THE EIGHT GREGORIAN MODES ON THE CLUNY CAPITALS

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Among the sculptural remains of the ancient abbey church at Cluny, finished around 1100, there are two capitals with representations of the eight scales—or modes, or tones—of the Gregorian chant.[1] Preserved are four figures on one capital, and one figure only on the second capital. These are: 1st mode—a man, seated, plucking the strings of a lute-like instrument (Fig. 1); 2nd mode—a woman, in dancing movement, holding two bell-shaped instruments (Fig. 2); 3rd mode—a man, seated on a chair, his head inclined toward a stringed instrument which rests on his left knee (Fig. 3); 4th mode—a man, in dancing position, with a carillon (Fig. 4); 5th mode—destroyed; 6th mode—a man, seated, with a stringed instrument before him on a table or board; 7th mode—of the upper part of the body, only one bent arm is recognizable; 8th mode—destroyed.[2]

We can identify the order of the modes from the inscriptions. The figures of the first capital, representing modes one to four, are surrounded by inscriptions placed on mandorlas. On the second capital, representing modes five to eight, the inscriptions, all of which are preserved, form a band encircling the middle of the capital. These *tituli* read:

1st mode: Hic tonus orditur modulamina musica primus.
2nd mode: Subsequor ptongus numero vel lege secundus.
3rd mode: Tertius impingit Christumque resurgere pingit.
4th mode: Succedit quartus simulans in carmine planctus.
5th mode: Ostendit quintus quam sit quisquis tumet imus.
6th mode: Si cupis affectum pietatis respice sextum.
7th mode: Insinuat flatum cum donis septimus almum.
8th mode: Octavus sanctos omnes docet esse beatos.

There seems no doubt, then, that each figure was to represent one of the eight Church or Gregorian modes. But the explanation of the figures and of the meaning of the mottoes is problematic. Several scholars have tried to identify the significance of the figures with the meaning of the mottoes, and at the same time to find a common denominator for this meaning and the emotional character of each scale.

Barbier de Montault[3] seems to have been the first to relate the Cluny *tituli* and the figures to the

1. P. Deschamps, "L'âge des capitaux de Cluny," *Revue de l'art ancien et moderne*, LVII, 1930, pp. 157ff.; K. J. Conant, "Le problème de Cluny," *Revue de l'art ancien et moderne*, LVIII, 1931, pp. 141, 189; H. Focillon, *L'art des sculptures romanes*, Paris, 1931, I, pp. 152-155.

2. Lithographs after drawings of all figures in the article by Pouget, "Théorie et symbolisme des tons de la musique Grégorienne," *Annales archéologiques*, XXVI, 1869, p. 380; XXVII, 1870, pp. 32, 151, 287; in the article by Pouzet, "Notes sur les chapitaux de l'abbaye de Cluny," *Revue de l'art chrétien*, LXII, 1912, pp. 1ff. and 104ff.; 3rd and 4th modes in *Annales archéologiques*, XVII, 1857, pl. 103; photographs of 1st mode in E. Mâle, *L'art religieux du XIIe siècle*, Paris, 1922, p. 321; 1st and 2nd mode in L. Bréhier, *L'art chrétien*, Paris, 1918, p. 195, fig. 79; all figures in L. Schrade, "Die Darstellungen der Töne . . . zu Cluny," *Deutsche Vierteljahrschrift für Literaturwissenschaft*, VII, 1929, p. 229; 3rd and 7th mode in A. Kingsley Porter, *Romanesque Sculpture of the Pilgrimage Roads*, Boston, 1923, II, pl. 7; 1st mode in M. Aubert, *La sculpture française*, Paris, 1929, p. 90, pl. VIII (called erroneously *Music*); 2nd, 4th, and 6th mode in J. Evans, *Monastic Life at Cluny*, London, 1931, p. 122 and pl. XXIV; 3rd mode in E. Reuter, *Les représentations de la musique dans la sculpture romane en France*, Paris, 1938, pl. 31.

3. Barbier de Montault, *Traité d'iconographie chrétienne*, Paris, 1898, I, p. 308.

characteristics of the eight modes as given by Guido of Arezzo.[4] Schrade[5] has elaborated this theory and has tried to link this connection to the symbolic meaning of numbers as taught by the Pythagorean school. Thus, the number 1 stands for the male principle, the number 2 for the female, and therefore the figure of the second mode at Cluny is represented by a woman. Evans[6] and Whitehill[7] have followed the same idea.

It is the purpose of this paper to show why these attempts were bound to fail, and that the tradition on which the mottoes are based differs from the tradition out of which the figures arise. Furthermore, I shall try to explain that the numbers of the Gregorian modes have no dogmatic or mystic significance; otherwise it would not be possible to find different characteristics determined by different writers. The characters given to the scales originate neither in the symbolic quality of their numbers, nor in their emotional quality, but are derived from the method of paralleling antiphons and related texts.

I

It is true that in several mediaeval treatises we find the single scale characterized in a way somewhat similar to that which Plato used in his *Laws* and in the *Republic*.[8] However, the authors who have written on the character of the modes in the period of the Cluny figures and in later times have occasionally stated that there is no identical *ethos* or character for the Gregorian scales. Apparently the Greeks used certain scales for certain types of melodies only, e.g., the Doric scale for war hymns. Of course, the musician of the Middle Ages, like his modern successor, would also at times associate a certain scale with a certain type of melody. The effect of the trumpets in C major in Haydn's *Schöpfung* accompanying the words "*Es werde Licht*" was so convincing that it was often imitated. But such relationships are not binding.

That different mediaeval writers assigned different moods or characteristics to one scale may be seen from the following comparative table:[9]

	Guido ca. 1020	Contractus 1013-1054	Cotton ca. 1125	Jacques de Liége 14th century	Cod. Basil. ca. 1310
1.	in modo historiae recto et tranquillus	gravis vel nobilis	morosa et curialis vagatio	morosa et terminalis vagatio	ad iocundos
2.	(tristis)	suavis	rauca gravitas	praeceps et obscure gravitas	ad senes
3.	anfractis saltibus delectetur	incitatus vel saltans	severe et quasi indignans persultatio	severa et indignans persultatio	ad severos
4.	(blandus)	modestus vel morosus	adulatorius	mulceus et adulatorius	ad blandos
5.	(laetus)	voluptuosus	molesta petulantia	petulans lascivia	?
6.	voluptuosus	lamentabilis	lacrimosus	dulcis querimonia amantium	ad tristes
7.	garrulus	garrulus	mimicos saltus faciens	liberos saltus iocundi faciens	ad versutos
8.	suavis	iocundus vel exultans	decens et quasi intonalis	seriosus	ad honestos

4. "Omnibus est primus, sed et alter tristibus aptus,
Tertius iratus, quartus dicitur fieri blandus,
Quintum de laetis, sextum pietatis probatis,
Septimum est juvenum, sed postremus sapientium."
Guido of Arezzo, *Micrologus*, chap. 14, and Guido, *Regulae musicae rhythmicae*, in: M. Gerbert, *Scriptores ecclesiastici de musica*, St. Blasii, 1784, II, pp. 2ff., 29.

5. Schrade, *op.cit.*, pp. 237, 241, 262.

6. Evans, *op.cit.*, pp. 120, 122.

7. W. M. Whitehill, "Gregorian Capitals from Cluny," *Speculum*, II, 1927, p. 385.

8. Plato, *Laws*, ed. R. G. Bury (Loeb Classics), London, 1926, I, p. 245; Plato, *Republic*, ed. P. Shorey (Loeb Classics), London, 1930, I, pp. 331-335.

9. The table is taken from J. Wolf, "Anonymi cuiusdam Codex Basiliensis," *Vierteljahrschrift für Musikwissenschaft*, IX, 1893, p. 409; see also H. Abert, *Die Musikanschauung des Mittelalters*, Halle, 1905, pp. 237-244.

This list could be easily supplemented from other writings. But the result would be the same: the characterizations are sometimes identical, sometimes opposite. The same diversity is demonstrated by the fact that the same text has been put down in different modes in different manuscripts. Johannes de Muris, or whoever is the author of the *Summa musicae*,[10] states that one melody may follow different modes, adding, "*Identitatem esse matrem fastidii, cum diversitas incitat appetitum.*"

Modern theorists of the Gregorian chant, too, deny that a certain emotional category corresponds to each mode; and the Gregorian chant has remained essentially the same throughout the centuries. Vincent C. Donovan[11] states that "though certain medieval writers . . . attempted to put these scales in more or less rigid emotional categories, a modern commentator is much nearer the truth: We ought not to assign to one Church mode a joyful character and to another a sorrowful one; for in each there are bright and jubilant strains, and each can be grave and mournful, but each produces these results in its own way."

I should like to quote especially the definitions from writings which should be typical of the tradition valid in Cluny, i.e., the treatises ascribed to Odo of Cluny, the famous abbot of the monastery († 942). In his *Proemium Tonarii*[12] Odo gives the following characterizations or names for the scales: 1st and 2nd mode—*vox audax*; 3rd and 4th mode—*vox iubilo* [sic]; 5th and 6th mode—*voces excelses*; 7th and 8th mode—*voces stridentes*. Without tracing the origin of these terms, it is obvious that Odo did not believe in a particular mode following a particular mood; otherwise he would not have given characteristic names to pairs or groups of scales. Besides, all the names themselves do not imply moods; the words *excelses* and *stridentes* refer to acoustic qualities.

Thus, it seems improper to base an explanation for the meaning of the mottoes and the figures at Cluny on so vague a theory. There is no doubt that mediaeval and Renaissance writers did try to establish correspondences between different realms of knowledge or experience. In the treatise of the Cod. Basiliensis (ca. 1310)[13] the authentic modes are correlated with the four temperaments: *sanguis, cholera, phlegma, melancholia*; the four plagal modes, with four virtues: *justitia, temperantia, prudentia*, and *fortitudo*. The scales of the plain chant were also coordinated with the music of the spheres, with planets, and so forth. Of this procedure the famous woodcut in Gafurius' *Practica Musicae* is a well-known example.[14] But Gafurius lived around 1500, in the flowering of humanism, when this practice was almost a fashion. The Cluny capitals were sculptured four hundred years earlier, and the approach to music had changed considerably in the meantime.

The writers of the twelfth and thirteenth centuries would establish relationships of this sort in a less elaborate way. In the eleventh century, the period of the Cluny mottoes, they did it in terms of "concordances." This was a method practiced since Hellenistic times and popularized by the Fathers of the Church. It represents a poetic method, and no mystic foundation should be attributed to it. As such parallels or concordances were not dogmatic, we generally find various patterns which enable us to trace particular schools and traditions of thought. This is true also for the characteristics of the Church modes. Thus, if we want to explain the meaning of the Cluny *tituli*, we shall have to find the special tradition that was followed in the monastery.

In order to find the origin of the mottoes we must search for sources relating to the same cycle of the eight modes. Liturgical books as well as treatises on the theory of music are concerned with the modes. Some books intended for use during the liturgy group the melodies of the plain chant according to the eight scales; they are called *tonarii, troparia*, or *octoechoi*.

The *tonarii* are guide books for the conductor of the choir. They list the beginnings of the liturgical melodies in eight sections, each devoted to one scale. There are liturgical books which list

10. *Summa musicae*, chap. 22, in Gerbert, *op.cit.*, III, p. 236.
11. C. V. Donovan, "What Is Gregorian Chant?", *Music Journal*, November 1946, p. 32.
12. Odo, *Proemium tonarii*, in Gerbert, *op.cit.*, I, pp. 248ff.
13. *Vierteljahrschrift für Musikwissenschaft*, IX, 1893, pp. 408ff.
14. A. Warburg, *Gesammelte Schriften*, Leipzig, 1932, I, pl. LIV.

the melodies in other ways, such as the order of the ecclesiastical year, or arrange them according to particular kinds of festivals or parts of the service.[15]

The name *tonarius* derives from the term *tonus*, which is sometimes used for the Gregorian scale. The Latin word *tonus* is the Greek *modos*, and the Greek *echo*(*s*) is the Latin *modus*; all these terms were applied to "scale." There are eight regular Gregorian scales; they are divided into authentic and plagal tones, that is, scales of first and second grade.[16] In the Occidental Church the order generally alternates between authentic and plagal scales; this holds true also for the order of the figures and mottoes at Cluny. The Byzantine Church counts the authentic scales as numbers 1 to 4, and the plagal as numbers 5 to 8.[17]

A number of manuscript *tonarii* have come down to us; the earliest were written by Regino of Pruem († 915) and Odo of Cluny († 942); then follow Hartker of St. Gall (10th cent.) and Berno of Reichenau († 1048); at the end of the century, Frutolf of Bamberg (ca. 1080) and Gundekar of Eichstaett († 1075) form a kind of third generation of authors.[18] The earlier of these *tonarii* have the music generally added in neumes, the later, in notes. For the notation in neumes the *tonarii* were especially useful, as here the pitch of the melodies was indicated, which was not recognizable from the neumes alone.

The *tonarii* sometimes have different, and misleading, names.[19] They were termed *antiphonaria*, because the melodies listed are antiphons. At other times we find the title *troparium*, because the word *tropos* could mean melody in general. But *troparium* in the proper sense indicates a collection of "tropes," which in the period from the ninth to the thirteenth century were exclusively defined as paraphrases of an original liturgical tune. Such a paraphrase could alter the text alone, or the melody alone, or both text and melody. A *troparium* always has music throughout its length.

In the Byzantine liturgy the book corresponding to the *tonarius* is called *octoechos*. This book "groups the changing songs of mass and office following the time of Lent. . . . it is divided into eight sections which change weekly; the melodies of each section are set to one scale."[20] The composition or compilation of the *octoechos* is ascribed to John of Damascus († before 754).

What makes these books important to the understanding of the meaning of the Cluny mottoes is the fact that they are all divided into eight sections, each devoted to melodies belonging to one of the eight modes. The sections usually start with a kind of cue antiphon, and we intend to show that one tradition of these texts, and the most popular one, is related to the Cluny mottoes.

Let us describe one of the *tonarii*. Regino's *tonarius*, of the latter part of the tenth century, resembles a dictionary and lists the melodies in two columns to the page.[21] It starts with the first mode, in the following way: The antiphon *Primum quaerite regnum Dei* serves as a kind of heading with the neumes added. This title has been added later, but probably by the same hand. The next line contains the syllables *No-e-o-e-a-ne*, with neumes added. The purpose of these syllables has not been definitely established; they are supposed to have served as an aid to the memorization or transcription of liturgical melodies. The line underneath the syllables contains the melody of the *Gloria seculorum Amen* in the first mode, with neumes. Then, on four pages, follows the list of the antiphons in the first mode, beginning with *Ecce nomen Domini*. Neumes are added to almost all antiphons. After this list follow three—in some modes, four—sections dealing with the so-called

15. See my *Introduction to the Catalogue of Liturgical Music Incunabula*, to be published by the Bibliographical Society, London.

16. *Tonale S. Bernardi*, in Gerbert, *op.cit.*, II, p. 266a.

17. F. X. Mathias, *Die Tonarien*, Graz, 1903; G. Reese, *Music in the Middle Ages*, New York, 1940, pp. 198ff.

18. E. Nikel, *Geschichte der katholischen Kirchenmusik*, Breslau, 1908, p. 86; Regino, in E. de Coussemaker, *Scriptorum de Musica Nova Series*, Paris, 1867, II, pp. 1ff.; Hartker Codex, in *Paléographie Musicale*, Tournay, Ser. 2, 1; Odo, *Intonarium*, in Coussemaker, *op.cit.*, II, p. 117; Odo, *Proemium* and *Musica*, in Gerbert, *op.cit.*, I, pp. 248ff.; Berno, in *ibid.*, II, p. 79; Frutolfi *Tonarium*, ed. C. Vivell, *Sitzungsberichte der Wiener Akademie, Phil. Hist. Kl.*, CLXXXVIII, 1918, 2. As Dr. Gustave Reese kindly informs me, neither the second of Odo's *Tonarii* nor the treatise of Gundekar have been published.

19. *Tonarii* are the *Antiphonale Miss.* from Laon and the *Antiphonale* from Chartres, published in *Paléographie Musicale*, Solesmes, X, XI.

20. E. Wellesz, *Byzantinische Musik*, Breslau, 1927, pp. 23, 33; O. Ursprung, *Die katholische Kirchenmusik* (*Handbuch der Musikwissenschaft*), Potsdam, 1931, p. 37.

21. Facsimile edition in Coussemaker, *op.cit.*, II, pp. 1ff.

divisiones or *differentiae*. These are melodic formulas, leading from the *Gloria* to the next antiphon, which is set in another key or mode. In modern music we call the corresponding technique modulation. The last section of these *differentiae* lists the formulas for two special parts of the Mass, for the *Introitus* and the *Communio*, the beginning and closing parts.[22]

Regino handles the other scales in a similar way, with the exception that those chapters have no titles or headings. The first title, the antiphon *Primum quaerite regnum Dei*, is important for our problem: it is the cue melody for the first mode. We have similar cue antiphons for the other modes also, and all can be found in Regino's *tonarius*, though not in the first lines. They all have been added later. Regino's and Odo's *tonarii* are the earliest sources for this set of cue antiphons. They are:

1st	mode: *Primum* quaerite regnum Dei.	*Line* 1
2nd	mode: *Secundum* autem est simile huic.	*Line* 2b
3rd	mode: *Tertia* dies est quod hec facta sunt.	*Line* 2b
4th	mode: *Quarta* vigilia venit ad eos.	*Line* 2b
5th	mode: *Quinque* prudentes intraverunt.	*Line* 1
6th	mode: *Sexta* hora sedit super puteum.	*Line* 2b
7th	mode: *Septem* sunt spiritus ante thronum.	*Line* 2
8th	mode: *Octo* sunt beatitudines.	*Line* 3

Obviously, these antiphons have been selected because the numbers 1 to 8 are the first words, and because their melodies are set in the corresponding mode. They are used as mnemonic devices for the eight scales. I do not believe that we have to explain their selection on a mystic or even symbolic basis. We do not know who invented this system, nor who introduced these antiphons into the theory of music. They are used from the tenth century on in many books which deal with the eight scales, in special *tonarii* as well as in general theories of music in the chapter on the modes. Probably the oldest manuscript which lists them all is Regino's *tonarius*.[23] We have seen that there they were added later, though probably by the same hand; this manuscript was written in the second half of the tenth century.

In the *Proemium tonarii*,[24] ascribed to Odo of Cluny, the author uses the antiphons as titles in the chapter on the eight modes. If Odo is the author, this work must belong to the early tenth century, and we might attribute the invention of the method to him. But his authorship is very doubtful, and the manuscript dates only from the fourteenth century. The eight cue melodies also occur in Berno's *tonarius*,[25] where they are paraphrased. Later on, we shall quote and explain his words to show the possibility of varied paraphrasing of the same sentence. Jacques de Liége lists them as late as the beginning of the fourteenth century in the 82nd chapter of his comprehensive *Speculum*.[26]

The most systematic use of the listed cue melodies is found in Guido of Arezzo's treatise *De modorum formulis et cantuum qualitatibus*, part VI, chapters 1-9.[27] This section is similar to Regino's *tonarius*, but adds an explanatory text. Guido starts with a little poem that refers to the order of the tones. Next follows the antiphon *Primum quaerite*, this time with notes on a stave; then the melody of the *Gloria* in the first mode; finally, the beginnings of the texts of the antiphons in the first mode. The order of the antiphons in Guido is not identical with the list in Regino. Guido then lists the *differentiae* of the first mode and the antiphons to which they lead, and ends like Regino with the sections of *differentiae* for the *Introitus* and the *Communio* of the Mass. Guido deals with the other modes in a similar way, and each time he starts with a cue melody.

22. Mss. containing the *introitus* and *communio* antiphons as separate collections are the Cod. Einsiedel (10th cent.) published in *Paléographie Musicale*, Solesmes, IV, and the Ms. lat. 1118, Bibliothèque Nationale, Paris.

23. See note 21.

24. See note 12.

25. Gerbert, *op.cit.*, II, p. 73.

26. Of the seven books of the *Speculum*, Books 6 and 7 are published in Coussemaker, *op.cit.*, II, pp. 193ff.; an outline of the other books, *ibid.*, pp. xvii-xxi; Book 1, chaps. 1-19, in W. Grossmann, *Die einleitenden Kapitel des Speculum musice*, Leipzig, 1924.

27. Coussemaker, *op.cit.*, II, p. 78.

There are some other sets of cue antiphons and mnemonic verses for the eight modes. They do not seem to have been as popular as the ones we have listed; they appear in later manuscripts only, and may be of later origin. The Hartker codex contains the following antiphons:[28]

Primum mandatum amor Dei est.
Secundum est amor proximi.
Die *tertia* gratiae nobis Christus natus est.
Quaternos libros sumpsimus ab ore Dei.
Quinta die Jesus finivit legem.
Sexta die et ipsa hora crucifixus est pro nobis.
In sepulchro quievit Christus *septimo* die.
Octava surrexit et multos secum suscitavit.

These words are not so close to the words of the Gospel as was the other set. Only the second antiphon refers to the same text, the *amor proximi*, as that used in our set. The scheme appears less impressive, and less instructive, because not all antiphons begin with the numeral.

I should like to quote two other instances, from the treatises of the *Anonymus XI* (ca. 1400),[29] a codex related to the writings of Cotton, and from the *Tractatus de musica plana cuiusdam monachi Carthusiensis*, today attributed to Tunstede and written ca. 1300.[30] In both cases the authors have composed little verses as mnemonic devices. The chapters are informative because they clearly indicate the connection of some of the antiphons with the character of the modes.

Tunstede, in chapter VIII, gives a short description of the character and then proceeds: "*ut patet in illis antiphonis*," and then, "*unde versus*." The verses are:

1st mode: Mobilis est habilis prothus quia novit ad omnes
Affectus animi flectere neuma prothi.
2nd mode: Flebilis atque gravis est primi collateralis.
Tristibus et miseris convenit ille modus.
3rd mode: Tertius ad furias tonus incitat atque severus.
Crudelis domus, hinc bella movere sciens.
4th mode: Aptus adulanti tibi quartus convenit ordo.
Garrulus et blandus dicitur ille modus.
5th mode: Auditum solita est mulcere modestia quinti
Lapsos spe recreat; tristia corda levat.
6th mode: Flebilis atque pia ptongi modulatio sexti
Provocat ad lacrimas corda canore suo.
7th mode: Lascivie servit jucundis septimus odis
Autumo plus tales tale decere melos.
8th mode: Octavus morulus, gaudiens gradiensque decenter,
Creditur esse magis gratis in ore sonus.

The *Anonymus XI* starts with our cue antiphons; later, while discussing the *differentiae*, he adds two sets of texts mentioning the numbers 1 to 8. One set of these antiphons refers to a point of dogma, the other to an event that happened in the first, second, etc., period of history. Thus we have:

1st mode: Primum quaerite regnum Dei.
Primus et altissimus deus et principium et clausula rerum.
Prima etate creati sunt Adam et Eva et positi sunt in sede beata.
2nd mode: Secundus autem simile est huic.
Secundum testamentum meum precepit dignitate victus.
Secunda etate natavit archa diluvio passim de fluentem.

28. Hartker Codex, St. Gall, nr. 388, 390, 391 (*Paléographie Musicale*, Tournay, Ser. 2, 1).

29. Coussemaker, *op.cit.*, III, p. 416: *Anonymus XI. Tractatus de musica plana et mensurabili.*

30. *Cuiusdam Carthusiensi Monachi Tractatus de Musica Plana*, chap. VIII (Coussemaker, *op.cit.*, II, p. 448); *Quatuor Principalia Musicae per Simonem Tunstede*, III, chap. XXXVIII (Coussemaker, *op.cit.*, IV, p. 235).

3rd mode: Tertia dies est hec quod facta sunt.
Tres persone sunt in sancta Trinitate.
Tentatus est Abraham tertia etate, dilectum Ysacum mactari voluit.
4th mode: Quarta vigilia venit ad eos.
Quatuor libris angeli instruuntur quatuor plage mundi.
Quarta etate Moises legis tabulas Sinai accepit in monte.
5th mode: Quinque prudentes virgines intraverunt ad nuptias.
Quinque libris mosayie legis erudiebantur ebrei.
Quinta etate prevaluit David in funda et lapide contra Goliat.
6th mode: Sexta hora sedit super puteum.
Salvator noster dominus Jesus Christus natus est in sexta etate.
Sextam etatem dominus visitans hunc cultu suo dedicavit.
7th mode: Septem spiritus ante tronum dei.
A septem demoniis Mariam Magdalenam dominus Jesus Christus septiformis gratia liberavit.
Septima etate resurgemus rationem meritorum.
8th mode: Octo sunt beatitudines.
Octavus dies resurrectionis salvatoris perpetuum octavum diem figurat beatorum.
Octava etate que carebit fine perpetua pace fruetur.

Both sets are more elaborate than the texts of our cue antiphons, but they are not as consistent in form or thought. I found one similarity to our list in the verse for the second mode by Tunstede. Though I am reluctant to use sources that are several centuries later than the Cluny mottoes, I have quoted the two sets to demonstrate the methods of paraphrasing and correlating verses from the Gospels with dogmatic or Biblical facts. How are the mottoes of Cluny related to the cue antiphons of our list? We shall put them in corresponding columns and mark the verses of the Scriptures from which they are quoted or paraphrased, and then explain the logic of the relationship in each instance.

Cluny	Antiphon
1. Hic tonus orditur modulamina musica primus. (Psalms 31:4-6; Romans 14:17)	Primum quaerite regnum Dei. (Matthew 6:33)
2. Subsequor ptongus numero vel lege secundus. (Leviticus 19:18)	Secundum autem est simile huic. (Mark 12:31)
3. Tertius impingit Christum resurgere pingit.	Tertia dies est quod hec facta sunt. (Luke 24:21)
4. Succedit quartus simulans in carmine planctus.	Quarta vigilia venit ad eos. (Mark 6:48)
5. Ostendit quintus quam sit quisquis tumet imus. (Isaiah 25:11; 5:15; 2:11; Sirach 10:7-17)	Quinque prudentes intraverunt. (Matthew 25:10)
6. Si cupis affectum pietatis respice sextum.	Sexta hora sedit super puteum. (John 4:6)
7. Insinuat flatum cum donis septimum almum.	Septem sunt spiritus ante thronum. (Revelation 4:5; 8:2)
8. Octavus sanctos omnes docet esse beatos.	Octo sunt beatitudines. (Matthew 5:3-10)

The texts of these cue antiphons, with the exception of the seventh, are quotations from the Gospels, and follow the original text almost literally. On examining the Cluny mottoes, we shall see that except for the fourth motto they paraphrase the antiphon verses, or concordant ones taken from other parts of the Bible.

Paraphrases can be related to the original verse in three ways. One word or several words may be identical; the meaning of one word or several words may be identical (e.g., *spiritus*—"angel" in the Revelation—becomes *spiritus*—*flatus*—breath); or the meaning of the whole sentence may be similar. In the paraphrases at Cluny, we find all three devices.

In the motto of the first mode, the words *primus* and *ordo-regnum* are used as a connecting link.

In the motto of the second mode, the two words *secundus* and *lex-praeceptum* (to which *secundum* refers) are used. The text of the second antiphon, the quotation from Mark 12:31, refers to the interpretation of the Decalogue. After the explanation of the First Commandment (*praeceptum*) follows the second *lex* or *praeceptum*; it is "similar to the first, and no other commandment is greater than these." No distinction is made between the value of the first and the second *lex*.

In the motto of the third mode, it is the meaning of the quotation that is paraphrased. St. Luke 24:21 says: "Today is the third day since these things were done;" that is, on the third day, "The Lord is risen indeed" (Luke 24:34, *resurrexit*).

The motto of the fifth mode interprets the meaning of the sentence of the Gospel verse. This time it is not the words *nuptias* or *intraverunt*, used in other concordances and paraphrases, which are decisive for the relationship, but the idea of "How low is fallen he who exalts himself." The foolish virgins thought too highly of themselves and were disgraced; the general idea that pride is humbled is expressed in many other verses of the Bible, some of which have been indicated in the table.

The sixth antiphon is a verse from the story of the woman of Samaria. "Now Jacob's well was there. Jesus . . . sat thus on the well: and it was about the sixth hour" (John 4:6). The motto paraphrases the meaning of the whole chapter, not of a concordant verse which mentions the sixth hour, as do other writers, e.g., Berno of Reichenau, whom we shall quote later. The Cluny motto emphasizes the parable of the "living water that shall be a well of water springing up into everlasting life." This everlasting life is acquired through faith and piety; that is the meaning of St. John, chapter 4, and of the motto as well.

The way in which the seventh motto and the seventh antiphon are connected reveals a very interesting relationship of ideas. The spirits or angels before the throne of the Lord, to which reference is made by the motto as well as by the antiphon, are mentioned several times in the Revelation of St. John (1:2; 4:5; 8:2, etc.). In the motto the word *spiritus* is replaced by *flatus*, both terms implying the idea of breath. Breath, in the Bible, is the symbol of life and of resurrection. As a symbol of life, it is used in Genesis 2:7; as symbol of reanimation in 2 Kings 4:35. In the latter case, it is connected with the number 7, while in Genesis the creation of man is performed on the sixth day. In the Revelation of St. John it is the symbol of resurrection. In many representations, *spiritus* is characterized by a wind instrument, which thus comes to be the instrument in the Last Judgment. The wind instrument as symbolizing life and death, revival and resurrection, was used even in pre-Christian times, and also in civilizations other than the Jewish.[31]

The motto of the eighth mode is connected with the antiphon by identical words and similar meaning; both texts refer to the Eight Beatitudes from the Sermon on the Mount (Matthew 5:3-10).

The one exception where motto and antiphon are connected by a musical rather than a textual relation is the fourth. The antiphon quotes from the Gospel, *Quarta vigilia venit ad eos*, and is taken from the miracle of Christ walking upon the sea; the text of the motto, however, refers to a *carmen planctus*. In an attempt to identify lamentation as the characteristic category of the fourth mode, and at the same time to connect the meaning of the figure of the fourth mode—the carillon player at Cluny—with a melancholic mood, it has been supposed that "such bells were used in funerals and symbolize the melancholic cadence of the 4th tone."[32]

In the Cluniac tradition, symbolic practice does not ascribe a melancholic connotation to the number four. The writers and scholars from Cluny and the monasteries of this order mention the symbolism of numbers only on rare occasions. Rodolfus Glaber, the chronicler of Cluny (11th cent.), makes but one detailed reference to a number, the sacred 4 (*de divina quaternitate*), in his

31. R. Eisler, "Orphisch-dionysische Mysterien-Gedanken," *Vorträge der Bibliothek Warburg*, 1922-23, part II, Leipzig, 1925, p. 87.

32. J. Evans, *Monastic Life at Cluny*, London, 1931, p. 122.

Historiarum libri quinque, Book I, chapter 1.[33] Here he makes the following cycles correspond: the four elements, the four Gospels, the four virtues, the four senses, the four periods of mankind, and the four rivers of Paradise. Of these cycles mentioned by Glaber, the sculptor of Cluny used the four virtues and the four rivers of Paradise only, on capitals of other columns. On the other hand, the sculptor has represented other cycles of four:[34] the four seasons, the four kinds of handicraft, the four authentic and the four plagal modes—none of which were mentioned by Glaber. Thus, the sculptor of Cluny or the man who outlined the plan, must have taken his inspiration from some other source.

The musical tradition at Cluny does not assign a melancholic character to the fourth mode but, on the contrary, a joyful one. To Odo of Cluny several treatises on music are ascribed—among them, two *tonarii* (one still unpublished) and the *Proemium tonarii*, already mentioned. In the latter we find the cue antiphons, a fact which might confirm our conjecture that the antiphons were used in musical training at Cluny, for which purpose Odo may have written his treatises. The cue antiphons stand like titles over the analyses of the technical structure of the scales. Odo gave to the fourth mode, as well as to the third, the name *vox iubilo* [sic].[35]

The source for the expression *planctus* seems to have been a musical one, but not because the fourth mode has a "melancholic cadence." There existed in the Middle Ages a musical form of *planctus* or *carmen planctus*. We have records of such laments from the seventh century on. Some famous ones are the laments on the death of the Visigothic monarchs, King Chindasvinthus (641-52) and Queen Reciberga (ca. 657), and the laments on the death of Charlemagne (814) and of his son Hugo of St. Quentin (844). The melodies of these laments have come down to us in neumes without lines, so that we cannot state the mode. The songs deal with secular, historic facts and are written in Latin.[36] From the eleventh century we have the laments of Abelard; they are concerned with secular subjects, not historical but individual ones. The musical form of the *carmen planctus* is similar to the French *lai*, and is composed of four sections in the order *a, a', a, a'*.[37]

The most famous *planctus* is the antiphon *Media vita*; its technical form is different from a *lai* and from a sequence; its melody is taken from the liturgy, probably from the Compline, i.e., the late evening service and the last section of the Office of the Hours. The *Media vita* became the usual song for funerals and acquired a magic power in the course of time. It was used as a spell or charm, so that its singing was forbidden by several Church councils as late as the fifteenth century.[38] The melody of the *Media vita* is in the fourth Church mode. It became the model for, and influenced, the setting of many laments in the fourth mode. This, then, is the origin of the expression *planctus* in the motto of the fourth figure in Cluny.[39] Even if the greater part of the laments were written in the fourth mode, this would not necessarily indicate its melancholic character, since there are many joyful melodies in this mode. The motto of the fourth mode thus has an origin, and uses a method, different from the paraphrasing of antiphons which we have found in the mottoes of all the other figures.

To clarify this method of paraphrasing, to demonstrate the possible variations of the same original text, and thus to point out the special traits of the Cluny paraphrases, I should like to quote the paraphrases for the cue antiphons as Berno of Reichenau has given them in his *tonarius*:[40]

1st mode: *Primo* pro culmine tuae quaerere iustitiae Domine verum summum quoque lumen fac nos petimus ut in coelo semper tibi iubilemus.

33. Migne, *Patrol. Lat.*, CXLII, col. 614.
34. R. Marle, *Iconographie de l'art profane*, The Hague, 1931, pp. 270ff.
35. Gerbert, *op.cit.*, I, p. 248.
36. H. Anglès, *El Codex de las Huelgas*, Barcelona, 1931, I, p. 25; E. de Coussemaker, *L'histoire de l'harmonie*, Paris, 1852, pl. 2.
37. H. Spanke, "Das öftere Auftreten von Strophenformen in der altfranzösischen Lyrik," *Zeitschrift für französische Sprache*, LI, 1928, p. 73; *idem*, "St. Martial Studien," *ibid.*, LIV, 1930/31, pp. 282, 385; LIII, 1929/30, p. 113.
38. P. Wagner, "Media Vita," *Schweizerisches Jahrbuch für Musikwissenschaft*, I, 1924, p. 18.
39. See the two motets "Homo miserabilis" and "Mors" from the Bamberg Codex, ed. P. Aubry, *Cent motets du 13me siècle*, Paris, 1908, no. 37 and pl. 37.
40. Gerbert, *op.cit.*, II, p. 79.

2nd mode: *Secundum* quae legis verbum, mutua quo dilectione Dei & proximi Christe mandasti colere, quo per haec geminae observantiae praecepta reddamus.

3rd mode: *Tertia* die Christe te resurgere, [&] mundo ferre lumen credimus. O alme fac nos & tuum semper laudare nomen, & in patriae te aeternae regione cernentes sedere.

4th mode: *Quarta* te noctis Christe vigilia discipulis dare coeleste solamen nos humiles fatentes, te cantantes, laudantes, tuaeque nomen potentiae nos quaternae tuae evangelicae vocis da cognoscere munimen.

5th mode: *Quinque* tu Domine in coelum virgines te recipere dignatus es, plebi tuae verbis revelare signis & ostendere, sensus ecce nostros ut precamur Domine te disponere.

6th mode: *Sexta* tuae Christe potentiae corporalis hora resplendet formae, ecclesiae vitam tribue salientem aquae vivae, fervore quoque plenae gratiae hanc semper accende.

7th mode: *Septemplicem* te nunc quoque nobis adesse deposcimus alme paraclite, nostrae mentes ut tuae gratiae semper exuberent, perfecto munere, quaeque nocent extingue, & cuncta, quae proficiunt, accende semper amoris igne.

8th mode: *Octo* pie rex Christe lucide beatitudines evangelicae gratiae plebi tuae praebe benignus & clemens sempiternam requiem, & refove sine fine credentes in te.

Clearly, Berno, a cleric and musician, likewise paraphrases verses concordant with the antiphons; he, too, uses the word *primus* for the first mode; *lex* and *secundus* for the second mode; *resurgere* for the third; and *beatitudines* for the eighth. Berno's paraphrase of the fourth mode does not refer to musical forms and names, but to the miracle of Christ walking on the sea; this miracle is meant to give us faith and comfort, as it did to the Apostles. Berno's paraphrase for the fifth mode explains the *intraverunt* of the antiphon as "allowing the wise virgins to enter heaven." Through this, Christ gives us a sign of grace. The paraphrase of the sixth mode refers to the sixth hour of the Crucifixion, not to the sixth hour from the story of the woman of Samaria.

Berno's paraphrases and the mottoes at Cluny are both related to the same cue antiphons for the eight modes. The method of connecting the two texts is similar; the paraphrases, however, are not identical. Both authors were familiar with these antiphons, which were memorized in the musical training of the period as representatives of the eight modes. The first words of their verses refer to the number of the musical scale to which their melody was set. In Regino's manuscript dating from the second half of the tenth century, these antiphons have been added by a contemporary hand, which suggests that they were introduced into teaching about this time.

The texts of these antiphons are almost literal quotations from the Gospels, with the exception of the seventh. The Cluny mottoes are paraphrases of the antiphons and use one or several identical words as a connecting link; a motto may also depend on the identical meaning of a word or a similar meaning of the whole original sentence. Such paraphrases do not necessarily always use the same identical words or meanings. Berno, as we saw, sometimes refers to other concordant verses.

Only for the fourth mode has the author used an expression taken from a musical source. The *carmen planctus* is the form of a lament, for which we know examples from the seventh century on. The best known of these laments was written in the fourth mode; therefore, the *carmen planctus* is mentioned in the fourth motto. Odo of Cluny, or the author of the *Proemium* ascribed to him, did not believe in a single or identical mood for one scale and called the fourth mode *iubilant*.

In explaining the mottoes we have tried to show that the author used the method of paraphrasing, and that there can be different paraphrases from one original text, by using different concordant verses. Since the Cluny author chose links different from those in Berno, his specific choice must have been characteristic of him. If the figures at Cluny were to express the same mood or idea as the mottoes, then the figures would have to exhibit those typical traits which the mottoes emphasize. Actually, the figures have none of these traits.

It is my intention to show that the sculptor of the figures was inspired by models of a very different kind. We shall see that he, too, used ideas which we can trace back far into antiquity, in addition to ideas that can almost be called modern. The sculptor of these figures does not seem to have known much about music or the technique of instruments; on the other hand, we have

seen that the author of the mottoes at Cluny had some knowledge of music and was also a churchman familiar with the text of the Bible.

The chronicler Gilo (or Gilon), in his life of St. Hugh,[41] ascribes the planning of the church at Cluny to the abbot Gunzo, whose life was miraculously prolonged in order to enable him to supervise the completion of the building. Gilo calls this abbot *magnus psalmista*, which means a man concerned with liturgical singing. Thus, we may attribute to him personally the scheme to have the eight modes of the Gregorian chant represented on the capitals of the two columns.

II

Of the figures at Cluny which we can recognize by means of the mottoes as representatives of a certain scale, there remain:[42]

1st mode: A man, seated, and plucking the strings of an instrument which he holds in his arm. The instrument has been described as a lute and is supposed to be the earliest European representation of this instrument. The hands of the player are reversed, and he plucks the strings with his left hand (Fig. 1). The sculptor apparently did not know much about the technique of playing an instrument; the hands are likewise reversed in the figure of the sixth mode.

2nd mode: A woman in a dancing pose, holding two bell-shaped instruments (one is destroyed). The shape is unusual, curving inward near the rim of the bell, instead of the usual straight-sided shape. The instruments are tied together by a string running along the arms and over the neck of the woman (Fig. 2).

3rd mode: A man seated on a chair, his head inclined toward the instrument which rests on his left knee. The chair has small arches between its legs and a protruding board for the player's feet. The instrument has an odd form. A kind of lyre is fastened on a pear-shaped body with two round holes; the crossbar for the pegs is curved; it has six strings. The musician plucks with his right hand; of his left hand four fingers are seen close together on one string of the instrument (Fig. 3).

4th mode: The fourth figure is a carillon player. A man, standing or dancing, carries over his shoulders a curved piece of wood; two bells of usual shape are attached to either end. The player twists his right arm around the piece of wood and strikes the bells from the front; with the left hand he seems to support the piece of wood. From the visual standpoint, the position of the player is very impressive, but it is nearly impossible to imagine how the instrument could have been played (Fig. 4).

5th mode: destroyed.

6th mode: A man seated; his head is destroyed; he has before him a table or a board on which the instrument rests. This instrument, a kind of dulcimer or zither, is held with the right hand and played with the left. Here again, as with the player of the first mode, the hands are reversed.

7th mode: The upper part of the figure is almost completely destroyed; one bent arm is recognizable and might suggest a flute or horn player.

8th mode: destroyed.

Do these figures correspond to a specific emotional character, or to the symbolic significance of the numbers 1 to 8? Do they correspond to the moods or ideas expressed in the mottoes?

We have shown from writings on the theory of music that there is no such thing as a definite mood for each scale. Furthermore, the mottoes at Cluny are connected with the cue melodies and their numbers, not with symbolic numbers in general. The significance of these general numbers, too, is vague. The number 7, e.g., could be used for the seven virtues as well as for the seven vices. Finally, the mottoes of mode one, two, five, and seven refer to no particular mood.

41. A. L'Huillier, *Vie de St. Hugue*, Paris, 1888, p. 360; V. Mortet, *Recueil de textes relatifs à l'histoire de l'architecture*, Paris, 1911, I, p. 272.

42. See note 2.

For the second motto, the theory has been proffered that the woman represents the number 2 insofar as it means the weaker principle as compared to the number 1.[43] But if we look for the source of the motto, the second *lex* mentioned there is not the weaker law, but both are the greatest among the commandments.

Of the third mode, it has been thought that the figure represents *Christos Soter* as related to the third day, the Day of Resurrection;[44] but the attitude of this player does not differ from those of the representatives of the first or sixth mode and does not allow us to attribute a special significance to him. The instrument has a slight similarity to the form of the antique *lyra*, an instrument sometimes held by Orpheus-Christos, the symbol of resurrection, e.g., in the catacomb of St. Calixtus. But there he is represented rising. Up to now, no representation of the rising Christ with a musical instrument is known from the Romanesque period.

The carillon player of the fourth mode has been thought to play the kind of bells used at funerals, and thus to be connected with the term *carmen planctus* of the motto. The carillon in the Romanesque period is generally the instrument of Pythagoras or of music as one of the seven liberal arts, the *musica teorica*. There might be in this figure some allusion to the funeral rites, in a context which has not so far been pointed out. The position of the carillon player may suggest a dancer. We know that, from Merovingian times on, the burial societies of Syrian Christians introduced the *dance macabre* in France. The official buriers of these rites are represented with their insignia: bier, spade, shovel, and pickax, but not with bells.[45] A frontispiece woodcut in *La danse macabre des charniers* (1485)[46] shows four skeletons with musical instruments: bagpipe, portable organ, harp, and drum with fife, but no bells. I mention these facts only in order to suggest the possibility of a relationship. I hope to prove that other sources were more important for the representation of the Cluny figures.

For the sixth figure, the mood of *pietas* has been proposed; but, again, this seated player does not show an attitude different from the representatives of the first or third modes.

These remarks only serve to point out that even if we find some signs of correlation between mood and mode, they do not seem decisive. I am not convinced that they explain the meaning of the figures, if indeed each has an individual meaning. The whole approach of allegorical interpretation, customary since the sixteenth century, seems futile. I do not deny, and I even expect to prove, that the tradition for these figures goes back in part to literary sources, but not as an expression of moods, nor with an individual meaning.

To find these sources we have to consider the figures as a group. Unfortunately, we are hampered in this respect by the fact that we have only five figures, and not the whole series of eight. What can we deduce from the figures? The five—three of them seated and playing, two dancing or standing—all represent musicians; in fact, *jongleurs*. This is shown by their costumes and by their coiffures (semi-long, with the parting in the middle). They are thus described by Rodolfus Glaber. This chronicler of Cluny relates that about the year 1000, at the wedding of Robert le Pieux (995-1031) and Constance d'Aquitaine, a peculiar group of people appeared in the retinue of the bride. They did not care for arms or horses; the way in which they wore their clothes and their hair recalled that of the *jongleurs*; however, they belonged to the courtiers. They came with the bride from the south, from a province bordering Spain.[47]

We know that the northern provinces of France and Burgundy soon after adopted this fashion, and the courtier-*jongleurs* established themselves at many seats of the nobles. The remark of Glaber clearly reveals a change in the social status of the *jongleurs*. These descendants of the actors of antiquity had occupied a low place in society up to 1000. In the eleventh century they were ad-

43. Schrade, *op.cit.* (see note 2), p. 241.
44. *ibid.*, pp. 245ff.
45. R. Eisler, "Danse Macabre," *Traditio*, VI, 1948, p. 187.
46. *La danse macabre des charniers*, ed. E. F. Chaney (*Publ. of the University of Manchester*, no. 293, Manchester, Eng., 1945), frontispiece.
47. E. Faral, *Les jongleurs en France*, Paris, 1910, pp. 20, 27, 31; Menendez Pidal, *Poesia juglaresca*, Madrid, 1924, pp. 315, 326.

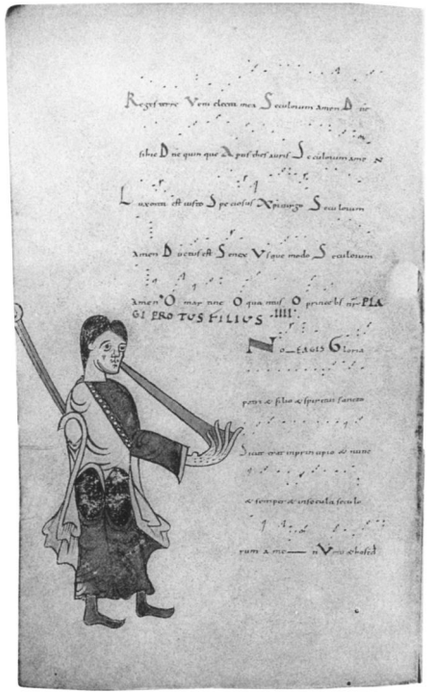
1. 1st Gregorian Mode. Cluny, Musée Ochier, capital from the abbey church at Cluny

2. 2nd Gregorian Mode. Cluny, Musée Ochier, capital from the abbey church at Cluny

3. 3rd Gregorian Mode. Cluny, Musée Ochier, capital from the abbey church at Cluny

4. 4th Gregorian Mode. Cluny, Musée Ochier, capital from the abbey church at Cluny

5. 1st Gregorian Mode. Paris, B.N., Ms. lat. 1118, *Troparium*, fol. 104r

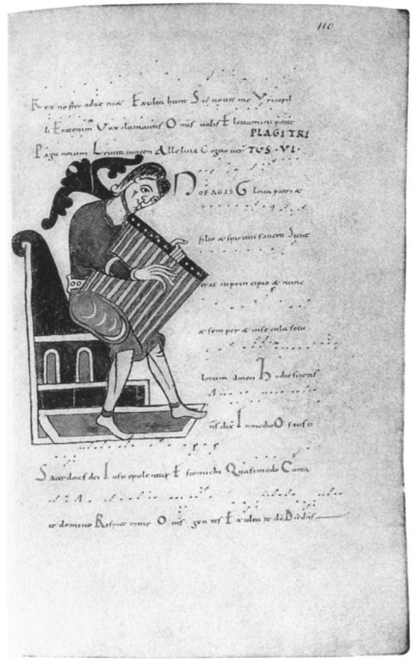


6. 2nd Gregorian Mode. Paris, B.N., Ms. lat. 1118, *Troparium*, fol. 105v

7. 3rd Gregorian Mode. Paris, B.N., Ms. lat. 1118, *Troparium*, fol. 106v

8. 4th Gregorian Mode. Paris, B.N., Ms. lat. 1118, *Troparium*, fol. 107v

9. 5th Gregorian Mode. Paris, B.N., Ms. lat. 1118, *Troparium*, fol. 109r



10. 6th Gregorian Mode. Paris, B.N., Ms. lat. 1118, *Troparium*, fol. 110r

11. 7th Gregorian Mode. Paris, B.N., Ms. lat. 1118, *Troparium*, fol. 111r

12. 8th Gregorian Mode. Paris, B.N., Ms. lat. 1118, *Troparium*, fol. 112v

mitted to the courts and were allowed to take part in liturgical plays. Their influence became so great that strong opposition arose in the latter part of the twelfth century. Their foremost deprecator at that time was John of Salisbury, who devoted a whole chapter of his *Policraticus* to the *curiales* and *histriones*.[48] But in the eleventh century nobody objected to sculptures representing *jongleurs* inside the cathedrals or on the portals, nor in illuminations in liturgical books or in the Bible.[49]

That these musicians are *jongleurs* might explain the ecstatic or frantic gestures of the two dancing figures (the second and fourth modes).

Another important clue is offered by the instruments. As mentioned before, the portrayal of the method of playing the instruments shows mistakes and misunderstandings in every case; in addition, the preservation of the figures is not very good.

The instrument of the first player is supposed to show the earliest European rendering of a lute.[50] However, it is doubtful whether the present state of the figure permits the identification of the instrument as a lute. It is further very probable that earlier instances exist. DeWald calls the instrument on fol. 23v of the Psalter, Vatican Ms. gr. 752 (10th cent.), a lute.[51] On one of the capitals of the cathedral of Jaca, begun in 1054, one of the musicians of King David holds an instrument that looks very much like a lute.[52]

If the instrument of the first player is a lute, it would point to a Spanish source for our figures, or one under Spanish influence; and the lute would be a "modern" instrument. We have two trends in the representations of musical instruments; either they are modern instruments, or they try to imitate the forms of antiquity. Edward Buhle is the only scholar so far to have made a comparative study of the instruments in mediaeval illuminations,[53] and he has found that their representation in sculpture and manuscript illumination is related. Buhle discovered that around the year 1000 an essential change took place. Until then, the illuminators drew hypothetical instruments, partly using models from antiquity, in forms which people thought likely for the musical instruments mentioned in the Bible. This was the style of the manuscripts of the Carolingian period. From 1000 on, the illuminations show modern instruments. The *rotta* or *rebec* of King David, for example, replaced the lyre or the psaltery. In the thirteenth century the development turned back to instruments styled after hypothetical Greek, Roman, or Oriental types. In the fourteenth and fifteenth centuries, modern instruments were usually portrayed. In the sixteenth and seventeenth centuries, there was a revival of the tendency to model the instruments after examples from antiquity.

The instruments of our figures follow both trends, thus suggesting their origin in a period of transition, perhaps around 1100. Again our judgment is hampered by the faulty representations. The artist was a better sculptor than student of music.

This also affects the description of the instrument of the second mode. Its characteristic feature is the string worn around the neck to the end of which the bells or, rather, the instruments are fastened. Though the form might be explained as a bell (if of unusual shape), we probably ought to identify these as castanets, which in this period were worn connected by a string. The castanets would be a suitable instrument for a dancer; they are of Spanish origin, a modern percussion instrument.

The instrument of the third mode has an odd form; it combines a modern body similar to the sound-body of a lute with an imitation of an antique *lyra*. The curved part is similar to that of an antique *lyra*; but while in that instrument the sideboards are curved and crossed by a straight board

48. J. Huizinga, *Parerga*, Basel, 1945, pp. 35ff.

49. H. Focillon, "Apôtres et jongleurs," *Revue de l'art ancien et moderne*, LV, 1929, p. 13; Ph. Lauer, *Enluminures romanes*, Paris, 1927, p. 32; A. Gastoué, "Musique dans les anciens manuscrits," *Trésors des Bibliothèques*, V, 1933/35, pp. 74ff., pl. XXIV; Reuter, *op.cit.* (see note 2), pls. 17/19, 27.

50. K. Geiringer, "Vorgeschichte der europäischen Laute," *Zeitschrift für Musikwissenschaft*, X, 1927/28, p. 560.

51. E. DeWald, *The Illustrations in the Manuscripts of the Septuagint*, III: *Psalms and Odes*, part 2: *Vaticanus Graecus 752*, Princeton, 1942.

52. Photographs in the Collection of the Metropolitan Museum, New York.

53. E. Buhle, *Die musikalischen Instrumente in den Miniaturen des Mittelalters*, Leipzig, 1903.

for the pegs, the Cluny sculptor curves the crossbar with the pegs. Because of this construction, the strings are longest at both sides and shortest in the middle. Thus we would have low sounds on the side strings and higher ones in the middle, a very unusual arrangement. Another unusual feature is the position of the hands. The lyre was held in one arm and plucked with the hand of the other arm. The Cluny instrument is held on the knee and played with both hands. Perhaps the sculptor had somewhere seen a figure of *Musica* where several instruments were represented, some of them overlapping or not clearly separated, so that he mistook two of them for one instrument. The figure of *Musica* in Chartres, e.g., has, besides the chime she is playing, a psaltery on her knees and a viol hanging on the wall. These two might be taken for one instrument by someone not familiar with music.

We have already mentioned the carillon of the fourth mode and its possible relation (or the dancer's relation) to funeral rites. The chime is the instrument which demonstrates most clearly the difference in the tones of the scale; it often appears as the instrument used by Pythagoras[54] in his experiment, but is also often played by King David. I have not found it in any other cycle of musicians from the Romanesque period before the Cluny figures, and am therefore inclined to give the sculptor credit for having introduced this instrument into the cycle. Perhaps he was inspired by some musician whom he had seen, since the form of the instrument differs from the chimes in other illuminations and sculptures of the period. In these, the bells are always affixed to a wall or frame opposite the player, who is generally seated.

The carillon player at Cluny was imitated in two churches notably influenced by Cluny: Vézelay and Autun.[55] In both cases, the carillon player is an isolated figure and does not belong to a group of musicians. In Autun, the manner of playing is even more peculiar than in Cluny. If the Autun sculptor intended to imitate the Cluny figure, he must have misunderstood his model. In Autun, six bells are fastened behind the player to a straight board on, or somewhat distant from, a wall. Two men sitting on low chairs strike the bells with hammers. In the middle stands a man in dancing position, twisting his arms around the bar on which he leans with his left arm. He shakes two of the bells; in fact, with his right hand he shakes the very bell which one of the sitting players is striking.

The instrument of the sixth figure is the only one preserved from the second pillar at Cluny. It is a zither or dulcimer, lying before the player on a board or table. It has few strings, fixed on an egg-shaped body. As in the case of the player of the first mode, the hands are reversed. It is a modern stringed instrument.

The arm of the seventh figure at Cluny, so far as it has been preserved, suggests a horn or flute player.

To sum up: the series of figures at Cluny includes five *jongleur* musicians, four men and one woman; they play three stringed and two percussion instruments; the woman is dancing. In order to find the models for these figures, we shall have to look for a group of eight similar musicians using similar kinds of instruments (stringed, wind, or percussion). For such representations we shall have to examine contemporary manuscript illumination and Romanesque sculpture. Here we must differentiate between groups and cycles of musicians, groups being represented together in one picture, cycles as separate figures such as those in Cluny, and on different pages of manuscripts.

In this period, groups of musicians generally appear as the Twenty-Four Elders, a group which we exclude for numerical reasons. Further, we have the angels in representations of the Last Judgment; their number varies. Among them I have not found any *jongleurs*. But *jongleurs* frequently occur as worshipers of Nebuchadnezzar in illuminated Bibles, and they occur among the companions of David in sculpture as well as in Psalter manuscripts.

Cycles of eight musicians may be found also in illuminated *tonarii*. Let us begin therefore by

54. E. Buhle in *Liliencron-Festschrift*, Leipzig, 1910, pp. 50ff.

55. Reuter, *op.cit.*, pl. 22.

inquiring if there are any illuminated *tonarii* containing a similar cycle. The Spanish *tonarii* of the period, sections of which Anglès published in facsimile, are not illustrated.[56] A *tonarius*, called *troparium*, from Nevers (Paris, Bibl. Nat., Ms. lat. 9449, 11th cent.; photograph in the Pierpont Morgan Library) has one illumination showing *jongleurs*. The instruments are a viola da braccio and an oliphant; beside the players we see the inscriptions *consonantia* and *cuncta musica*. A *troparium et sequentiarium* from Bamberg (Ms. lit. 5, Ed. V. 9) has only one illumination with musicians, showing King David with a harp and a man blowing a horn.[57]

There are two *tonarii* which appear to be related to the Cluny figures; these are the *Liber troparium et Prosarium* (Paris, Bibl. Nat., Ms. lat. 1118) and a *tonarius* in the British Museum (Ms. Harley 4951).[58] The Paris manuscript has three parts, two of which are collections of tropes and proses or alleluias, melodic graces that were inserted into the traditional liturgic melodies and which are important for the development of early polyphony. The middle section lists the *introitus* antiphons according to the eight modes. It will be remembered that in several *tonarii* and treatises these *introitus* antiphons are dealt with in a special section or chapter. The manuscript was written in the eleventh century in St. Martial at Limoges, a monastery belonging to the Cluny group. The middle section is illustrated with nine illuminations, eight of them introducing the sub-sections of the eight modes, and one on the page following the last sub-section. The style of the illuminations has been identified as Catalan, as in the case of several other manuscripts belonging to the Cluny school. Contacts between Spanish and French institutions of this order were frequent; even such an important task as the reorganization of the pilgrims' center, St. James of Compostela, was carried out by monks coming from Burgundian monasteries of the Cluny group.[59]

All figures represented in the Paris manuscript are *jongleurs*.[60] We can recognize them as such from their appearance, which is just as Rodolfus Glaber has described it. Besides, the two flute players for the fourth and the eighth mode are accompanied by acrobats playing with balls and knives. The figures in the Paris manuscript are as follows: for the first mode, a seated man with a bonnet in the form of a crown which shows him to be the king or leader of the group (Fig. 5). He plays a rebec with three strings. The *jongleur* of the second mode carries a large tuba; at his back appear the forked cymbals (Fig. 6). The figure for the third mode plays a Panpipe (Fig. 7). The musician for the fourth mode plays a flute (Fig. 8). The fifth mode is illustrated by a dancer, his arms lifted in a very expressive gesture (Fig. 9). The sixth *jongleur*, seated on a throne-like chair, plays a square instrument with ten or eleven strings, the long ornamented neck of the instrument is supported by his left shoulder (Fig. 10). The player for the seventh mode blows a short curved horn which might be called an oliphant, and carries in his left arm a narrow triangular instrument with five strings to be plucked (Fig. 11). The eighth musician plays a flute with a double row of holes (Fig. 12). At the end we see the picture of a dancing woman, holding two pairs of castanets fastened together by a string (Fig. 13).

The fact that musicians in this liturgical manuscript (the content of which has nothing to do with secular purposes) are not represented as clerics but as *jongleurs* and even as acrobats and dancers, confirms our belief that in the eleventh century the *jongleurs* were admitted to the higher levels

56. H. Anglès, *La musica a Catalunya*, Barcelona, 1935, pls. 15, 18, 21, 22.

57. E. de Coussemaker, "Essai sur les instruments de musique du moyen-âge," *Annales archéologiques*, III, 1845, pp. 35ff.; Buhle, *op.cit.*, pl. 9.1, gives the drawing after one of the illuminations; some others are published by H. Fischer, *Mittelalterliche Miniaturen aus der Staatsbibliothek Bamberg*, Bamberg, II, 1929; only one illumination shows musical instruments.

58. The dancing woman from the Harley Ms. is reproduced in K. J. Conant, "The Apse at Cluny," *Speculum*, 1932, p. 23, pl. VI a; the dancing woman and the player for the first mode in J. Evans, *Cluniac Art*, Cambridge, 1950, fig. 205 b and c (fig. 205 c is erroneously attributed to Ms. Paris. BN. lat. 1118, here several times erroneously called 118. The text on p. 117 mentions two figures from the Paris Ms. as representatives of the eighth mode; the dancing woman at the *finis* does not belong to a certain mode, etc.).

59. W. Neuss, *Die katalanische Buchillustration*, Bonn, 1922; E. Mâle, *L'art religieux du XIIme siècle*, Paris, 1922, pp. 148, 384, 319; M. Bernath, *Die Malerei des Mittelalters*, Leipzig, 1916, p. 100.

60. Drawings after the illuminations in Buhle, *op.cit.*, pl. 8.1; pl. 9.3; pl. 10.3; photographs in Gastoué, *op.cit.*; in Faral, *op.cit.*; J. B. Beck, *La musique des troubadours*, Paris, 1910, pls. 2/3.

of society. Their representation is thus the expression of a fashion and makes it very probable that the Paris manuscript is related to the Cluny figures.

Similarities in detail between the Paris manuscript and the sculptures are plentiful. The first mode in both instances is represented by a seated string player, though with different chairs and different kinds of instruments. The last picture corresponds to the woman of the second mode in Cluny; both women are dancing and have the instrument which I called castanets on a string hanging around their necks. The attitude of the player of the third mode in Cluny exactly corresponds to the sixth figure in the manuscript. Both are sitting and have their heads inclined toward the instrument in the same manner; the chairs are similar, and both have stringed instruments, albeit of different form. The player of the sixth mode in Cluny shows the same instrument as the manuscript.

The Harley *tonarius*, too, is supposed to belong to the Cluny group of the period and to have been written in a monastery of this order, St. Etienne at Toulouse. This *tonarius* also has illuminations at the beginning of the sub-sections, and they all represent *jongleurs*. As a source, this manuscript is less important, because it is incomplete. Only five figures are extant; of these, one is an acrobat, one a dancing woman without a musical instrument. Of the three *jongleur* musicians, the player for the first mode has a triangular harp, the player for the second mode a stringed instrument with a bow resembling that of the first player in the Paris manuscript. The player for the fourth mode has a kind of carillon.

So far, the similarities, especially the relationship between the dancing women and the seated players of the second, third, and sixth modes, point to some kind of connection between the cycles. Further, there is the fact that all the figures are *jongleurs*. Common to the Cluny and the Harley cycles is the carillon player. If we consider the players of the Paris manuscript as a group, or as a kind of orchestra, we have three stringed, four or five wind, and two percussion instruments.

Among the groups of worshipers of Nebuchadnezzar is one in a Catalan Bible (ca. 1000) that seems related to Cluny.[61] The illumination shows nine *jongleurs*, that is, six musicians and three acrobats. One of the instruments recalls the Cluny carillon; it is a gong (or chime). On long separate strings four disks or flat saucer-shaped bells hang from a curved piece of wood. The one curved end of the wood rests on the right shoulder of the player who supports the piece of wood with his right arm; with his left hand he strikes the disks. Queer as this instrument looks, it could be performed upon, while the playing of the instruments at Cluny and Autun is difficult to imagine.

There is another fact that points to a relationship between the illumination in the Catalan Bible and the Paris *troparium*, as well as the Cluny figures. Four of the instruments in the Paris manuscript also appear in the Catalan illumination: the harp of narrow triangular shape, though not as narrow as in the Paris manuscript, a curved horn, a Panpipe, and a flute with a double row of sound-holes. In both cases, this latter instrument is a misunderstood double flute; Buhle has claimed this for the figure in the Paris *troparium*.[62]

The other group of eight musicians which occurs in the Romanesque period are the companions of David. The material for this subject has always been rich, since the Psalter belonged to the most popular group of books. So far the history of these representations has not been dealt with as regards the number of players, the different kinds of instruments they use, and their significance. The number of the musicians accompanying David varies; the most frequent combinations are eight or four.

In Romanesque sculpture, we know of four instances of such groups: one at Jaca, on capitals of the cathedral, and on the door of the cathedral at Ripoll in Catalonia, both in Spain;[63] two in France, on capitals from Moissac and from the monastery la Daurade at Toulouse; on the latter two we see David with three companions.[64] In Jaca, David has eleven companions, either musicians or dancers; in Ripoll there are eight.

61. W. Neuss, *Die katalanische Buchillustration*, Bonn, 1922, p. 90, pl. 32, fig. 98.
62. Buhle, *op.cit.*, p. 39.
63. J. Pijoan, *El arte Romanico*, Madrid, 1944, pp. 61, 72; G. Sanoner, "Le portail de Santa Maria de Ripoll," *Bulletin monumental*, LXXXII, 1923, p. 352; Kingley Porter, *op.cit.* (see note 2), pls. 562 and 564.
64. Reuter, *op.cit.* (see note 2), pls. 1 and 3.

The material for the Psalters is so plentiful, and for the greater part so inaccessible, that I shall restrict myself to the manuscript Vat. gr. 752.[65] This Psalter, of Greek origin, has illuminations in Byzantine style. Here the musicians are not *jongleurs*. The Psalter has been ascribed to the tenth century, and its illuminations probably reflect earlier figures. Four of them are important to our problem. The first, a kind of title page (fol. 18v), shows David with two musicians; one, named Asaph, plays a German flute, and the other, Jeduthun, has two instruments, an oliphant and a triangular narrow harp (?). The second is the illumination for Psalm 4 (fol. 23v) and shows David, a scroll in his hand, accompanied by two musicians, one with a German flute, the other with viol and bow.

The two most important illuminations show David among eight musicians; one occupies fol. Vv, the other illustrates the *Canticle of Moses* (fol. 449v). There are two reasons why these illuminations are so important for our problem. The two groups of eight have different sets of instruments, and these seem to be typical of the two most frequently used combinations and traditions. Further, through the inscription in one of them, we learn the origin of one of these traditions.

In one of these illuminations David, seated among his companions, plays a viol with a bow; his musicians hold the following instruments: German flute, round cymbals, a small triangular psaltery, a second viol with bow, and a Panpipe (?); the last is a dancer.

In the other illumination (Fig. 14) a circle of women, in costumes of the Byzantine court, dance a round. Inside the circle stand eight musicians. They are designated as Asaph, Yemen, Ethan, Jeduthun, the sons of Kora, two "singers" and one *boukolios*. These musicians carry or play the following instruments: drum, German flute, triangular psaltery, cymbals, viol with bow, harp and Panpipe (square form). Two inscriptions surround the circle of the dancing women, one at shoulder height, one between their feet. DeWald has found the source of these inscriptions in the commentary on the Psalms by Pseudo-Chrysostomos (4th cent.).[66] He further calls attention to a passage in the preface of this commentary, where the instruments are enumerated "on which the Chorus of the prophets or the children of the prophets . . . are accustomed to play." DeWald was able to state that the instruments as listed in the commentary are akin to those represented in the illumination. This, however, is true only to the extent that they are similar. The *aulos* of the commentary becomes a German flute, and so forth. The instruments are mostly modern. The representations of the viol with bow are among the earliest recorded. Buhle did not find the German flute in Occidental manuscripts before the end of the twelfth century.[67]

An especially interesting detail concerning the similarity of the instruments is the fact that the preface attributes tuba and psaltery to the two singers (ᾠδός), who have no Biblical names, and that the same combination appears in the illumination—the two musicians called "singers" being equipped here also with tuba and psaltery. The same combination recurs in the illumination, fol. 18v, where *one* musician, Jeduthun, has the same instruments. To make this fact still more significant, we find the same combination in one of the cycles of the eight modes; the *jongleur* of the seventh mode in the Paris manuscript also has both an oliphant and a narrow triangular psaltery.[68]

Here, then, a tradition clearly connects the commentary of the fourth century with the Byzantine manuscript of the tenth or early eleventh century, for which DeWald assumes earlier manuscripts as models, and at the same time with our French manuscript, the *troparium* of the eleventh century. Other instruments, also found in the commentary, the Psalter, and the *troparium*, are the Panpipe and the cymbals. The Panpipe occurs in all the cycles, with the exception of Cluny, where it might have been the instrument of one of the destroyed figures. In the illumination of the Canticle it is the instrument of the musicians called *boukolios*; this, incidentally, was the name of the priests in the Orphic rites.[69] The cymbals in both illuminations of the Psalter have a round,

65. DeWald, *op.cit.*
66. Migne, *Patrol. Gr.*, LV, col. 534.
67. Incidentally, the chorus of the prophets is not wholly identical with the companions of David.
68. A similar combination, handled by one musician, occurs as late as the seventeenth century in the engravings of musicians by G. B. Bracelli.
69. R. Eisler, *Orpheus—The Fisher*, London, 1921, p. 18.

saucer-shaped form; in the Paris manuscript and at Cluny they seem to be replaced by another double instrument, the castanets of the second mode and the terminal figure in the Paris *troparium*.

The relationship between the Canticle illustration and our cycles becomes still more apparent if we look at the word written inside the ring of the dancing women; it is *Octoechoi*. This was the Greek, or rather, Byzantine name for the eight modes or scales, and for the book of the Byzantine liturgy corresponding to the *tonarius* of the Gregorian chant.

So far, we have pointed out the similarities; but the differences are just as interesting. As we have seen, the two groups of eight musicians, as represented in the two illuminations from the Psalter, are different, and they seem to represent two different traditions. The enumeration in the commentary and the illumination of the *Octoechoi* with the dancing women, illustrating the *Canticle of Moses*, correspond to each other; in both there are two percussion instruments, two stringed instruments, two wind instruments, and a Panpipe. In the other Psalter illumination with eight musicians, there are four stringed instruments, one percussion instrument, one dancer, one wind instrument, and a Panpipe. It is noteworthy that here David is one of the musicians, sitting in the center with viol and bow.

We find a representation similar to the latter group on the portal of Ripoll (Ripoli);[70] again, four stringed instruments—three viols and one harp—one percussion instrument, one dancer, one wind instrument, and a Panpipe. But here David appears as the leader without an instrument, in the center of the upper row. In both cases, in the second illumination of the Psalter as well as at Ripoll, the names of the musicians are not given.

On the portal at Ripoll the eight musicians are divided into two groups of four each. Four taller figures are in the upper row; four smaller ones in the lower row lead up to the scene of the bringing-in of the ark of the Lord. If we are to interpret the whole group at Ripoll as a representation of the eight scales—which might be worth considering—the upper row might stand for the authentic modes, the lower and smaller one for the plagal modes.

The connecting link between this second kind of tradition and our cycles is the dancing figure; in the Psalter and at Ripoll this figure has, so far as can be seen, no instrument; at Cluny the woman dancer of the second mode has castanets; in the Paris *troparium* we have two dancing figures, one man for the fifth mode without instrument, and the woman dancer with castanets in the terminal picture. In the Harley *tonarius* the figure for the fifth mode is a woman dancer without instrument.

A comparative table of the instruments and players as indicated in the six documents reads:

Commentary	Vat., Ps. Canticle	Paris, Ms. lat. 1118		Cluny	Vat., Ps. fol. V	Ripoll
tympana	drum—Kora	viol	1st mode	lute	viol	viol
aulos-fistula	flute—Asaph	tuba & forked cymbals	2nd mode	castanets	psalterion	harp
kymbala	cymbals—Yeman	Panpipe	3rd mode	lyre	dancer	dancer
tuba	tuba (singer)	flute	4th mode	carillon	viol	viol
psalterion	small harp (singer)	dancer	5th mode	(?)	triangle zither	viol
kithara	harp—Ethan	dulcimer	6th mode	dulcimer	cymbals	cymbals
	viol—Jeduthun	horn & triangular zither	7th mode	horn (?)	flute	horn
	Panpipe—boukolios	double flute		(?)	Panpipe	Panpipe
		castanets	8th mode			

The similarities stand out clearly, if we agree to replace instruments of antiquity with corresponding modern ones. That would mean replacing a kithara with a viol, and then with a lute

70. See note 63.

(all of them stringed instruments); or replacing the tympanon with cymbals or drum, and then with castanets (all of them percussion instruments).

Two of the instruments from the Paris and the Cluny cycles do not appear either in the commentary or the Psalter: the carillon of the fourth mode at Cluny, and the forked cymbals which the *jongleur* of the second mode carries together with the tuba in the Paris *troparium*. Both of these instruments can be seen in other illuminations and in sculpture. In sculpture, carillons occur even earlier than the eleventh century. In Psalters I have found them in manuscripts of the twelfth century, e.g., in Psalters at Hildesheim, Glasgow, and Cambridge.[71] In other kinds of manuscripts they are to be found earlier; there is an instrument similar to the Cluny carillon in the Catalan Bible of the early eleventh century, and in the same illumination is depicted a primitive carillon with one bell.[72] It may be that the sculptor of Cluny introduced his kind of carillon into the cycle of eight musicians. Indeed, there are carillons similar to the strange instrument at Cluny in cathedral sculpture influenced by the master of Cluny.[73]

The other instrument foreign to the cycles is the forked cymbals. It is taken over from original Roman monuments and can be seen on two of the earliest mediaeval representations of King David as a musician, i.e., on an ivory plaque at Paris (9th cent.),[74] and in the *Golden Psalter* at St. Gall (9/10th cent.).[75] Further, it appears as a second instrument of Jeduthun in a Cambridge Psalter (beginning of the 11th cent.).[76] This same instrument is mentioned by Buhle as a typical example of an instrument inspired by antique models, which, however, was no longer played in the ninth century but was depicted in Carolingian manuscripts.

Save for these two, all the instruments can be traced back in one way or another to one of the two traditions. One of these is given in the commentary and in the illumination of the Canticle; the other in the second illumination of the Vatican Psalter and at Ripoll. We find influences of both traditions in the Paris manuscript and in the figures at Cluny.

The connecting link between the Paris *troparium* and the Cluny sculptures are these: (1) both represent *jongleurs*; (2) the third mode of Cluny imitates in position and attitude the sixth mode of the Paris manuscript; (3) the instruments of the *jongleurs* of the sixth mode are the same; (4) the dancing woman of the second mode and her instrument are similar to the terminal picture in the manuscript.

The commentary, the illustrations of the title and the Canticle in the Vatican Psalter, and the seventh *jongleur* in the Paris *troparium* have in common the peculiar combination of two instruments, the tuba (horn) and psaltery.

The musicians in the Canticle illustration are named *octoechoi*, and the figures at Cluny are designated by mottoes as the eight modes.

One reason that the attribution of the Cluny cycle to either tradition is so difficult is its incompleteness, only five of the eight figures being extant. The second reason for difficulty is that the instruments at Cluny are rendered in such a peculiar way: some instruments are of the period, others look like fanciful imitations of antique models. The figures of the second and the sixth mode alone follow a specific tradition. The lute(?) of the first mode is perhaps the first of its kind in European art. The lyre of the third mode is an imaginary instrument; and how does the player of the carillon get into this group?

One peculiarity of the sculptor is apparent in all the figures; he cannot have understood the construction and playing technique of the instruments. Three of them are handled incorrectly; the

71. A. Goldschmidt, *Der Albanipsalter in Hildesheim*, Berlin, 1895; J. J. Tikkanen, *Die Psalterillustrationen im Mittelalter* (*Acta Soc. Fennicae*, XXXI, 5, 1903); J. O. Westwood, *Paleographia sacr. pict.*, London, 1868, pl. 41; E. Millar, *English Illuminated Manuscripts*, Paris, 1926, pl. 60; W. Galpin, *Old English Instruments*, Chicago, 1911, pls. 12, 20, 33, 44, 51.

72. Neuss, *op.cit.*, p. 90, figs. 32 and 98.

73. See note 55.

74. A. Goldschmidt, *Die Elfenbeinskulpturen aus der Zeit der karolingischen Kaiser*, Berlin, 1914, I, pl. III.3.

75. Facsimile edition: *Das Psalterium aureum von St. Gallen*, herausgegeben vom historischen Verein des Kantons, St. Gallen, 1878; A. Merton, *Buchmalerei in St. Gallen*, Halle, 1911, pp. 38ff.

76. Buhle, *op.cit.*, p. 3.

castanets are misunderstood and rendered as bells in an unusual form, and it seems impossible to play the carillon in the manner depicted. This criticism concerns only the technical rendering of the instruments, for otherwise the sculptor shows remarkable skill.

We have tried to clarify the real meaning of the famous capitals at Cluny while disposing of erroneous interpretations. We have seen that there is no common denominator for the mottoes, the figures, and the mood of each scale. The Gregorian modes did not belong to specific emotional categories in the Middle Ages any more than they do today.

We have seen that the belief that the Cluny sculptures represent the eight modes is quite justified, but that a common source for both the mottoes and the figures that portray the modes has not been established by the scholars who have written on the subject. It has been found necessary to search for different sources of origin for the texts and for the figures which illustrate them.

We have traced the literary history of the mottoes and have seen that the person who suggested them to the artist must have been a churchman familiar with the literature and tradition of music. The artist, on the other hand, was not acquainted with this tradition. Selecting a secular model and copying it exactly, the sculptor portrayed the *jongleurs* familiar to the aristocratic courts of the period.

The sculptures at Cluny, then, have been derived from two different but contemporary traditions and represent a fusion of religious and secular motifs, a fusion encountered, in part only, in the illustrations of the Paris manuscript. This would seem to be the only plausible interpretation of the otherwise contradictory nature of the mottoes and the figures on the Cluny capitals.

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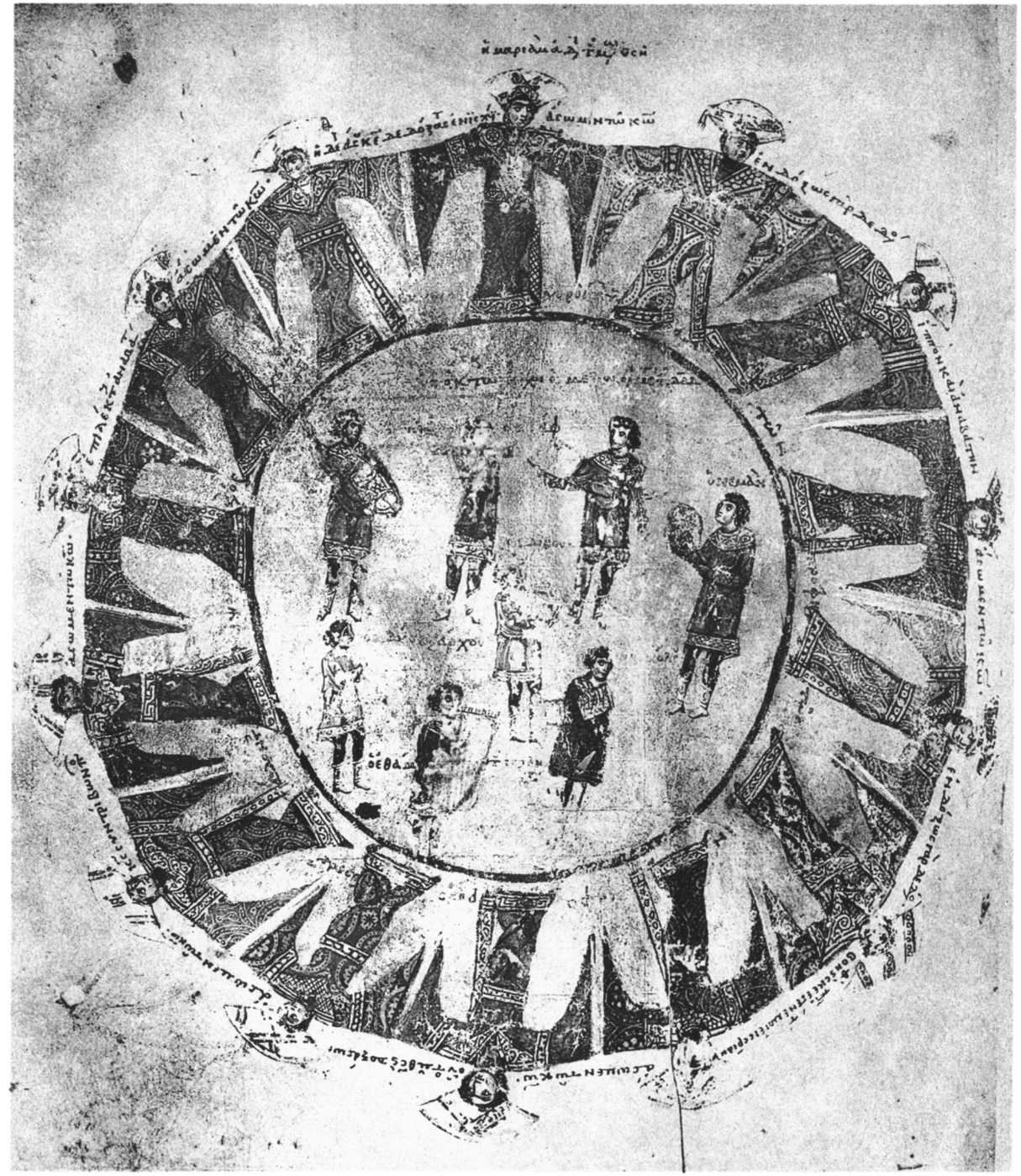
13. *Finis*. Paris, Bibl. Nat., Ms. lat. 1118, *Troparium*, fol. 114r



14. *Octoechoi, Canticle of Moses*. Vatican Library, Ms. graec. 752, *Psalter*, fol. 449v