requires completion or creative imagination. Such techniques also could be utilized in the transcription of the *Cantigas*.

CANTIGA 5



Example 1. Beginning of Cantiga d'amor: Senhor fremosa, non poss'eu osmar by King Dinis (Sharrer MS, n.º 5)

The hybridism of the above transcription may however be confusing for performers, since the void note-head has a rhythmic value of a semibreve (two minims) in modern notation. In fact, readability by present-day musicians recommends the use of conventional notation whenever possible with reduction of the original note values. In the Cantigas the nature of the notation excludes mechanical reduction; the longer single note can be transcribed in each song as required by the rhythmic pattern in operation as a dotted minim, a minim, a dotted crotchet or even a crotchet, depending on readability. This choice will determine the value of the remaining figures. When the length of a long is ambiguous, an alternative to the void note-head may be to leave an optional dot after the minim (a dot inside brackets), thus allowing it to be performed either in two or three beats. This applies only to the simplest cases. Since figures other than the simple long also admit different practical realizations, these can all be entered above the staff, either individually or as part of a coherent pattern, vertically aligned with the corresponding notes. Therefore the performer would be given the choice between the editor's preferred solution and plausible alternatives.

In the Cantigas de Santa Maria, there are fortunately many songs that pose no problems in their transcription into modern notation. Observe, for example, CSM 40, with its clear short-long pattern (BL, for *brevis-longa*, or 1+2 beats) repeated until phrase-endings are reached:¹⁰

Manuel Pedro FERREIRA, Cantus Coronatus: Sete cantigas d'amor d'El-Rei Dom Dinis (Kassel, Reichenberger, 2005). The book was published ten years after it was written. The same principles were applied to the transcription of song 'Ondas do mar de Vigo' by Martin Codax in Manuel Pedro FERREIRA, Antologia de Música em Portugal na Idade Média e no Renascimento, 2 vols., 2 CDs (Lisboa, Arte das Musas - CESEM, 2008), vol. 2, n.º 8.

¹⁰ FERREIRA, Antologia de Música (see note 9), vol. 2, n.º 16.

Cantiga de loor

(Cantiga de Santa Maria n.º 40)

E-Mn, MS 10069, fl. 40 ed. M. P. Ferreira/S. Parkinson

Alfonso X



Example 2. *CSM* 40 according to the Toledo MS (*To*)

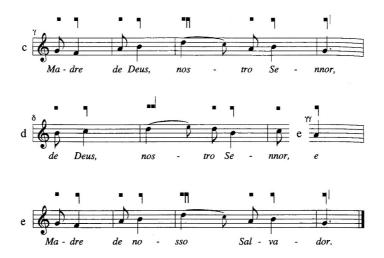
Here we step on familiar ground, that of ternary metre and Parisian modal rhythm: a repeated BL pattern corresponds to the second rhythmic mode of 13th-century French polyphony. The

reverse, LB (2+1 beats), corresponds to the first mode. The third mode, LBB, requires an extra beat at the start (perfect long, encompassing three beats) and at the end (brevis altera, encompassing two beats) to fit the ternary context. It should be said, however, that in the Cantigas we do not find the customary French mensural notation. Even in the Escorial manuscripts T and E—the ones closer to the French notational paradigm—there is limited and inconsistent use of alteration rules. The brevis altera can be written as a long; and it is quite unlikely that the rule 'long before long is perfect' (meaning that it takes three beats instead of two), created in the context of polyphony in ternary metre, can be generally applied.

The notator's job in the Cantigas project was less to reproduce a given visual model—initially non-existent—than to transfer musical experience into notational image, or, when notated exemplars became available, to filter the given notation through his musical experience of the song. In so doing, the copyists of the Escorial manuscripts had to struggle with a rigid notational framework primarily designed for polyphony. Only three basic values (semibreve, breve, long) were acknowledged; each of them could assume different lengths. In polyphony, both metrical pulse and time-unit were invariable; in monophonic song this was not necessarily the case. Some compositions required ad-hoc solutions; with accumulated experience, notational practice evolved.

Melodies in binary metre, unaccounted for in French precedent, posed a challenge. For instance, dotted rhythm was at first signalled by two short vertical strokes after the note to be prolonged; only later lozenged or square note shapes replaced these. An additional lozenge initially functioned as an Aquitanian *oriscus*: it meant, in To, just the repetition of the previous note within a melodic flow (CSM 37, 47, 89). In time, mensural meaning was attached to the lozenge and to the previous, attached shape. The hesitation in the choice of note shapes for rhythmic augmentation can still be seen in CSM 353.

Scholars may easily agree that French notational theory seems to have penetrated courtly copying practices at Seville (not speaking of other courtly circles) only up to a point. This would still allow the adoption of standard notation for modal rhythm, which is not as rigid as some may suppose; the modal framework allows one to accommodate, through fractio or extensio modi, some irregularities. An example is CSM 330, present in one manuscript only (E); it shares some melodic contour with CSM 214. It clearly starts in second mode and then, in the refrain, there is an apparent break in the pattern. The only way to reconcile rhythmic coherence in melodic repetition and a downbeat at the rhyming syllable is to assign three beats to the A-B junction at the melodic peak of phrase D (which conflates phrases A and B). For the sake of simplicity, one can assume extensio modi (addition of short and long values) in all plicated ligatures, including the crucial, ascending one. This is the solution proposed by Martin Cunningham in his edition of the *loores* (Example 3).



Example 3. CSM 330 (refrain), transcribed by M. Cunningham

The modal paradigm may also serve as an umbrella for mixed ternary patterns, like long-short short-long (LBBL), occurring in many songs of the *Cantigas*; these patterns are so pervasive that they must have had an inter-subjective existence of their own. Anglés referred to them as instances of 'mixed mode'; David Wulstan coined the concept of a 'mode 7' to accommodate them in his description of rhythmic profiles.¹¹ It should be noted that these schemata are a common feature of classical Arabic music as described by al-Fārābī and his followers.¹²

Sometimes this notational pattern, LBBL, may be read also according to the third Parisian mode, meaning (3+1+2)+3 beats, instead of (2+1)+(1+2) beats; this would fit the description of a mixed mode based on conventional third and fifth modes in *De musica libellus* (c. 1260), an expanded version of a treatise by Anonymous 7.¹³ Regular or modified forms of the third rhythmic mode seem implied in some *Cantigas*, like *CSM* 144 and 339. The editor should weight both alternatives; even if there is no palaeographical evidence in favour of one of them, other kinds of reasoning may justify editorial preference. Alternative suggested readings might be presented above the preferred interpretation, as in *CSM* 183 (Example 4):¹⁴

_

¹¹ WULSTAN, *The Emperor's Old Clothes* (see note 1), pp. 51-2. This proposal has a historical precedent: Walter Odington, in his *Summa de speculatione musicae* (c. 1300), VI. 6, listed the LB-BL pattern among the 'secondary modes' then in use. Frederick HAMMOND, ed., *Walteri Odington Summa de speculatione musicae*, Corpus Scriptorum de Musica, 14 (Rome, American Institute of Musicology, 1970), p. 131.

¹² For a thorough comparison between French and Arabic rhythmic models, and their application, see Manuel Pedro FERREIRA, 'Rhythmic Paradigms in the *Cantigas de Santa Maria*: French versus Arabic precedent', paper read at the 15th Symposium des Mediävistenverbands, 'Abrahams Erbe' (Heidelberg, 3-6/3/2013), accepted for publication in *Plainsong & Mediaeval Music* (forthcoming).

¹³ Edmond de COUSSEMAKER, ed., *Scriptorum de musica medii aevi nova series a Gerbertina altera*, 4 vols. (Paris, Durand, 1864-76, reprinted edition Hildesheim, Olms, 1963), vol. 1, pp. 378-83. See also Sandra PINEGAR, 'Exploring the margins: A Second Source for Anonymous 7', *Journal of Musicological Research*, 12 (1992), pp. 213-43.

¹⁴ FERREIRA, *Antologia de Música* (see note 9), vol. 2, n.° 14; n.° 15 is the source for Example 8.



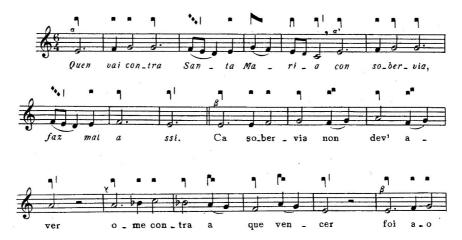
Example 4. Beginning of CSM 183 according to the códice rico (T) at the Escorial Monastery

A different case is when alternatives exist, but no objective ground is apparent for favouring one of them. Notational ambiguity can be defeating. For instance, in CSM 283, it is clear that the notation in manuscript E, its only musical witness, implies distinction between long and short sounds, but there is no easy rhythmic solution. There are many different ways to make overall sense of the notation. One is found in the 1943 edition by Anglés: a mix of binary and ternary metre, both in the refrain and in the *mudanzas* (Example 5).



Example 5. CSM 283 according to Anglés (1943). The notational figures in MS E are reproduced above the staff

Roberto Pla transcribed this song with a regular alternation of six-beat and four-beat bars, keeping the durational values in the edition by Anglés essentially unaltered.¹⁵ But Anglés was eventually dissatisfied with his 1943 version. He arrived at it because, according to him, he assumed at the outset that the fourth rhythmic mode (BBL, read as 1+2+3 beats) was unfitting to medieval melodies. Afterwards, he tentatively proposed a new version mixing first, third, fourth and fifth modes and binary metre (Example 6), warning, however, that the earlier version sounds much better.¹⁶



Example 6. Alternative interpretation of CSM 283 (beginning), according to Anglés (1958)

This is not the only possible alternative. Another solution would be to adhere more strictly to ternary metre while allowing a hemiola (2+2+2 beats) beginning with the fifth note in the stanza. Still another would be to assume binary metre throughout. One can also choose to read the refrain as ternary, and the first part of the stanza as binary, or interpret the notation as a mixture of third and first rhythmic modes (a solution close to Ribera's). There is no way to establish the priority of one solution over the others solely on the basis of higher internal coherence or formal balance.

Yet, ternary metre in the refrain has the advantage of greater simplicity: without breve alteration, it allows fuller convergence of the recurring pulse with the lexical accents of these two lines, resulting in a mixture of first, second and (ornamented) third rhythmic mode. This could incidentally be described as a juxtaposition of three secondary modes explicitly acknowledged by

Portuguese Journal of Musicology, new series, 1/1 (2014) ISSN 0871-9705 http://rpm-ns.pt

_

¹⁵ PLA, *Cantigas de Santa María* (see note 2), p. 418. Pla shortened the final longs in the initial phrases of the stanza, from three to two beats; otherwise the durational values coincide.

ANGLÉS, La música de las Cantigas (see note 2), vol. 3/1, p. 334; vol. 3/2, Parte Musical, pp. 36-7. A rare example of a trouvère song, Devers Chastelvilain, written in fourth rhythmic mode can be found on: Johannes Wolf, 'Chansonnier Cangé', in Handbuch der Notationskunde, vol.1 (Leipzig, Breitkopf & Härtel, 1913), pp. 211-2, fols. 44v-45.

¹⁷ Julián RIBERA Y TARRAGÓ, *La música de las Cantigas: Estudio sobre su origen y naturaleza con reproducciones fotográficas del texto y transcripción moderna* (Madrid, La Real Academia Española, 1922), pp. 154 (commentary), 249 (single-voice transcription), 307-8 (harmonized transcription).

Anonymous 7 and Walter Odington (LB-BL followed by LBB-BL or LBB-L). 18 Since the music of the refrain returns with the final three lines of each stanza, the criterion of simplicity favours ternary metre throughout the Cantiga; the first and the second part of the melody can be bound together if the latter is interpreted under the third rhythmic mode. Thus we can justify the preference for the latter solution, but, even so, the beat-quantity of some figures remains an open question that should be acknowledged in the edition above the staff (Example 7).



Example 7. Transcription of *CSM* 283 (beginning)

By French standards, the rhythm is unusually varied in this Cantiga, but the repertoire does not have to conform to French-based expectations, for it often mirrors non-Parisian musical traditions. The tradition most conspicuously present is that of Arab-Andalusian music. 19 Modern performances of the famous CSM 100, Santa Maria, 'strela do dia, never depart from its binary metre and typical dotted rhythm, as was (correctly) transcribed a century ago by Friedrich Ludwig and in every transcription (and recording) ever since. ²⁰ Although Ludwig and his disciple Anglés were unaware of it, there is no clearer example of periodic rhythm as expounded by the tenth-century theorist al-Fārābī than CSM 100.²¹ Thus, it is no surprise that we can also find five-beat metre, referred to by

¹⁸ See notes 11 and 13 above. The treatise *De musica libellus* describes patterns based on the third mode, modified to incorporate either a second-mode or a fifth-mode ending.

¹⁹ Manuel Pedro FERREIRA, 'Andalusian music and the Cantigas de Santa Maria', in Cobras e Som: Papers from a Colloquium on the Text, Music and Manuscripts of the Cantigas de Santa Maria, edited by Stephen Parkinson (Oxford, Legenda, 2000), pp. 7-19; reprinted in Elizabeth AUBREY, ed., Poets and Singers, Music in Medieval Europe, vol. 4 (Farnham - Burlington, Ashgate, 2009). Portuguese translation in FERREIRA, Aspectos da música medieval (see note 4). FERREIRA, 'Rhythmic Paradigms' (see note 12).

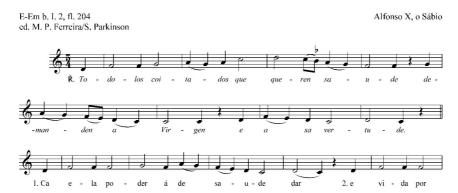
²⁰ Friedrich Ludwig, 'Die Geistliche Nichtliturgische und Weltliche Einstimmige und die Mehrstimmige Musik des Mittelalters bis zum Anfang des 15. Jahrhunderts', in Handbuch der MusikGeschichte, edited by Guido Adler (Frankfurt am Main, Frankfurter Verlags-Anstalt, 1924), pp. 180-1.

²¹ George Dimitri SAWA, Rhythmic Theories and Practices in Arabic Writings to 339 AH/950 CE, Annotated Translations and Commentaries (Ottawa, The Institute of Mediaeval Music, 2009).

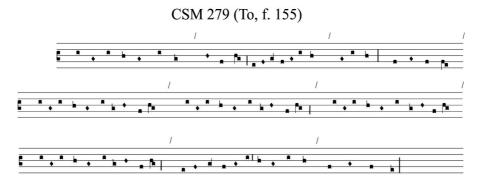
al-Fārābī and documented in later Iberian song,²² associated with the repeated pattern LBL, as in *CSM* 223 (Example 8) and *CSM* 279 (Examples 9-10):

Um milagre em Terena

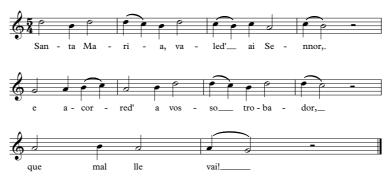
(Cantiga de Santa Maria n.º 223)



Example 8. Transcription of CSM 223 (beginning)



Example 9. CSM 279 — palaeographical transcription of notation in To



Example 10. CSM 279 — the author's interpretation of the refrain in To

_

On five-beat metre in Spanish songs from the Renaissance, see Dionisio Preciado, 'Veteranía de algunos ritmos «Aksak» en la música antigua española', Anuario musical, 39-40 (1984-5), pp. 189-213. The phenomenon is also referred to by other authors: RIBERA, La música (see note 17), pp. 84-5; Marius SCHNEIDER, 'Studien zur Rhythmik im «Cancionero de Palacio», in Miscelánea en homenage a monseñor Higinio Anglés, vol. 2 (Barcelona, C.S.I.C., 1958-61), pp. 833-41; Juan José Rey, Danzas cantadas en el Renacimiento español (Madrid, Sociedad Española de Musicología, 1978), pp. 30-3; Manuel Pedro Ferreira, O Cancioneiro da Biblioteca Públia Hortênsia de Elvas: Edição facsimilada (Lisboa, Instituto Português do Património Cultural, 1989), pp. ix-x.

In CSM 223, attempts to interpret the notation according to modal, ternary principles create either inconsistencies or conflicts with the accent normally found on the second and fifth syllables of each line; taking the notation at its face value, with an upbeat, solves most problems. In CSM 279, the French-inspired third-mode interpretation of the pattern proposed by Anglés is contradicted by the *cum-sine* binary ligature in E (implying a first long of two beats); the absence of any shortstemmed virga (signalling a long of three beats) in To gives extra weight to the five-beat interpretation.²³

The six-beat reading of the notational pattern LBL admits, in fact, two possibilities: a regular Parisian third mode of 3-1-2 beats or an Arabic heavy Ramal cycle of 2-1-3 beats; but only the former finds support in To notation, where a 3-beat long is sometimes singled out with a short virga. A problem arises in songs that allow both five-beat and six-beat hypotheses if none of them claim advantage. The editor should acknowledge this ambiguity, anticipating a choice of either two or three beats in the performance of the first long.

For instance, in CSM 10, Rosa de las rosas, the sequence long-short-long (LBL) can be thought of as part of a first-mode repeated pattern, as one way to write a third-mode pattern, or as mirroring a five-beat pattern, and all these interpretations seem to function musically.²⁴ The first-mode hypothesis, apparently the simplest, can be discarded nonetheless, for it implies non-coincidence between beats and text-articulation and goes against the rhyme accent, which is crucial in the Cantigas.

Arabic music theory allows for the combination of contrasting cycles in a rhythmic period, but nothing prepares us, after a fairly consistent use of a LBL pattern in a particular song, for the sudden presence of a quaternary pattern uniquely reserved in it for the cadence or its approach. Among the first one-hundred *Cantigas*, this phenomenon occurs in at least six (Prologue, 5, 38, 41, 93, 97), even if To and the Escorial codices are not always in agreement; the variation must therefore correspond to a specific intention.

The situation recalls the ancient idea that the metrical feet record qualitative relations, while the length of the period determines the actual duration of their elements.²⁵ If we accept that under a

²³ The third-mode interpretation of CSM 279 is already found in Higinio ANGLÉS, El còdex musical de Las Huelgas, música a veus dels segles XIII-XIV, vol. 1 (Barcelona, Biblioteca de Catalunya, 1931), p. 57. The five-beat interpretation is shared by PLA, Cantigas de Santa María (see note 2), p. 413; and ELMES, Cantigas de Santa Maria (see note 2), vol. 3, p. 146.

²⁴ On the music of CSM 10, see Manuel Pedro FERREIRA, O Som de Martin Codax (Lisboa, Imprensa Nacional-Casa da Moeda, 1986), Apêndice I (includes a transcription from To); Israel KATZ, 'Melodic Survivals? Kurt Schindler and the Tune of Alfonso's Cantiga Rosa das rosas in Oral Tradition', in Emperor of Culture-Alfonso X the Learned of Castile and His Thirteenth-Century Renasissance (Philadelphia, University of Pennsylvania Press, 1990), pp. 159-81, 251-7; and CUNNINGHAM, Alfonso X (see note 2), pp. 93-4.

²⁵ Giovanni Comotti, Music in Greek and Roman Culture (Baltimore - London, The John Hopkins University Press, 1989), pp. 102-10. Lionel PEARSON, ed., Aristoxenus: Elementa Rhythmica, The Fragment of Book II and the Additional

regular pulse different subdivisions of time may coexist, nothing prevents us from admitting the equivalence, in time length, of juxtaposed metres. In fact CSM 195, copied in manuscripts T and E, demonstrate this possibility. The faultless notation in T manages to represent the alternation of shorts and longs without imperilling its basic tenet: the centrality, in syllabic context, of the punctum/virga opposition. Binary metre in the refrain is based on the punctum, with extended syllables not exceeding the value of a virga; the stanza starts with ternary alternation of punctum and virga, and then reinstates binary metre. Phrase A in the refrain (A B A C) is first repeated in the stanza (D A' B A C) with a change of metre. These two versions of the same phrase, A and A' are likely to be commensurable; although A encompasses eight syllables instead of twelve in A', a durational proportion of 8 breves to 24 breves, as written, can be ruled out in practice. In manuscript E, the copyist sensed the proximity or equivalence in time-length of A and A' and tried to record it: the basic value in the following binary phrases accordingly became a virga (Table 1).

A	П		•	•	A	A	•
Quen	a	fes-	ta	е	0	di-	a
7	7	7	7	7	7	7	7
se- rá	e mos-	tra-	do	que a	que nos	gui-	a
٩	•	7	7				
fez	mi-	ra-	gre				

Table 1. Notation of the initial phrase in CSM 195: (a) beginning: binary version in T and E (after correction); (b) middle: ternary version in both T and E; (c) end: return of the binary version in E, before cancellation of *virgae* and return to the initial notation.

The choice of a *virga* to represent the binary time-unit unfortunately implied unwanted duplex longs at the end of the phrase, and created an inconsistency with its first written exposure; the scribe accordingly ended up cancelling the *virgae* and returning to the initial set of notational values. His intuitive preference run into technical problems, but offered us a glimpse of the music working behind the notation: in all probability, an alternation of 2/4 and 6/8 metres (Example 11).

This means that the ultimate choice of a notational time-unit did not necessarily depend on its performing speed. Convention governed the way to write a rhythmic pattern. Tension between

Evidence for Aristoxenean Rhythmic Theory (Oxford, Clarendon Press, 1990), pp. xli-xlii, 21 ff. Egert PÖHLMANN, 'Metrica e ritmica nella poesia e nella musica greca antica', in Mousike: Metrica ritmica e musica greca in memoria di Giovanni Comotti, edited by Bruno Gentili and Franca Perusino (Pisa - Roma, Instituti Editoriali e Poligrafici Internazionali, 1995), pp. 3-15. Sophie GIBSON, Aristoxenus of Tarentum and the Birth of Musicology (New York - London, Routledge, 2005), pp. 77-98, 194-201.

musical input and notational constraint could imply counter-intuitive notational choices. The consequences will be explored in a few additional examples, starting with CSM 150, present in manuscript E only.



Example 11. Binary and ternary versions of phrase A in CSM 195. Quaver equivalence is a possibility, but keeping the pulse and changing the subdivision (crotchet equal to dotted crotchet) is musically simpler and leads to more balanced results.

The melodic structure of this *loor* is quite clear. In the refrain, an ascending sequence of rising thirds, G-b, a-c, b-d, is followed by an inconclusive descending fourth, d-a; the ascending sequence is then partially repeated, G-b, a-c, but this time two consecutive descending fourths, g-d-a, lead conclusively to G. In every ascending movement, the upper tonal goal coincides with an accented syllable. The stanza begins by establishing the ascending fourth **b-e**, followed by a descent to **c**, through d; the same initial gesture is heard again, this time leading to a descending fourth, d-a. The last two phrases of the refrain are then reinstated.

Notwithstanding a straight tonal plan, this is one of the most difficult Cantigas with which to grapple rhythmically. The copyist carefully distinguished LBB and LBL patterns, which Anglés plausibly interpreted as pointing to binary and ternary metre, respectively. ²⁶ However the notation is both ambiguous and inconsistent in its use of the semibreve. In one passage of this song the copyist tried in succession two notational solutions for what is essentially the same phrase with different endings; none of them, considering the context, seems to make sense; and apparently the second time the phrase is much longer (Table 2, next page).

The version in manuscript E cannot be compared with T, which has a lacuna at this point; but the above hesitation suggests that the scribe lacked an exemplar to copy from, and was transcribing from sung dictation. After the second virga above 'ou[-tra]', the copyist heard two shorter notes

²⁶ ANGLÉS, La música de las Cantigas (see note 2), vol. 2, p. 161. Transcription attempts after 1943 include three versions mixing the second, third and fourth rhythmic modes: ANGLÉS, La música de las Cantigas (see note 2), vol. 3/2, Parte Musical, p. 23; FERREIRA, O Som de Martin Codax (see note 24), Apêndice 2; and CUNNINGHAM, Alfonso X (see note 2), pp. 50, 146-9. The edition by PLA, Cantigas de Santa María (see note 2), pp. 278-9, assumes five-beat patterning; the palaeographical evidence counters it. A partial transcription, pointing out presumed copying errors, is found in David WULSTAN, 'Contrafaction and Centonization in the Cantigas de Santa Maria', Cantigueiros, 10 (1998), pp. 85-109, at 94.

(notated as *semibreves*); by contrast the next one was clearly longer, fit to be represented as a *brevis*; next he recorded a similar fast-slow contrast, and a slacker one at the end. The second time, he heard two unequal notes (*semibrevis* - *brevis*) and then a much longer one (identified as a *virga*); this contrast was in turn replicated, twice. It is known that in the 13th century the semibreves could assume quite different durational values (as did breves and longs), and therefore confusion could easily arise. The *semibrevis-brevis* and the *brevis-virga* relationships are similar: what the copyist was clearly not sure about was their performing speed and how it related to the phrase ending.

	R	7	•	*	*	A	*		R	•
Non	ou-	ua	ou-	Tra	Tal	a-	mor	mos-	tra-	do.
	•	٦	٦	+		٦	•	٦	•	
com	a	es-	ta	Pois	El	quis	ens-	ser-	ra-	do.

Table 2. *CSM* 150 in MS *E*, fol. 147 (beginning of stanza)

We can plausibly suppose that what he heard was intermediate between the first and the second try, and closer to the second, for if some inadequacy had not been detected in the first try, a change of mind would not have occurred. In fact, he ended up by reinstating with the words 'quis ens-ser [-rado]' a notational pattern, LBL, which he had already used in the refrain to start its final descent. If we assume that the problematic short-long relation was relatively quick, effected within a single beat, and transcribe accordingly, the copyist's hesitation is explained away and the result is convincingly consistent. If the latter solution is applied to the long-short-long pattern at the end of both refrain and stanza, there is no conflict with the quaternary pattern coming just before the accented rhyming syllable, for only the subdivision of the beat is changed. And the same reasoning may be applied to ternary patterns, assuming an invariable slow pulse across the whole song (Example 12). As a result, all the phrases in *CSM* 150 sound metrically equivalent: unlike previous transcription attempts, verse design and tonal clarity are not obscured by rhythmic oddity.

Related examples of notational hesitation occur, as observed by David Wulstan, in *CSM* 367 and *CSM* 390, where, in ternary context, figures equivalent to LBB, BSS or BSB are indifferently chosen to represent a third-mode pattern of 3-1-2 beats, in juxtaposition with first-mode.²⁷ We can deduce that in such combination the pattern was performed somewhat quickly; in *CSM* 367 it

Portuguese Journal of Musicology, new series, 1/1 (2014) ISSN 0871-9705 http://rpm-ns.pt

²⁷ WULSTAN, 'Contrafaction and Centonization' (see note 26), pp. 103-6; WULSTAN, *The Emperor's Old Clothes* (see note 1), p. 76.

Alfonso X

replaces LSS, making it equivalent to a three-beat bar (6/8=3/4). This is the way Anglés transcribed BSB in *CSM* 384.²⁸

It seems that only from the middle of the collection onwards (or CSM 150 in manuscript E) the scribes began to entertain the idea of accommodating the written rhythmic values to their relative, contextual speed in actual performance, even if this idea was finally given up, as in CSM 195.

De loor de Santa Maria (Cantiga de Santa Maria n.º 150) E-Em b. I. 2, fol. 147



Example 12. CSM 150, newly edited

Earlier in the collection the usual way to write a third-mode pattern, LBB (or LBL), was followed even when it was combined with the first rhythmic mode. This implies that written LBB or LBL, leading to BL or LB, may correspond in early Cantigas to a single periodical pulse, instead of two. The presence of a compressed form of the third mode would help to understand why so often the Toledo manuscript presents two longs at phrase endings, while the Escorial manuscripts have at the same point a first- or second-mode pattern: if both solutions were equivalent in overall

ANGLÉS, La música de las Cantigas (see note 2), vol. 2, pp. 58, 416. According to an old hypothesis, the quick form of the third mode preceded the conventional, expanded one: Rudolf VON FICKER, 'Probleme der modale Notation (Zur kritischen Gesamtausgabe der drei- und vierstimmigen Organa)', Acta Musicologica, 18-19 (1946-7), pp. 2-16.

length, as are 6/8 and 3/4 bars (instead of doubling or halving the number of beats, 6/4 versus 3/4), such rhythmic variants would not have had major consequences.

Three *Cantigas* that, one way or the other, have so far resisted a satisfying modern transcription are affected by this new understanding. The least famous of them is *CSM* 78, *Non pode prender nunca*. Its first phrase, up to the final accent, was understood to be two bars longer than the second phrase, and sung under two successive, contrasting speeds. Now it can be restored to its proper balance (Example 13).



Example 13. CSM 78

Another melody, also a transposed *Deuterus* plagal, is *CSM* 20, *Virga de Jesse*, whose particular transcription problems, relative to text setting, were discussed elsewhere.²⁹ Almost all musicologists, since Anglés published his edition, suppose an invariable time-unit; regular third mode (or its 2-1-3 alternative) and second mode are asymmetrically combined. This implies either an irrational middle suspension of the melodic movement or a sudden, hiccup-like acceleration at every internal cadence, with a never-ending closing gesture. An invariable pulse with flexible subdivision (alternating 6/8 for compressed third mode, and 3/4 for second mode) allows the melody to flow unhindered (Example 14). Gerardo Huseby first arrived at this solution in his unpublished doctoral dissertation, where it is given without further comment.³⁰



Example 14. CSM 20

_

The final example is one of the most celebrated songs by King Alfonso: *CSM* 10, *Rosa das rosas*. Like *CSM* 150, its melodic structure is clear, especially in the Toledo version: the motif **DD-FF** is presented with the first five syllables and immediately repeated; then an upper third is added, and a descending *arpeggio* reaches the sub-final before the movement rests on the initial note: **F-a,**

²⁹ FERREIRA, *Aspectos da música medieval* (see note 4), vol. 1, pp. 83-4. FERREIRA, 'Understanding the *Cantigas*' (see note 3), p. 144.

³⁰ Gerardo V. Huseby, 'The Cantigas de Santa Maria and the Medieval Theory of Mode' (Ph.D. dissertation, Stanford University, 1982), p. 216 (Example 77).

a-F-D, C-D, DD. With the stanza, the chain of thirds is extended to the upper c and twice rests on the central a. The melody then pivots around F and aims down at the sub-final; the last phrase of the refrain reappears as a closing gesture.

Some of the difficulties in the rhythmic interpretation of this *cantiga* were pointed out above. An additional one is the apparently hurried, asymmetrical ending of the two initial phrases in the Escorial version of the song: the unexpected change to second-mode rhythm seems to upset the tonal balance and to belie the importance and pausing function of the rhyming word. The scribes were certainly aware of the Toledo version; how could they have modified the song only to make it worse? However, if metrical equivalence between third-mode (in its compressed form) and secondmode is assumed, final acceleration and asymmetry dissolve in the air, and both Toledo and Escorial versions are seen to coincide in their formal design (Example 15).



Example 15. Beginning of CSM 10 in manuscripts T and E

To conclude, the above sample illustrates the extraordinary range of rhythmic possibilities in the notation of the Cantigas de Santa Maria: regular or irregular second mode, standard Andalusian mixture of first and second modes, mensural data marred by defeating ambiguity, five- and six-beat alternatives with equivalent plausibility, and elasticity in subdivision within a period, allowing for metrical variety.

In spite of some difficulties, I propose that modern notation—slightly adapted—is able to convey the rhythmic information present in the sources, to suggest possible alternatives, and to represent the cases in which the information is too ambiguous to allow editorial preference based on objective criteria. The advantages of modern notation in its unrestricted legibility and its capacity to bring together information from different sources are clear and do not counter closer contact with the latter, since a clean reproduction of the original notations will soon be available for anyone willing to confront their graphic presentation.

To explain cases of notational inconsistency, temporal nuances and the will to capture them accurately have to be supposed; the solution arrived at also provides a clue to understanding otherwise mind-blogging cadential schemata. The melodic fluidity, formal balance and metrical legibility achieved in several *Cantigas* through this approach argue in its favour. Ternary subdivisions within a binary framework (or vice-versa) and temporal equivalence of different kinds of metre, namely 3/4 and 6/8 or their equivalents, should therefore be admitted, when required to ensure metrical coherence, in the range of transcription solutions called for by the medieval notation of the *Cantigas*.

Manuel Pedro Ferreira was educated at Lisbon and Princeton University. His doctoral dissertation discusses Gregorian chant at Cluny. In 1995 he founded the Early Music ensemble *Vozes Alfonsinas*, with which he recorded 5 CDs. He teaches at the Universidade Nova de Lisboa (FCSH-UNL), where he chairs the Research Centre on the Sociology and Aesthetics of Music (CESEM) and the Doctoral Program 'Music as Culture and Cognition'. He published extensively on music up to c. 1500 and created the *Portuguese Early Music Database* http://pemdatabase.eu and the Lisbon *Cantigas de Santa Maria* music database. He was elected in 2010 a member of the Academia Europaea and he is since 2012 a member of the Directive Board of the International Musicological Society. Contact: mpferreira@fcsh.unl.pt.

Recebido em | *Received* 15/05/2013 Aceite em | *Accepted* 06/10/2014