

The Tonary as Analytic Guidebook for the Performance of Chant

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A tonary is a liturgical book in which the antiphons of the office and mass, as well as responsories and other chants, are classified according to the eight psalm tones.¹ This was essential before the development of precise pitch notation as it provided a guide for the memorisation of the psalmodic endings of each of the eight tones, thus facilitating the link between the specific antiphons and psalms selected to celebrate the many feasts of the Western Christian Church. The earliest tonaries appeared in the eighth century and continued, though with diminishing frequency, through the fourteenth century, even though by then precise pitch notation was readily available. The examples that I examine in this paper all appear in the British Library manuscript, Harley 281,² and were collected at the end of the popularity of the tonary, in the early fourteenth century.³ They are the twelfth-century *Tonale Sancti Bernardi* (a Cistercian tonary in dialogue form),⁴ the thirteenth-century *Tractatus de tonis* of Petrus de Cruce (Amiens, secular use)⁵ and the early fourteenth-century *Tractatus de tonis* of Guy of Saint-Denis (Paris, Benedictine monastic use).⁶ This final work is presented in two parts. The first part provides the analytical substructure of the working of the eight tones, and the second puts these principles into practice with exemplary use of more than 400 chants.

There are several reasons why it is important to investigate the tonary. First among them relates to the theme of this symposium, "Analysis and Performance in Music," since the tonary provides one of the earliest expressions in the West of the fundamental relationship between theory and practice. Guy of Saint-Denis underlines the

¹ Grove Music Online, s.v., "Tonary," by Michel Huglo, accessed 6 November, 2016, <http://www.oxfordmusiconline.com.ezproxy.library.uwa.edu.au/>.

² Hereafter MS H281.

³ This manuscript is described in *The Theory of Music: Manuscripts from the Carolingian Era up to C. 1500 in Great Britain and in the United States of America*, ed. Christian Meyer, vol. 4 (Munich: G. Henle, 1992), 74–78.

⁴ Anonymous, *Tonale sancti Bernardi*, in Christian Meyer, "Le tonaire cistercien et sa tradition," *Revue de Musicologie* 89 (2003): 57–92 (the tonary runs between pp. 77 and 92).

⁵ Petrus de Cruce, "Tractatus De Tonis," in *Petrus de Cruce Ambianensi Tractatus de tonis*, ed. Denis Harbison (Rome: American Institute of Musicology, 1976).

⁶ Guy of Saint-Denis, "Tractatus De Tonis," in *Guido von Saint-Denis Tractatus de tonis: Edition und Studien*, ed. Sieglinde van de Klundert (Bubenreuth: Hurricane Publishers, 1998). See also Constant J. Mews, Carol J. Williams, John N. Crossley and Catherine Jeffreys, eds, *Guy of Saint-Denis: Tractatus De Tonis* (Kalamazoo: ARC Medieval Press, forthcoming).

essential nature of this relationship in the prologue to his *Tractatus de tonis* in the following words:

Indeed, because I wish to provide something useful not just for simple brothers but also for the more advanced and subtle among them, I have divided the present book into two principal parts. The first is about the tones in relation to theory or speculation about them. . . . This difficult and subtle [part] is for the more studious and advanced. In the second, I will deal with praxis, that is, the operation of these things more figuratively and by examples easier for the simpler and the young. This is so that those who perchance are not able to grasp the subtlety of the first part to the full are at least able to delight in the clarity of the examples⁷ in the second part.⁸

The question of whether theory is the accumulation and distillation of practice, or practice the ultimate expression of theory, forms the intellectual substrate on which the tonary is formed.

Perhaps equally important is the contribution that a study of the tonary can make to the history and practice of memory, given that the monks were expected to chant the material of the liturgical year from memory.⁹ This exercise of ritualised memory was an important part of monastic devotions. By the end of the Middle Ages there were more than 3000 antiphons; add to this around 70 introits, 118 graduals, 100 alleluias, 18 tracts, 107 offertories and 150 communions, as well as the Office Propers and it might amount to "seventy five or eighty hours of memorised matter. This would correspond to the selection of Beethoven's instrumental works plus the full Wagnerian canon."¹⁰ In the performance of much of this liturgy, the smooth connecting of one piece of chant to the next is crucial; the tonary provides the key to this connecting process, and for the singer it unlocks access to the corpus of memorised plainchant.

⁷ The examples in the second part that Guy refers to include more than 400 references to, or notated examples of, chant—a considerable challenge.

⁸ "Verum quia non solum simplicium fratrum immo etiam provectorum magisque inter eos subtilium utilitati deservire cupio. libellum presentem in duas partes principales distinxi. In prima videlicet de tonis quantum ad theoriam sive speculationem eorum artificialiter quodammodo vel scientifice et per consequens cum omnis ars atque scientia ut alibi scribitur sint de bono et difficili difficilius atque subtilius pro studiosioribus ac provectoris. In secunda vero quantum ad praxim idest operationem ipsorum figuraliter magis et per exempla atque facilius pro simplicioribus et parvulis tractaturus. Ut qui forte prime partis subtilitatem capere ad plenum non potuerunt. saltem in secunde partis exemplari planitie delectentur." Klundert, Guido de Sancto Dionysio, *Tractatus*, II:2.

⁹ Anna Maria Busse Berger, *Medieval Music and the Art of Memory* (Berkeley: University of California Press, 2005), 48. For documented evidence of the expectation that the monks of Notre Dame recited chant from memory through the seventeenth-century see Craig Wright. *Music and Ceremony at Notre Dame of Paris, 500–1550* (Cambridge: Cambridge University Press, 1989), 325–29.

¹⁰ Kenneth Levy, *Gregorian Chant and the Carolingians* (Princeton, N.J.: Princeton University Press, 1998), 175–6, cited in Anna Maria Busse Berger, *Medieval Music and the Art of Memory*, 49.

Since we generally assume that if you can write something down you don't need to commit it to memory, the question remains of the continuing practice of the performance of the body of chant by memory.¹¹ With the invention of the staff by Guido of Arezzo (ca. 1030) and the development of unambiguous pitch notation soon thereafter, the enduring function of the tonary, as a mnemonic aid, should be questioned as well. There are a number of explanations for the continuing tradition, not least among them the concept of ritualised devotion associated with the daily performance of prayer as an essential part of monastic life, referred to above. In addition, the high cost of candles and obscurity of dark chapels often made reading difficult, if not impossible.¹² Finally, there existed the belief—still with us today—that performance from memory is of greater value than that from the score.¹³ Berger makes the interesting point that the invention of writing does not automatically put an end to memorisation.¹⁴ In fact the tonary in its written and notated form provides evidence of the process of memory.

A tonary was a practical document since in every service specific antiphons had to be attached appropriately to their full cursive psalms for the Office or to selected passages from them in the Mass. In the Vespers service for example, on any day of the week there were four "ordinary" psalms and literally hundreds of ever changing "proper" antiphons that had to be matched in daily worship. The tonary provided quick access to this material and was indispensable in providing the psalmodic endings for each of the eight tones. The first task for a singer was to commit to memory the structural fundamentals captured in the Table 1 below:

¹¹ This assumption rests on a wealth of scholarship on the relation between literacy and orality in the Middle Ages. Amongst many studies see Brian Stock, "Medieval Literacy, Linguistic Theory, and Social Organization," *New Literary History: A Journal of Theory and Interpretation* 16 (1984): 13–29; Leo Treitler, "Orality and Literacy in the Music of the Middle Ages," *Parergon: Bulletin of the Australian and New Zealand Association for Medieval and Renaissance Studies* 2 (1984): 143–74; Brian Stock, *Listening for the Text: On the Uses of the Past* (Philadelphia: University of Pennsylvania Press, 1996); and Mark Chinca and Christopher Young eds, *Orality and Literacy in the Middle Ages: Essays on a Conjunction and its Consequences in Honour of D.H. Green* (Turnhout, Belgium: Brepols, 2005).

¹² See Craig Wright, *Music and Ceremony at Notre Dame of Paris, 500–1550*, 328. Wright points out that there was little natural light at Notre Dame and that candles would have been required to read at all. As well, the records of payments leave no doubt that singers must have sung by heart.

¹³ This is a personal observation based on many years as a performer and concertgoer; also see Chia-Jung Tsay, "Sight Over Sound in the Judgment of Music Performance," in *Proceedings of the National Academy of Sciences of the United States of America* 110 (2013), 14580–14585.

¹⁴ Anna Maria Busse Berger. *Medieval Music and the Art of Memory*, 47–8.

Table 1. Structural fundamentals of the tones

			<i>Range (nominal)</i>	<i>Mode Final</i>	<i>Psalm tone</i>
Protus	Authentic	Mode 1	D – d	D	a
	Plagal	Mode 2	A – a	D	F
Deuterus	Authentic	Mode 3	E – e	E	(b) c
	Plagal	Mode 4	B – b	E	a
Tritus	Authentic	Mode 5	F – f	F	c
	Plagal	Mode 6	C – c	F	a
Tetrardus	Authentic	Mode 7	G – g	G	d
	Plagal	Mode 8	D – d	G	c

Note that there is a distinction between modes and tones; modes were conceived abstractly in terms of functional relationships, as in range and finishing notes or finals, while the tones were melody types and part of a formula family, a set of concrete, characteristic turns and cadences arising out of a long oral tradition.¹⁵ Mode is a theoretical abstraction whereas tone is a collection of practical outcomes.

The usual order of listing chants in the antiphoner followed the sequence of the liturgical calendar starting with the First Sunday of Advent and provided the material that would be sung on any specific day of that calendar. Tonaries provided a different and more practically oriented means of access to this material by reorganising the liturgical order of the antiphoner with a classification into the eight tones. Here the chant is classified hierarchically, firstly by mode, then within each mode, the antiphons may be arranged liturgically, alphabetically or by the pattern of the termination, the *differentia*. This clever organisation facilitated the performance of the psalms of the Office. Each antiphon was sung with a complete psalm to which was usually appended the short doxology after which the antiphon was reprised, thus:

Antiphon—Psalm in all verses—Gloria Patri—Antiphon

Each antiphon was classed in one of the eight modes according to the *final* of the melody and it was the mode of the antiphon that determined the choice of psalm tone for the accompanying psalm. The final cadence of the psalm intonation had to lead back to the beginning of the framing antiphon, but since the antiphon could start on any of several pitches apart from the final, a range of possible terminations, the *differentiae*, was provided, from which the cantor would make the most appropriate choice. As an

¹⁵ This distinction is pointed out very succinctly in Richard Taruskin, "Retheorizing Music: A New Concept of Mode," chap. 3 in *Music from the Earliest Notations to the Sixteenth Century* (Oxford: Oxford University Press, 2010), accessed October 30, 2016, <http://www.oxfordwesternmusic.com.ezproxy.lib.monash.edu.au/view/Volume1/actrade-9780195384819-div1-003002.xml>.

example, consider the liturgical requirement to frame the psalm *Domine dominus* with the antiphon, *Prophete predicaverunt*. A cantor trained in the Benedictine tradition of Saint-Denis would know that this is in the first tone and that he must therefore follow the first iteration of the antiphon with the psalm intonation of the first tone. He might also know that the psalm must terminate using the first *differentia* in order to reconnect it smoothly to the opening of the antiphon to complete the liturgical statement. The *Tractatus de tonis* by Guy of Saint-Denis describes this process with clarity, by firstly providing the "way of intoning upon psalms" in the first tone as it begins and as it illustrates the mediant:



Pri - mus to - nus sim - pli - ci - ter sic in - ci - pit et sic me - di - a - tur.

The psalm intonation of the first tone may end in a number of different ways, but the first way of ending, the first *differentia*, is presented by Guy thus:



Et sic fi - ni - tur. E u o u a e

Guy continues: "And this *differentia*, in our way of speaking ought to be assigned to those antiphons that . . . beginning from D-solre, at first descend to C-faut and then re-ascend above in this way."¹⁶



Antiphona

Pro - phe - te pre - di - ca - ve - runt

The diligent cantor now has all the information he needs to rehearse and present this antiphon with its psalm.¹⁷

¹⁶ Guy of Saint-Denis, "Tractatus De Tonis," 68–69.

¹⁷ The role of cantor seems to have been quite onerous and involved the selection and ordering of the sung elements of the liturgy in the daily cycle of the Hours. The cantor would rehearse his brother monks and teach the material to the boys as well as oversee the performance and take whatever solo passages were required. Ready access to a tonary would have been essential. For further information on the role of the cantor, see Susan Boynton, "Training for the Liturgy as a Form of Monastic Education," in *Medieval Monastic Education*, eds George Ferzoco and Carolyn Muessig (London: Leicester University Press, 2000), 7–20.

To achieve the practical goal of matching up psalms and antiphons, stylistic generalisations had to be made about the antiphons on the basis of observation. Classifying the antiphons was thus an early exercise of musical analysis, analysis being the breaking down of an observed whole, a chant, into its functionally significant parts. A tonary is the ground over which theory and practice meet, thus tonaries summarise in practical form decisions made on the basis of theory.

The earliest tonaries served as prefaces or appendices to antiphoners or graduals and were simple lists of antiphons grouped according to the psalm tones. With the growth in size and complexity of the chant corpus, these "list" tonaries also grew until they occupied a complete and separate section of the antiphoner with which they were bound. Ultimately, these tonary sections were separated from the host antiphoner, due to misadventure perhaps, or because they could more conveniently function as a cross reference tool in this way. As simple lists, these early tonaries could only function as adjuncts to antiphoners but with the addition of some fundamental music theory and definitions of terms they became self-contained works. These "treatise" type tonaries were also included in collections of musical treatises, as are the three tonaries from MS H281 examined here, producing a particularly focussed anthology "on the tones."¹⁸ These three include definitions of terms, a range of mnemonic devices and verses summarising the rules concerning intonation and psalmody, and practical advice for the seamless performance of antiphons with their psalms. In manuscript and chronological order they are the *Tonale Sancti Bernardi*, a twelfth-century Cistercian tonary not attached to any particular location; the thirteenth-century *Tractatus de tonis* of Petrus de Cruce, a secular tonary for the use of Amiens Cathedral; and the fourteenth-century *Tractatus de tonis* of Guy of Saint-Denis, a Benedictine tonary specifically attached to the Abbey church of Saint Denis, the royal necropolis, and a reliquary for some remnants of Gallican chant.

The anonymous Cistercian *Tonale Sancti Bernardi* is a product of the liturgical reforms of Bernard of Clairvaux (1090–1153), and adopts the systematic application of Guido Augensis's *Regule* in reducing the number and complexity of the psalm tone endings.¹⁹ The tonary is organised as a dialogue between master and student, and in essence forms a catechism of the fundamentals of theoretical understanding. Moreover, and in accordance with the dialogue genre, the *Tonale Sancti Bernardi* assumes the student has no prior knowledge in relation to either theory or practice. The treatise opens with the student asking "Quid est tonus" ("what is a tone?") This question, and the other

¹⁸ See Constant J. Mews, Catherine Jeffreys, Leigh McKinnon, Carol J. Williams, & John N. Crossley, "Guy of Saint-Denis and the Compilation of Texts About Music in London," *British Library*, Harl. Ms. 281." *Electronic British Library Journal* (2008) article 6, <http://www.bl.uk/eblj/2008articles/article6.html>.

¹⁹ See Guido Augensis, "Regule De Arte Musica," in the edition of C. Maître, ed. *La réforme cistercienne du plain-chant. Etude d'un traité théorique* (Beernem, Belgium: Brecht, 1995).

Dorothy-Dixer-style questions that follow, allows the master not only the chance to pontificate, but also to systematically scaffold the student's knowledge starting from first principles. The definitions section of the *Tonale Sancti Bernardi* displays several features distinctive to the Cistercian liturgy: a) that unity of the tone must be maintained and median and final cadences should use, respectively, the reciting tone (*tuba* or dominant) and the final without exception; b) that melodies should be modified so that their normal range would lie within the octave and their outer limits would never exceed a ten-note ambitus; and c) that there should be the minimum of options for variety, hence the restraint on the number of *differentia*.

By contrast, Petrus de Cruce in his tonary assumes depth of understanding of both theory and practice, and through the use of mnemonic devices and verses provides only the most cursory of reminders of procedure. Consequently, the tonary proper is a simple list of notated incipits. The secular practice of the Cathedral of Amiens summarised in this tonary is different in detail from that of the monastic orders and that of other cities. Petrus was clear about this when, in a discussion about the varying numbers of *differentiae*, he writes: "Indeed, the usages of cities which are diverse give *differentiae* in various ways, since at this time, one gives more, another less."²⁰ That Amiens had an atypical secular use distinct from monastic practices was recognised by Guy of Saint-Denis in a discussion of the performance of the Gloria at Matins:

And note that this way of singing ... is commonly observed by monks, although there is a different use among other churchmen. The church of Amiens, however, according to the tonary of Master Petrus de Cruce and the examples that he puts there, and ourselves, seems to conform rather to our use [i.e. that of Benedictine Saint-Denis] and that of other monks.²¹

Guy of Saint-Denis held him in high esteem as, within a discussion about limiting of the number of invitatories to seven, Guy considers the position of "Master Petrus de Cruce, who was the finest cantor and particularly observed the practice of the church of Amiens."²² Guy's estimation of Petrus as the "finest cantor" is repeated some years later by Jacobus in the *Speculum musicae*, for he praises "that influential cantor, Petrus de Cruce, who composed so many beautiful and fine songs."²³

²⁰ "Usus enim civitatum qui diversi sunt dant eis differentias diversimodo, tum quia unus plus, alter vero minus," Petrus de Cruce. "Tractatus De Tonis," vii.

²¹ "Et nota quod iste modus cantandi . . . communiter a monachis observatur, licet ab aliis ecclesiasticis viris aliter habeantur in usu. Ambianensi tamen ecclesia secundum tonos magistri Petri de Cruce et exempla que ponit ibidem nostro potius et ceterorum monachorum usui quo ad hoc conformari videtur et nos isti." Klundert, Guido de Sancto Dionysio, *Tractatus* II:78 (MS H281 f. 82v).

²² "[E]t magistrum petrum de cruce qui fuit optimus cantor et ambianensis ecclesie consuetudinem specialiter observavit," Klundert, Guido de Saincto Dionysio, *Tractatus* II:133 (MS H281 f. 95v).

²³ "Nam ille valens cantor, Petrus de Cruce, qui tot pulchros et bonos cantus composuit ..." Jacobus Leodiensis, "Speculum Musicae," in *Jacobus Leodiensis, Speculum musicae*, ed. Roger Bragard (Rome:

Guy's own tonary, put together for the brethren at the Abbey of Saint-Denis, is a far more substantive exposition of the tones than either the *Tonale Sancti Bernardi* or Petrus de Cruce's work. It is organised into two parts, the first of which is concerned with theoretical issues, the second with practical examples. His exposition on the tones is based firmly on the authority of monastic tradition primarily as established by Guido of Arezzo and Boethius, but combining the authority of the ancients with those of certain moderns, among them Johannes de Garlandia, Johannes de Grocheio and Petrus de Cruce. Guy establishes a position of some importance in the history of chant, particularly for the fragmentary Gallican chant,²⁴ as the principal treasure of the Abbey of Saint Denis was to be found in its collection of unique liturgical books; it was also revered for its function as the necropolis for French kings.

Though these three tonaries were constructed at different times to serve distinctly different singers they, somewhat surprisingly, all transmit virtually the same suite of mnemonic *aides-memoires*. Equally surprising is the stability of transmission in relation to localised detail. In the usual process of manuscript transmission—whereby the scribe is principally reliant on the sense of sight—there are changes from copy to copy, whether this be due to scribal error or the result of notational "improvements," amongst many possible types of change. This degree of change is strangely absent from these tonaries, and it seems that the well-trained memory overrides the other senses. This is not without interest. A case in point is the presentation of the "model" antiphons; antiphons based on New Testament texts as a literary elaboration of the numbers of the modes, thus:

- i) Primum quaerite regnum Dei (Matthew vi.33)
- ii) Secundum autem simile est huic (Matthew xxii.39)
- iii) Tertia die est quod haec facta sunt (Luke xxiv.21)
- iv) Quarta vigilia venit ad eos (Matthew xiv.25)
- v) Quinque prudentes intraverunt ad nuptias (Matthew xxv.10)

American Institute of Musicology, 1973), VII.17, 36. The fact that Jacobus uses very similar wording to that of Guy of Saint-Denis in the writing of Petrus de Cruce is further support for the contention that Jacobus had access to MS H281 during his time in Paris and may have been acquainted with Guy. For a full treatment of this see Constant J. Mews, Catherine Jeffreys, Leigh McKinnon, Carol J. Williams, & John N. Crossley. "Guy of Saint-Denis and the Compilation of Texts About Music in London, article 6. Though interesting, the debate about whether Jacobus hailed from England, Spain or Liège as presented in Margaret Bent, *Magister Jacobus de Hispania, Author of the Speculum musicae* (Oxford: Routledge, 2015) and contested by Rob Wegman, "Jacobus de Hispania and Liège," *Journal of the Alamire Foundation* 8 (forthcoming) is irrelevant here.

²⁴ For the persistence of the Gallican liturgy see Craig Wright, *Music and Ceremony at Notre Dame of Paris, 500–1550*, passim, but particularly chapter 2, "Aspects of Parisian Chant and Liturgy" and its subsections "Traces of a Gallican Liturgy" and "Vestiges of Gallican Chant," 41–59. For the Gallican connection to Saint-Denis, see Anne Walters Robertson, *The Service-Books of the Royal Abbey of Saint-Denis: Images of Ritual and Music in the Middle Ages* (Oxford: Clarendon Press, 1991).

- vi) Sexta hora sedit super puteum (John iv.6)
- vii) Septem sunt spiritus ante thronum Dei (Revelation iv.5)
- viii) Octo sunt beatitudines (Matthew v.3–11)

These antiphons end with the same melismas (*neumae*) as the intonation formulae and serve as touchstones by which the mode of a chant could be determined. Each of our tonaries use these model antiphons. The examples for the first tone are from f.36r for the *Tonale Sancti Bernardi*; f. 53r for Petrus de Cruce's tonary and finally f. 80r for the tonary of Guy of Saint-Denis:

The only distinction between these three lies in the melisma; the *Tonale Sancti Bernardi* has a slightly shorter *neuma* as befits its Cistercian call for brevity and simplicity; Petrus de Cruce allows a leap (the rising 4th) which the Benedictine use of Guy fills with stepwise movement. This level of identity can be seen with the other seven model antiphons as well as in the quite extensive range of other mnemonic devices and verses which form the core of these tonaries.

Looking back at these works from a culture which makes little call on developed memory, we are reminded again of the chasm of difference which lies between us and them. The hardest concept to come to grips with in the study of these works is that, though they are transmitted to us in written form, they are absolutely reliant on a richly developed memory, since the classification system reordering the antiphons into modal order—fundamental to the tonary—was in itself an elaborate mnemonic. It reminded the singer of elements already known and committed to memory. Of course, further study is needed to clarify this material; it is clearly of cultural significance.