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A contribution to the history of early Latin
minuscule and to the dating of Visigothic MSS

with seven facsimiles

by

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To
the memory of
LEOPOLD DELISLE.

Since the epoch-making contention of Scipio Maffei, the illustrious Veronese archaeologist and palaeographer, we have come more and more to recognize with him how important a rôle was played by the *Cursiva Romana*, i. e. the notarial script of the early middle ages, in the formation of nearly all types or schools of early minuscule. It was the rise and rapid spread of the Caroline book-hand which proved fatal to the local manner of writing in most centres. The traditional script with its cursive letters and ligatures completely succumbed — in one place sooner, in another later — to the minuscule whose principle was simplicity and clarity. In giving thus a new direction to book-writing, the Caroline reform interrupted a development already past its first stage, and effaced the signs of relationship which united the different pre-Caroline types. Yet we can still realize the closeness of that relationship, and get, as it were, an epitome of the history of early minuscule, by concentrating attention upon one or two typical traits. And for this purpose there is perhaps nothing more interesting or instructive than a study of the usage of *i-longa* and *ti*.

In the following studies a modest attempt is made to trace the history of *i-longa*, by giving an account of its cursive origin, its entrance into calligraphic MSS, its rapid spread and short-lived vogue in all but two schools, and the rules which in those two schools seem to have governed its use. This account can be turned to practical use by the philologist. To the palaeographer its value lies in the light it throws on the different types of minuscule in process of formation, and in the explanation it offers for such curious phenomena as the employment of *i-longa* in early examples of schools so far removed from each other by space and tradition as the Spanish and the north Italian.

The remaining and larger part of these studies deals with the history of *ti*, and tries to show through what medium the *ti*-ligature was introduced into calligraphy; how it was used in various centres and then discarded by all but the Beneventan; how the last-named script reserved it for the specific

purpose of indicating the assibilated sound of *ti*; how the Visigothic like the Beneventan graphically distinguished the hard and soft sound of *ti*; and how this practice furnishes a *terminus a quo* for dating Visigothic MSS — a criterion whose application will remove some traditional errors from Spanish palaeography and prove its validity in several mooted cases. Incidentally the question of transcribing this ligature will be raised as well as that of a similar form which has been a problem in diplomatics — a form of *z* as yet unrecorded in our literature. The question of phonetics is outside the province of this investigation. If the data based upon the MSS which served my palaeographical purposes prove also of some value as raw material and evidence to the student of Romanic languages, it will only serve to confirm my conviction that apparently insignificant and usually neglected graphic points have their bearing upon the broader problems of history and philology.

To avoid repetition the data for *i*-longa and *ti* will be given together; their history will be treated separately.

My warmest thanks are due to Professor W. M. Lindsay. These studies have profited from his interest and advice as well as by the information which he put at my disposal with rare generosity. I am also grateful to Professor C. U. Clark for his kindness in permitting me to make use of his valuable collection of Visigothic photographs prior to their publication.

Lastly it is my pleasant duty to acknowledge my indebtedness to the American School of Classical Studies in Rome under the auspices of which I have had the privilege of continuing my studies as Research Associate of the Carnegie Institution of Washington. To the Director of the school and to the members of the committee in America I herewith express my sincere sense of obligation.

It is not to be my privilege to put this monograph into the hands of Léopold Delisle. In remembrance of his kindness in making public a portion of the results, I do myself the honor of dedicating these studies to his memory.

Rome, July 1910.

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I.

The main function of i-longa with which the student of Latin epigraphy is acquainted is foreign to the i-longa of Latin MSS. The i-longa in words like *VIXIT*, *LIBERTI*, *DIVO*, *PRINCIPI* etc. of Roman inscriptions serves the specific purpose of denoting the long quantity of the letter *i*.¹⁾ In Latin MSS i-longa has no reference whatever to quantity. The use of i-longa in inscriptions is, on the whole, optional and not strictly defined. One engraver may use it, another of the same period may not. And the same engraver may use it to indicate the long vowel in one part of the inscription and not in another. It may be employed at the beginning of a line merely as a decorative element, likewise in the middle of the line as in *FLAMINE*²⁾ or out of a sense of reverence as in *IMPERATORI*³⁾ In MSS, on the other hand — at least in those of certain schools and certain periods — the use of i-longa is obligatory and subject, as we shall see, to definite rules.⁴⁾ If there are these differences, there is also one important point of similarity.

1) On the subject of i-longa in inscriptions see: Christiansen, *De apicibus et i-longis inscriptionum latinarum* (Kieler Dissert. 1889), p. 26 sqq.

2) Christiansen, l. c., p. 28. The *Corpus Inscr. Lat.* is full of such examples.

3) *Ibid.*, p. 37.

4) See below, p. 8 sq. Excepting the brief report of my observations which was made by Léopold Delisle (*Comptes-rendus de l'Académie des inscriptions*, 1909, p. 775—778) and reprinted with corrections in the *Bibliothèque de l'école des chartes* LXXI (1910), 233—235, there exists no connected account of i-longa in MSS. The usual statement found in the descriptions of plates is that i-longa occurs often at the beginning of the word and occasionally in the middle.

The use of *i*-longa to denote the semi-vocal sound, which in inscriptions is as old as the use of *i*-longa itself, is a constant feature of those MSS which regularly employ *i*-longa. Such familiar epigraphic forms as *ELUS*, *HULUS*, *CONIUNX*, *IUNIUS* etc., have their exact graphic equivalent in Latin documents and MSS. Yet there is this difference: the engraver may make a long or a short *i* in *ELUS*, *IUNIUS* etc., but during many centuries the scribe of southern Italy or Spain is obliged to use the long form — as can be seen from the evidence cited below. Against the one point of similarity, then, there are several points of difference, one of which alone is so grave as to make it quite improbable that the use of *i*-longa in MSS is a direct inheritance from inscriptions. For, if that were the case, should we not expect to find MSS with *i*-longa used to indicate the long quantity? Such MSS, however, do not exist.

Yet a point of contact between the mediaeval and the ancient practice respecting *i*-longa doubtless exists. It is to be sought, I believe, in the domain of cursive writing. As a matter of fact, we find *i*-longa in the Pompeian mural inscriptions in cursive used in the manner in which it is later employed in mediaeval documents and MSS, namely, at the beginning of the word regardless of quantity or the meaning of the word, and medially for the semi-vocal sound.¹⁾ In order to see how the ancient cursive practice was taken over and introduced into calligraphy we must examine the connecting link, i. e. the mediaeval or "later" cursive. Without going too far into detail the usage in the documents may be briefly sketched as follows.

The Ravenna documents on papyrus of the 6th and 7th centuries²⁾ — and not a few of them have come down to

1) Cf. Christiansen, l. c., p. 36 and C. I. L. IV, indices, p. 258.

2) In fact, *i*-longa is found also in earlier documents. In Marini's facsimile (*Papiri Diplomatici*, Rome 1805), pl. 6, No. 82, a. 489 I find *Id*, *Iubeatis*. But in the still older example of cursive on papyrus, in Strassburg (*Pap. lat. Argent. 1*), *i*-longa is used apparently without any system: *domIne*, *InimItabili*, *benIvolentiae* etc. Facs. Arndt-Tangl, *Schrifttafeln*, Heft 2⁴, pl. 32 A; Steffens, *Lat. Pal.*², pl. 13.

us¹⁾ — show the frequent occurrence of initial and medial i-longa: In, Interfui, Iterum, Ipsum, hulus etc. etc.

Marginalia found in 6th century semi-uncial MSS written in a slanting uncial-cursive of the same time also show the i-longa initially.²⁾

North Italian documents of the Lombard régime are conspicuous for the regularity with which they use i-longa initially and medially. Even in words like *illa* the long *i* is used. The usual examples are: Id, Iustitia, hulus etc.³⁾

The earliest south Italian documents show a similar use of i-longa. In the Beneventan centres the practice lasts well into the 13th century, and examples are known even in the 14th.⁴⁾

Although no pre-Caroline documents from the papal chancery have come down to us, those of the 9th century and after may be assumed to represent an older tradition. They show the use of i-longa initially and medially, as do the Beneventan documents, for many centuries.⁵⁾ The same holds for the non-papal documents of the city of Rome and vicinity.⁶⁾

1) They may be studied to advantage at the Vatican library and the British Museum. Facs. Pal. Society, pl. 2, 28; Arch. Pal. Ital. I, pl. 1—5; Arndt-Tangl, l. c., Heft 1⁴, pl. I c, 2.

2) I refer to marginalia of the type seen in Delisle, Alb. Pal., pl. 7 (MS Lyon 523). Similar cursive exists in Vatic. lat. 3375, Monte Cassino 150, Rome, Basilicanus D 182 and others.

3) Facs. Bonelli, Cod. Pal Lombardo, passim; Schiaparelli, Bullet. dell' Ist. Stor. Ital. 30 (1909), 2 plates.

4) Facs. Russi, Paleografia e diplomatica de' documenti delle provincie Napolitane, Naples 1883; Codex Dipl. Cavensis, Voll. I—VII, 1873—1888; Codice Dipl. Barese, Voll. I, IV and V, Bari 1897—1902; Morea, Il Chartularium del monastero d. s. Benedetto di Conversano, Monte Cassino 1892; Piscicelli-Taeggi, Saggio di Scrittura notarile, Monte Cassino 1888; Voigt, Beiträge zur Diplomatik der langobardischen Fürsten von Benevent etc., Göttingen 1902 and Archiv. Pal. Ital. Vol. VII (1909), fasc. 31, pl. 20—26.

5) Facs. Pflugk-Harttung, Specimina Selecta Chartarum Pontificum Romanorum. Stuttgart 1886; also Steffens, Lat. Pal.², pl. 58 and 62.

6) Facs. Hartmann, Ecclesiae S. Mariae in Via Lata Tabularium, Vienna 1895—1901; Fedele, in Archiv. Pal. Ital. Vol. VI (1909), fasc. 30 and Vol. VI (1910), fasc. 34.

In the Merovingian documents, of which a considerable number exist in excellent state of preservation, the *i*-longa plays a rather inconspicuous rôle.¹⁾ It is manifestly not at home there. It may be observed initially here and there. Often enough it is found in the body of a word at the end of a syllable, or at the end of a word, e. g. *nostrI*. This use, it should be noted, is also found in some semi-uncial MSS and some French 8th century minuscule MSS which recall semi-uncial, e. g. *Épinal 68*. But the Italian practice found its way across the Alps. Initial *i*-longa may be seen quite frequently in many diplomas²⁾ and other French and German³⁾ documents of the Caroline age and later, but its use is inconstant.

The Spanish notaries, as far as I can judge from the rather inadequate facsimiles of Merino and Muñoz y Rivera,⁴⁾ make constant use of *i*-longa initially and medially for *j* — precisely in the manner of the 8th century north Italian notaries. The practice lasts as long as the Visigothic script remains in vogue.

With this rapid survey before us we are more in a position to discuss the question of the origin of *i*-longa.

If we consider on the one hand the utter absence of *i*-longa in the oldest Latin MSS in uncial and semi-uncial from the 4th to the 7th century, and its gradual and tentative entrance only into uncial and semi-uncial MSS of the recent type i. e. of the 8th and 9th centuries; and on the other hand its very frequent and continued use in cursive documents dating from the 6th to the 9th century (in many cases even much later than the 9th century), it seems reasonable to explain the presence of *i*-longa in most of the pre-Caroline MSS in minuscule as the result of direct imitation of the cursive. Nor

1) Facs. Lauer-Samaran, *Les Diplômes originaux des Mérovingiens*.

2) Facs. v. Sybel & Sickel, *Kaiserurkunden in Abbildungen* (Berlin 1880—1891) especially Lieferung I and III; also Schiaparelli, *Archiv. Pal. Ital.* Vol. IX (1910), fasc. 33, pl. 1—12.

3) For German documents see facs. in Chroust's *Monumenta Palaeographica*.

4) Merino, *Escuela Paleografica*, 1780 and Muñoz y Rivera, *Paleografía Visigoda*, Madrid 1881.

would i-longa in this respect present an exceptional phenomenon. An examination of the extant examples of early minuscule of the 7th and 8th centuries shows that often enough the calligraphic scribe of those centuries did not hesitate to appropriate from the domain of the notary many another feature beside the i-longa. The fact is familiar to the palaeographer. He thinks at once of the open *a*, the broken *c*, the peculiar *t*, as well as of the more striking ligatures of *fi*, *ri*, *ti*, *te*, *ta*, *tu* etc. Moreover a comparison of the calligraphic products in minuscule of the 7th and 8th centuries with the notarial documents of the same period will convince any observer that the calligrapher borrowed freely from the notary. It is hardly necessary to demonstrate that the reverse was not the case. For the careful methods of the calligrapher were not suited to the rapid, economical and practical methods of the notary; whereas the calligrapher, in his efforts to form a minuscule script, that is a more economical script, took over cursive ligatures and cursive forms of single letters because they were more easily traceable and thus more economical. Finally, considerable light is thrown upon the origin of i-longa by the fact that it flourishes in MSS which employ cursive elements, and that it is avoided in MSS in which cursive elements are few or wanting altogether. In other words, the company in which we find i-longa is a fair indication of its origin.¹⁾ In view of the above considerations there can hardly be any serious doubt that i-longa came into MSS from the cursive.

The primary purpose which i-longa served in cursive writing can only be conjectured. The fact that it is most frequently found at the beginning of a word suggests that it owes its origin to the desire of facilitating the reading; the appearance of the long form of *i* indicating at once the be-

¹⁾ See below, p. 12. In Paris 653, a north Italian MS of about 800 A. D., this point is clearly illustrated. On fol. 6^v two hands can be seen. The first used the *ti*-ligature and the i-longa *regularly*. The other hand used neither. Cf. plate 2. This facsimile I owe to the kindness of Prof. W. M. Lindsay.

ginning of a word. Whereas the book-hand with its *scriptura continua* neglected such aids, partly no doubt for reasons of symmetry, in cursive, on the other hand, where symmetry played no rôle, where words were often abbreviated by any capricious suspension, and a short letter like *i* could be easily overlooked, the use of a long form of the letter *i* initially must have been of signal assistance to the notary who had to read or copy the document.¹⁾ Perhaps this need of giving more body to the small letter *i* was first felt in words in which letters with short strokes followed initial *i*, as *In, Imperatoris*²⁾ etc. By analogy its use may have spread to any word, so that in the 8th century north Italian documents *ille* and *ibi* are written with *i*-longa as well as *in, imperatoris* etc.

But we find *i*-longa in documents not alone at the beginning of the word, but also in the body. The reasons suggested above for using *i*-longa initially are in so far applicable to its use in the body of the word as the long form of the letter here also facilitated reading. A consideration, however, of the examples of medial *i*-longa shows that with this form of the letter went a specific pronunciation. The writing of *huIus, cuIus, maIor, IeIuniis*, makes it clear that the long form of *i* has reference to its semi-vocal sound.

Whatever may have been the reasons for the employment of *i*-longa in cursive, the important fact remains that in many pre-Caroline documents the long form is constantly used in these two ways: initially, and also medially for the semi-vocal sound.

¹⁾ In this connection it is interesting to cite Zangemeister's opinion respecting the purpose of *i*-longa in the Pompeian mural inscriptions in cursive: "Patet maxime in eis (sc. inscriptionibus parietariis Pompeianis), quae cursivis litteris exaratae sunt, inscriptionibus *i* saepe productam esse non alia de causa nisi ut eius litterae forma magis plane et perspicua redderetur". C. I. L. IV, indices, p. 258.

²⁾ At any rate, it is a striking fact that *i*-longa clings longest to such words as *in, ita* etc. even in scripts which had given up its regular employment.

It is precisely this use of i-longa that we encounter in MSS. From data given below¹⁾ the course of i-longa in MSS may be sketched as follows. Unknown to the oldest types of uncial and semi-uncial, it gradually enters into their more recent types and is used there tentatively and irregularly.²⁾ The earliest minuscule MSS of Italy, France and Spain, those MSS which are occasionally styled "half-cursive" or "minuscule-cursive" make constant use of i-longa. The regular use of it which is observable in 8th century north Italian cursive documents has its exact parallel in contemporaneous north Italian MSS. In France the i-longa is a feature of those pre-Caroline minuscule types which still cling to the cursive elements, e. g. the Luxeuil type and the α type. During the 8th century it already begins to lose ground in France, so that many a Corbie MS of the $ic\bar{b}$ type either lacks it entirely or uses it sparingly. In time it is practically eliminated from French calligraphy by the Caroline reform. To the compact, orderly and neat Caroline script such a trait as i-longa manifestly appeared uncalligraphic and was therefore avoided. Its employment in Italy lasts as long as Caroline influence does not interfere. When the scriptoria of northern and central Italy adopted the Caroline script, i-longa was given up along with the other cursive features which formed part and parcel of the native hand. In southern Italy, however, as well as in Spain, the foreign forces never possessed sufficient energy to modify the local scripts. The old cursive practice of using i-longa, therefore, continued as long as the native script remained in use.

The manner in which i-longa was used in MSS has in a general way already been indicated. But two schools demand our particular attention, for in Visigothic and Beneventan calligraphy the regular employment of i-longa lasted for over four centuries and died out only when the scripts went out of fashion. In the case, therefore, of these two schools it is ad-

¹⁾ See the evidence cited in the list of MSS p. 29 sqq.

²⁾ The presence of i-longa in an uncial MS is an unfailing sign that it is of the recent type.

visible to illustrate somewhat more fully the rules which governed the use of *i*-longa.

In Visigothic.

I. At the beginning of a word *i* has the long form.

e. g. *Iam, Ibi, Iccirca, Id, Iecit, Ignem, Ihs̄, Ille, Impar, In, Iovita, Ipse, Ira, Iste, Itinera, Ius* etc.

Exception.

When initial *i* is followed by a tall letter the use of *i*-longa is not obligatory.

e. g. *ibi, ihs, ille* (written with a short *i*).

II. Semi-vocal *i* requires the long form.¹⁾

e. g. *maIas, alebat, proIciatur, aIt, galus, eIus,*²⁾
IeIuniis etc.

The Spanish scribe adhered to these rules with unusual strictness. If he wrote *in* or *huius* with a short *i* it happened through inattention or slavish copying from an original which did not use *i*-longa. In any case he was breaking a rule of

¹⁾ It is interesting to note that Isidore does not speak of *i*-longa as a means of denoting semi-vocal *i*. He would perhaps have mentioned it, if scribes and notaries of his time had made such use of *i*-longa. His statement, however, is merely an excerpt from an earlier writer: "*i* litteram inter duas vocales constitutam bis scribi quidam existimabant ut Troiia, Maiia, sed hoc ratio non permittit. Nunquam enim tres vocales in una syllaba scribuntur. Sed *i* littera inter duas vocales constituta pro duplice habetur". Etymol. I, 27, 11.

²⁾ Much light upon Visigothic palaeography was thrown by Delisle's description of the Silos MSS in *Mélanges de paléographie et de bibliographie*. From what he says of *i*-longa (p. 56) it appears that he failed to realise the rules governing its use: "On trouve *I* capital très allongé non seulement au commencement du mot, mais encore à la fin, surtout quand la désinence est figurée sous une forme abrégative: *eIs* pour *eIus*" (italics are mine). The fact that the form is abbreviated is a matter of indifference. *eius* would have the *i*-longa even if written out. When the *us* was abbreviated the *i*-longa naturally remained. But *i*-longa at the end of a word is absolutely foreign to Spanish calligraphy. Muñoz, *Paleografía Visigoda*, has nothing on the regularity of *i*-longa in Visigothic MSS.

the script. I have noted such irregularities in very few MSS.¹⁾ The utter neglect of the rule in these cases was a proof that the scribe was laboring under foreign influences.

Here mention should be made of a type of *i*-longa peculiar to Spanish MSS. It is a long *i* with a forked top resembling on the whole a tall *y*. It is frequently found in the word *ait*. Examples are cited below in the list of Spanish MSS.

In Beneventan.

The two main rules for initial and medial *i*-longa which prevailed in Visigothic scriptoria hold for Beneventan.²⁾ There is, however, this difference between the Beneventan and the Spanish scribe: the former was more averse to using *i*-longa before a shafted letter. He regarded it as uncalligraphic and therefore eschewed it. It is only in very few Beneventan MSS — and these are all of the early period, i. e. of the 8th and 9th centuries — that we find initial *i* invariably long. The rule is to write short *i* when the following letter has an upper or lower shaft, e. g. *ibi*, *ihs*, *illi*, *ipse*, *ire* (the *r* has a shaft), *iste* etc.

Another exception to the main rule of initial *i*-longa occurs when the preposition precedes the noun which begins with *i*, e. g. *ad imaginem*, *In italiam*. In such cases the scribe was accustomed to run the noun and the preposition together, and as he wrote them together he regarded the phrase as a unit and therefore wrote short *i*. This circumstance, it may be noted in passing, seems to confirm what has been said of the purpose of *i*-longa, namely, to call attention to the beginning of a word. On the other hand, the use of *i*-longa in

¹⁾ e. g. Paris 10876 and 10877. See below list of Spanish MSS.

²⁾ How little the rule for medial *i*-longa was recognized by Rostagno (Praefatio, p. IX, to the Leyden reproduction of the Tacitus MS, Floren. Laur. 68, 2) is seen from his words: "*i* grandi, quae vocatur, usus est non nunquam librarius ineuntibus vocabulis, cum praesertim subeat *u* littera: semper, ut quidem, post *u* in vocabulo cuius; item in *iniuria*, *obiectare*, *maior*, *coniugium*, *coniunctio* cet."

deInde, exInde is doubtless due to the inveterate habit of writing *in* with the long form of *i*, the excuse being furnished by the composite character of the two words.

It is possible to cite not a few instances in which Beneventan scribes break the rules. But this is mainly the case during the formative and uncertain period of the script, i. e. during the 8th and 9th centuries. The careful scribe conscientiously observed them, and the best possible proof that they *were* rules of the script is furnished by the autograph of Leo Ostiensis (Monacensis 4623). In making the additions and corrections in his chronicle of Monte Cassino Leo was hard pressed for space. The long form of *i* is certainly not the most economical. Yet in all the pages of small and crowded writing the above rules are carefully observed.

We have seen that in at least two scripts *i*-longa was a constant feature for several centuries. In this respect the Visigothic and Beneventan are different from other hands. We have also seen that the use of *i*-longa in both these schools was governed practically by the same rules (rules which already obtained in the 7th and 8th century documents) and that of the two the Visigothic showed stricter adherence to the rules. The question which naturally arises — and it is one of no little interest to palaeography — is this: did the Visigothic serve as a model to the Beneventan?¹⁾

If it were not for the fact that nearer and more likely models existed, the answer to the above question would have to be an unqualified affirmative, considering the importance and vogue of Spanish literature in the 8th century just when the Beneventan script was springing into life. But the south Italian minuscule could easily borrow the use of *i*-longa from its own notarial products; and if it went farther for its models, north or central Italian documents as well as MSS of the 7th and 8th centuries could have supplied them. This being

¹⁾ The reverse is out of the question, since the Beneventan as a script was just beginning its existence when the Visigothic had already reached maturity.

the case, and as no actual proof exists that the Beneventan took over the practice of i-longa or any other calligraphic feature from Spanish calligraphy, it is more reasonable to explain the matter somewhat thus: as the Beneventan has many cursive elements which are not found in Visigothic, the presence of i-longa must be regarded in the same light as the presence of the other cursive elements, namely as a remnant of the traditional Italian minuscule in which cursive features, adapted to calligraphic purposes, played a large rôle.

If it is true that the Beneventan does not depend upon the Visigothic for its use of i-longa, the same can be said with even greater emphasis of the north Italian schools. For if we assume for a moment for the sake of argument the direct dependence of north Italian upon Spanish MSS with regard to this point, we are at a loss to explain the same use of i-longa in contemporaneous north Italian documents. And no one would try to maintain that Italian notaries copied from the Spanish. The opposite is not only more probable, but doubtless *was* the case. The Spanish notary built upon Roman tradition; his model was the Italian notary. The knowledge of the i-longa which the Spanish notary had he owes to his Italian cousin. The knowledge of it possessed by the Spanish scribe is doubtless knowledge gained from the notary. And the same conditions which made the Spanish scribe turn to cursive for new material also made the north Italian scribe borrow from cursive. And that he really did so can best be illustrated by two concrete examples. It is impossible not to realize the points of similarity between the Ambrosian Josephus on papyrus of the 7th century and the Ravenna documents of about the same period. It would almost seem that the calligrapher in this case also filled the post of notary. The fact that interests us now is that the Ambrosian MS, whose style is little removed from a cursive document, uses the i-longa regularly at the beginning of a word and medially when semi-vocal, i. e. precisely in the manner of later Spanish scribes and notaries. The Ravenna notary certainly did not learn from the

Spanish; nor was the scribe of the Ambrosianus under any obligation to a Spanish scribe; for even the existence of a Visigothic minuscule at that date can only be assumed, not demonstrated. But a more cogent example is that furnished by the 8th century north Italian MS Vercelli 183 (see plate 1). Several other MSS — for instance, those from Bobbio,¹⁾ — might also be pressed into service to illustrate my point. But I single out Vercelli 183 because its north Italian origin as well as its dependence upon notarial writing is practically demonstrable. First of all the general impression of the script bears distinct resemblance to the writing in north Italian documents of the Lombard régime, the main difference being that the MS is orderly and calligraphic, and manifestly the work of an expert scribe. But the scribe attempted to use a certain form of *z* (cf. plate I, line 11) which is almost unique in MSS.²⁾ This form of the letter, however, is not rare in north Italian documents of the 8th century. Here we have, as it were, caught the scribe in the act of appropriating a cursive element. Now this scribe makes constant and regular use of *i*-longa initially, and medially when semi-vocal. The contemporaneous north Italian notary does precisely the same. Far from explaining this fact as due to the influence of Spanish models — and it is important to note that both the abbreviations and the orthography show no trace whatever of Visigothic influence — the above considerations force us to admit that the writer of Vercelli 183 merely took over *i*-longa as he did the singular form of *z*, from the cursive writing practiced in his region.

The use of *i*-longa, therefore, in all the schools is due merely and entirely to the influence, mediate or immediate, of cursive upon calligraphic writing. With this in mind, we can easily understand how the Caroline reform which banished cursive elements from the book hand, was inimical to the use of *i*-longa; also, how its use happened to remain a feature of

1) See below the list of Italian MSS.

2) See below, p. 26 sqq.

Beneventan writing, which is *par excellence* the script which *calligraphicized* cursive elements; and lastly how two such distant schools as the north Italian and the Spanish used the i-longa in precisely the same way. Maffei's view of the common origin of the different types of minuscule is instructively borne out by the results of this little investigation of the use of i-longa.

i-longa and philology.

Heretofore our considerations have been purely palaeographical; but the question has also its practical side.

Some of our important authors have come down to us through the medium of Beneventan or Visigothic transmission. When such a text depends mainly upon a single MS, and that MS is in a bad state of preservation — I need only mention the *Annales* and *Historiae* of Tacitus, Varro's *de Lingua Latina* and the fragments of Hyginus in Beneventan writing — its editor will not fail to profit from the rules formulated above (cf. p. 8 sq.). For some of the errors which creep into the text are manifestly due to ignorance of these rules. No less a philologist than Halm, in his edition of the fragments of Hyginus (Monacensis 6437) misread i-longa for an *l*. His unfamiliarity with another rule in Beneventan, that of the ligature *ri*, was the cause of two errors in one word. Halm gives *malorum* where the scribe wrote *maiori*¹⁾ with i-longa as is required by the rules of his school.

In a passage in the *Historiae* of Tacitus (IV, 48, 10) editors have wavered between the readings *ius* and *uis*.²⁾ Its last editor, Andresen, gives: *legatorum ius adolevit*. The Beneventan MS upon which the text is based (Floren. Laur. 68, 2) is hardly legible on that page as the ink has grown very pale. It was in fact illegible in the time of the humanists, as appears

1) Cf. Kellogg, in *Amer. Journal of Philology* XX (1899) 411.

2) Cf. Andresen, In *Taciti Historias studia critica et palaeographica* II (1900) p. 13.

from the interlineal transcription of the text.¹⁾ But the two words are impossible to confuse in Beneventan, for *ius* must be written with i-longa and *uis* must begin with a short letter. The MS, even in its present state, shows plainly that the first letter was short, in which case the correct reading is *uis* and not *ius* — correct at least palaeographically.²⁾

The resemblance of i-longa to the letter *l* could not but become a stumbling-block to ancient copyists in whose schools i-longa was not a rule. After the 9th century a continental scribe copying from a Beneventan or Visigothic original could easily mistake *aiebat* for *alebat*, *maias* for *malas*, *obiectat* for *oblectat* etc. Consequently editors must be mindful of this source of error, particularly if there is reason to believe that the archetype was Visigothic, Beneventan or in early pre-Caroline minuscule.³⁾

The fact that i-longa did service for semi-vocal *i* in Spanish and Beneventan calligraphy may in a measure account for the relatively frequent confusion of *i* and *g* in the MSS of those two schools. Owing to similarity of pronunciation this interchange is by no means uncommon in other schools.⁴⁾ The

¹⁾ The partial disappearance of the ink is noticeable in a great number of Beneventan, especially Cassinese MSS of the 11th century. It was evidently due to the manner of treating the parchment then practiced, for the ink has grown pale on one side of the leaf, the other, the hair-side, having retained the ink much better.

²⁾ Cf. the Leyden reproduction of the MS in the De Vries series: *Codices Graeci et Latini photographice depicti*, tom. VII, 2, fol. 94^v, col. 2, line 21.

³⁾ Cf. Tafel, *Die Überlieferungsgeschichte von Ovids Carmina Amatoria* (Münchener Diss. 1909) pp. 27 and 36.

⁴⁾ On the confusion of *i* and *g* owing to the similarity of sound see the following works whose title in full is given on p. 16 n. 2: Corsen, *Über Aussprache* etc. I¹, 126 sqq.; Schuchardt, *Vocalismus* I, 65, see p. 70: "Im gotischen Alphabet ist $G = J$; zu des Ulfilas Zeit muß also *g* vor *e* und *i* allgemein wie *j* gelautet haben"; Bonnet, *Le Latin de Grégoire* etc., p. 173 sq.; Haag, *Die Latinität Fredegars*, p. 867; Carnoy, *Le Latin d'Espagne* etc., p. 154—5.

ancient grammarians had already treated of semi-vocal *i*.¹⁾ And the interchange between semi-vocal *i* and *g* is evidenced by inscriptions, e. g. GEN for IAN (VARIAS) or GEIUNA for IEIUNA.²⁾ But in MSS we find not only *g* for semi-vocal *i*, but also *i*-longa i. e. semi-vocal *i* for *g*.³⁾ The latter type of error seems to me less likely in a script in which the semi-vocal *i* has not a distinct graphic form. It is the presence of the graphic distinction between semi-vocal and vocal *i* which often occasions the use of *i*-longa for *g* on the part of the Visigothic and Beneventan scribes. I cite the following examples from Beneventan MSS:

Monte Cassino 332, saec. x, p. 13 dilesta for digesta,
p. 38 quadralesime;

Floren. Laur. S. Marco 604, saec. xi, conluie for coniuge;
Monte Cassino 289, saec. xi, agebat for aiebat, progecit
for proiecit;

Oxford Bodl. Canon. Class. 41, IuIera for iugera;

Monte Cassino 303, saec. xi, in. Iesserunt for gesserunt;
Floren. Laur. 68, 2 (Tacitus), saec. xi, Iestus for gestus etc.

The confusing of semi-vocal *i* and *g* is not as familiar to editors as one might expect. An instructive case in point has been kindly brought to my attention and has since been published by the Reverend Dom De Bruyne.⁴⁾ He points out that in the important MS *k* of the gospels (Turin G VII, 15) the passage Mark XV, 11 is thus given: 'sacerdotes autem et scribae persuaserunt populo ut magis *agerent* barabbam dimitte nobis'. Puzzled by the word *agerent* some editors, as

1) Cf. Keil, Gram. lat. I, 13; VI, 333; Isidor. Etymol. I, 27, 11.

2) C. I. L. V, 1717; XII, 2193, 934, 3189, 649 etc. See also Pirson, La langue des inscriptions latines de la Gaule, p. 75: "l'*i*-longa ayant fini par tenir lieu du *jod* dans les documents de la décadence".

3) The use of *g* for *j* in Visigothic Verona 89 was noted by the editors of the Nouveau Traité (III, 449 nota).

4) Cf. Revue Bénédictine XXVII (1910) 498.

Burkitt and H. v. Soden, rejected it altogether and substituted *dicerent*; another editor, W. Sanday, explained *agerent* as used in a "special sense". But the original reading was manifestly *aierent*.¹⁾

II.

Assibilation of *ti*. The *ti*-distinction.

As there were two distinct sounds of *ti*, methods were in time adopted by both scribes and notaries of graphically marking the difference of pronunciation.²⁾ In some schools the distinction between soft and hard *ti* came to be represented by two different forms. Where that did not happen, *ci* often did service for assibilated *ti*. The practice of the various centres in this respect is on the whole sufficiently consistent to allow us at times to derive ideas of the provenance of a MS by a

¹⁾ Another instance cited by De Bruyne is that of *agis* for *ais*, which also proved a source of worry to two editors. Cf. l. c., p. 498. There are other biblical passages where the confusion occurs in parts of the verb *aio*. Cf. Wordsworth and White, *Novum Testamentum* I, 757. Bonnet (l. c., p. 173) mentions similar corruption in the texts of Gregory's *Historia Francorum*.

²⁾ On the phonetic value of assibilated *ti* and its interchange with *ci* see: Corssen, *Über Aussprache, Vokalismus und Betonung der lateinischen Sprache* I¹ (1858) 22 sqq. The second edition, 1868–70, I did not have at hand; Schuchardt, *Der Vokalismus des Vulgärlateins* I (1866) 155 sqq., III (1868) 317; Joret, *Du c dans les langues romanes* (Paris 1874) p. 66 sqq.; Seelmann, *Die Aussprache des Lateins* (Heilbronn 1885) p. 320; Bonnet, *Le latin du Grégoire de Tours* (Paris 1890) p. 170 sqq. and p. 751 "l'assibilation de *ci* et *ti* est un fait accompli" scil. in the time of Gregory of Tours. See also: Haag, *Die Latinität Fredegars*, in *Romanische Forschungen* X (1899) 864 sq.; Pirson, *La langue des inscriptions latines de la Gaule* (Brussels 1901) p. 71 sqq.; Carnoy, *Le latin d'Espagne d'après les inscriptions* (Brussels 1906) p. 141 sqq.; see also Meyer-Lübke in *Gröbers Grundriß der romanischen Philologie* I (Straßburg 1904–6) 475.

study of its *ti* usage. This point has heretofore received less attention than it merits.¹⁾

As I shall often have occasion to speak of assibilated and unassibilated *ti*, it is advisable to make the points clear at the outset.

The difference in the pronunciation between assibilated and unassibilated *ti* may already be observed in Roman inscriptions of the 2nd century.²⁾ The question received due attention from the grammarians. We have longer or shorter treatment of it by Consentius³⁾, Pompeius⁴⁾, Servius in his commentary of Donatus⁵⁾, Papirius⁶⁾ and Isidore⁷⁾. Other anonymous grammarians of the later middle ages also touched upon the subject.⁸⁾ I select for quotation the passage from Papirius who wrote about 400 A. D.:

1) In giving the arguments against the Italian origin of the famous Missale Gallicanum from Bobbio (now Paris 13246) Traube never mentioned the fact that such spelling as *Poncio, tercia* etc. was un-Italian and particularly typical of French MSS of that time. Cf. L. Traube, Paläographische Bemerkungen, in Facsimiles of the Creeds, edited by A. E. Burn, p. 45 sq.

2) Cf. Ferd. Schultz, Orthographicarum Quaestionum Decas, Braunschweiger Programm, Paderborn 1855; and E. Hübner, Neue Jahrbücher LVII, 339 sq.

3) Keil, Grammatici Latini V, 395.

4) Keil, l. c. V, 104; V, 286. I quote this excerpt: "fit hoc vitium (iotacismus), quotiens post *ti* vel *di* sequitur vocalis ubi *s* littera est, ibi non possumus sibilum in ipsa *i* littera facere quoniam ipsa syllaba a litteris accepit sibilum etc."

5) Keil, l. c. IV, 445 "iotacismi sunt, quotiens post *ti* vel *di* syllabam sequitur vocalis etc.". See also Keil, l. c. V, 327.

6) Keil, l. c. VII, 216. For this citation I am indebted to Dr. P. Lehmann.

7) Etymologiae I, cap. 27, 28 = Migne, Patrolog. Lat. 82, col. 104, "*y* et *z* litteris sola Graeca nomina scribuntur. Nam *justitia* *z* litterae sonum exprimat, tamen, quia Latinum est, per *t* scribendum est. Sic *militia, malitia, nequitia* et caetera similia".

8) Cf. Thurot, Notices et Extraits des MSS etc., Vol. XXII, part 2 (1869) p. 78, who gives the following excerpt from the 10th cent. MS Paris 7505. "Nunquam enim *T* ante duas vocales, *I* post ipsam, priore non

“Justitia cum scribitur, tertia syllaba sic sonat, quasi constet ex tribus litteris *t*, *z* et *i*, cum habeat duos, *t* et *i*. Sed notandum quia in his syllabis iste sonus litterae *z* inmixtus inveniri tantum potest, quae constant ex *t* et *i* et eas sequitur vocalis quaelibet, ut *tatius* et *otia justitia* et talia. Excipiuntur quaedam nomina propria, quae peregrina sunt. Sed ab his syllabis excluditur sonus *z* litterae, quas sequitur littera *i*, ut *otii iustitii*, item non sonat *z*, cum syllabam *ti* antecedit littera *s*, ut *istius castius*.”¹⁾

The statement of Papirius describes exactly the method of distinguishing the two sounds of *ti* which was followed by mediaeval scribes and notaries as far as that method can be derived from graphic distinctions. There is only this difference: in the case of *ti* followed by *i* no exception was made. The rule was simply this:

ti before any vowel has the assibilated sound. When preceded by the letter *s*, *ti* has the unassibilated sound.²⁾

tamen *s* precedente venire potest ut *species*, *glacies* . . . *ocium spacium* . . . *tercius* nisi sint primitiva a quibus *T* retineat, ut *scientia* a *sciente*, *sapientia* a *sapiente* etc. On same page “*t* ergo *s* precedente sonum non immutat, ut *molestia*, *modestia*, *ustio*, *quaestio* etc.”. Cf. also p. 144—5.

¹⁾ See preceding page, note 6.

²⁾ In his Praefatio (p. IX) to the Leyden reproduction of the Medicean Tacitus (Flor. Laur. 68, 2) Prof. Rostagno tried to formulate the rule governing the use of the two kinds of *ti*, but he was not successful because he failed to realize that it was a case of graphically representing a phonetic distinction as appears from his words: “subeunte enim vocali, *ti* litterae uno ductu (i. e. our *ti* ligature which in Beneventan is reserved for the assibilated sound) per compendium scriptae exstant, exceptis quidem, ut par est, comparativis adjectivorum in — estus — ustus desinentium, ut *iustjor* f. 11^r A. XII, 40, 7 etc. Cf. *questjore* f. 9^v, XII, 26, 1, et ita passim”. The reason why the Beneventan scribe used the ordinary *ti* in the above examples is explained in the citations from Papirius. The scribe also wrote *istius* and *hostium* with the ordinary *ti* for the same reason that he thus wrote *iustior* and *quaestiore*, i. e. for phonetic reasons, since *ti* followed by a vowel is unassibilated when an *s* precedes. The statement in Muñoz y Rivero’s *Paleografia Visigoda*, p. 105, is inexact and suggests that he also missed the essential point in the matter.

As will be seen from MS evidence adduced below many centuries had to pass before the phonetic distinction between the two sounds of *ti* was graphically reproduced.¹⁾

The Ligature *ti*. Its Forms.

In rapid writing the letter *t* particularly lends itself to combination with the following letter. The cross-beam of *t*, by being drawn down, readily forms part or even the whole of the next letter. The ligatures *te*, *tu*, *tr* and *ta* amply illustrate this tendency, but whereas they furnish examples of partial coincidence, we have in the ligature \mathfrak{t} complete coincidence, since the continuation of the cross-beam constitutes the letter *i*. Cursive *t* standing by itself would look thus: \mathfrak{t} . By drawing down the horizontal stroke without removing the pen we get \mathfrak{t} . Thus arose a form which plays an interesting part in Latin palaeography.

There are several ways of forming the ligature \mathfrak{t} . It may be made in two strokes, or without removing the pen. The latter way is more usual in cursive, the former in MSS. An analysis of the ligature shows that the upper arc or semi-circle corresponds to the cross-beam of the *t*, and that the point where the curves meet corresponds to the point where the vertical and horizontal strokes of the *t* meet. In some cases the scribe or notary begins with this point of juncture. First the lower half-curve is made, then the pen is placed at the initial point and the upper loop with its tail or continuation is formed. In either cases the pen starts at the top and forms first the two half-loops, like broken *c*, then the pen is placed at the same point and the vertical line representing the cross-beam of *t* and the letter *i* is traced. If made without removing the pen, the ligature began at the point where the two curves join, but after forming the lower curve the pen

¹⁾ The spelling *ci* for *ti* is much older than the conscious attempt to represent the two sounds of *ti* by two distinct forms. But *ci* for soft *ti*, instructive as it is phonetically, is after all misspelling.

was not lifted up, but returned to the starting-point in a straight line, then continued as in the case above, thus producing a form resembling . Another form of the ligature *ti* which deserves mention occurs in the earliest cursive extant, especially in the Ravenna documents and later in Insular MSS. It differs from the forms already described in lacking the upper half-curve. It resembles somewhat the letter *q* with the vertical stroke extending above the loop, thus: .

Origin. The ligature of *t* and *i* is so obviously of cursive origin that no demonstration of the fact is necessary.¹⁾ It is sufficient to remember that the ligature is found in documents as early as the 5th century when no MS used it, and that the first MSS which show the ligature are practically written in cursive.

As in the case of *i*-longa, here too a brief survey of the manner in which the notaries of the different centres used the ligature may be found instructive, for the light thrown upon the relation between cursive and calligraphic writing.

Usage in Cursive. A form of the *ti*-ligature is already found in the well-known letter on papyrus (Pap. lat. Argent. 1) of Strassburg.²⁾ It is used regardless of the sound: *scholasticos*, *suggestione*. It is used indifferently in a document of 489 reproduced by Marini (Papiri Diplomatici, pl. 6, no. 82). The celebrated documents of Ravenna of the 6th and 7th centuries make very frequent use of the ligature regardless of the *ti*-distinction: *designatis*, *mancipationi*, *testis*, *pretio* etc.³⁾

In the peculiar uncial-cursive of the 6th century which is found in many semi-uncial MSS as marginalia, the ligature is found: *uiginti* in Paris 12097;⁴⁾ *uitiatis*, *utilitas* in Lyon 523.⁵⁾

¹⁾ Not all ligatures are necessarily cursive. Combinations of *o* and *s*, *u* and *s*, *n* and *t* are peculiarities of uncial writing, just as the combination of *i* and *t* at the end of a line is typical of Spanish minuscule, but hardly of its cursive.

²⁾ For facs. see p. 2, note 2.

³⁾ Cf. p. 3, note 1.

⁴⁾ Facs. Delisle, *Le Cabinet des MSS*, pl. III, 3.

⁵⁾ Facs. Delisle, *Alb. Pal.*, pl. 7.

The ligature **ſ** is a constant feature in the documents of the Lombard régime. It is used indifferently: **ſ**bi, uindi**ſ**onis, por**ſ**onem, ex**ſ**ma**ſ**onem, Ius**ſſ**a etc.¹⁾

I found **ſ** used indifferently in several 8th century central Italian documents preserved in the Archives of Lucca.²⁾

In the Merovingian documents, however, **ſ** is rarely used.³⁾ I noted it in a document of 688: quolibe**ſ**psa = quolibet ipsa.⁴⁾ The spelling *ci* for assibilated *ti* is the rule rather than the exception in these documents. In some diplomas of Charlemagne **ſ** still occurs e. g. comi**ſ**bus, institu**ſ**s (a. 775); auctorita**ſ**s (a. 775); pala**ſ**o (a. 775); pra**ſ**s, tradi**ſ**onis (a. 782).⁵⁾ It is only rarely to be seen in later diplomas. I noted trinita**ſ**s in one of the year 902. The ligature **ſ** is found in St. Gall documents of 752, 757, 772 and 797, used indifferently: agen**ſ**s, pra**ſ**s, dona**ſ**ionem etc.⁶⁾

The reign of Charlemagne may be said to mark a turning-point in the history and function of the ligature **ſ**. The influence of the Caroline reform in writing drives out the ligature. This is more noticeable in France than in Italy. The notaries of Italy however begin about the year 800 to reserve the ligature for the assibilated *ti* — a practice which lasts for centuries. Thus in Tuscan documents **ſ** is still found in the 11th century;⁷⁾ in southern Italy some notaries use it in the 13th and even in the 14th century, always for assibilated *ti*.⁸⁾ The

1) Bonelli, op. cit. passim see p. 3, note 3.

2) Examples are the documents *L 75, a. 713—4, *N 100, a. 773, *B 65, a. 773, *G 46, a. 807.

3) Facs. Lauer-Samaran, op. cit., p. 4, note 1.

4) Facs. Arndt-Tangl, Heft I⁴, pl. 10.

5) Facs. v. Sybel and Sickel, Kaiserurkunden in Abbildungen. The five diplomas cited are reproduced respectively in Lief. I, 2; Lief. III, 3; Lief. I, 3; Lief. I, 4 and Lief. I, 13.

6) Facs. Arndt-Tangl, Heft III⁴, pl. 71 and Steffens, Lat. Pal.² pl. 38.

7) Facs. Collezione Fiorentina, pl. 36 of a document of 1013. One of the earliest instances of the ligature for soft *ti* is in a Pisan document of 780, facs. Collez. Fior., pl. 29.

8) Cf. works cited p. 3, note 4.

same is true of the peculiar script of the papal chancery. We find the ligature in the oldest extant documents as well as in papal bulls of the 11th century — always for the soft sound of *ti*.¹⁾ As soon as the characteristic script is supplanted by the papal minuscule the ligature disappears and somewhat later the *ti*-distinction.²⁾ The same is true of the cursive written by the notaries of the city of Rome and vicinity.³⁾ In a document of 1083 the *ti*-ligature still has its traditional use;⁴⁾ in documents of the early 12th century we begin to miss both the ligature and its distinctive function.⁵⁾

It is important to note however that during the 11th century we find in documents of northern Italy and Ravenna a ligature of *ci* which is strikingly like the ligature of *ti*. That the ligature represents *ci* and not *ti* is established beyond a doubt by the circumstance that when the same word is used in the same document by a hand writing ordinary minuscule or when it is repeated by means of tachygraphic signs, *ci* is used and not *ti*.⁶⁾

¹⁾ See facs. in Pflugk-Harttung, op. cit., p. 3, note 5. A papal bull of 1098 still has the ligature. Cf. *ibid.*, pl. 47.

²⁾ For I noted that the *ti*-distinction is carefully observed in two documents of 1127 and 1138 written in ordinary or papal minuscule. Facs. Steffens, *Lat. Pal.*², pl. 80 and 81^a.

³⁾ Facs. Hartmann, op. cit., p. 3, note 6 and Fedele in *Arch. Pal. Ital.*, Vol. VI (1909) fasc. 30 and fasc. 34 (1910).

⁴⁾ Hartmann, op. cit., pl. 26.

⁵⁾ Hartmann, op. cit., pl. 27, a. 1107 and pl. 28, a. 1110.

⁶⁾ Professor L. Schiaparelli who has kindly called my attention to this fact, furnished me with these examples: a document of Pavia of Dec. 1029, now in the Archives of Nonantola, has *de*  *ma* (I do not attempt to give the exact forms of the ligature) *ti*  *nense*, *fa*  *as*, *sancti*  *quiri*  *quiri*  *quiri*, and the tachygraphic signs give *querici*. In a document of Piacenza of Dec. 31, 1007 we have *Domini*  which must be expanded by *ci*. Cf. Schiaparelli, *Tachigrafia Sillabica* (Rome 1910) p. 38. Other documents have *pecia*, *tercia* in tachygraphic signs, and in the text *pe*  *a*, *ter*  *a*. Signor Pozzi who is working upon the later Ravenna documents has given me numerous instances of the ligature for *ci* and not *ti* in Ravenna documents. To him and Professor Schiaparelli I here express my warm thanks.

The Beneventan notary practices the *ti*-distinction even as early as the end of the 8th century,¹⁾ though the indifferent use of the ligature occurs during the 9th century. Later the notary shows the same care in distinguishing the two sounds of *ti* as the scribe. The practice lasts as long as the peculiar script remains in use.²⁾

Spanish notaries, as far as I can judge from an examination of facsimiles, observe the *ti*-distinction. It should be noted that at first (during the 8th and 9th centuries) **ʒ** serves for assibilated *ti*, and later, that is during the 10th and 11th centuries, **œ** performs that function precisely as in Visigothic MSS. The more recent Visigothic documents show a marked tendency toward employing *ci* for soft *ti*.³⁾

So much then to give an idea of the wide use of **ʒ** in documents and of its specific function in many of them since the time of Charlemagne.

Usage in MSS.

We are now ready to examine its use and function in MSS. This examination will help to bring out the closeness of relationship which existed between cursive and calligraphic writing. From the evidence given below the history of this ligature and of the *ti*-distinction in Latin MSS may be summarized as follows.

In the oldest MSS in uncial and semi-uncial we find neither **ʒ** nor the *ti*-distinction. In the earliest French minuscule MSS of the 7th and 8th centuries **ʒ** is used indifferently. It is still found in some MSS of the Corbie **ucb** type, but the great majority of them do not employ it. In a number of MSS of the early Caroline epoch, MSS which still use the open *a*

1) Cf. Cod. Diplom. Cavensis I, pl. 1.

2) For other facsimiles see works cited p. 3, note 4.

3) Cf. Merino and Muñoz cited p. 4, note 4. See also below, part IV, where Spanish usage is discussed.

and the *ri*-ligature, the form **ʒ** is still to be found, but always used indifferently. With the spread of the Caroline minuscule its use gradually dies out. It is scarcely found in MSS written after the beginning of the 9th century. Its presence in a French MS is a fair hint of its date.

As for the *ti*-distinction in French MSS, the practice apparently never took root. It is only in a few MSS of the 8th century, and only in portions of these, that the attempt to observe the distinction is noticeable.¹⁾ Curiously enough, **ʒ** stood for the hard sound and ordinary *ti* for the soft sound of *ti*. Of no small importance, on the other hand, is the fact — which doubtless stands in some causal relation with the absence of the *ti*-distinction — that *ci* often stood for soft *ti*.

The ligature **ʒ** is manifestly at home in Italy. We find it already in the earliest examples of Italian minuscule where (as in contemporaneous documents) it is used indifferently for both the soft and the hard sound. At about the end of the 8th century both in north and south Italy attempts are made to observe the *ti*-distinction, reserving **ʒ** for the assibilated sound. The ligature **ʒ** disappears from the north Italian scriptoria during the first decades of the 9th century, owing to the influence of the Caroline reform. In south Italy, on the other hand, where the Caroline reform did not penetrate, **ʒ** remained. Its one function was to represent assibilated *ti*.

In Spanish calligraphy **ʒ** is in reality but a makeshift, occurring chiefly at the end of a line because space was wanting for the normal *ti*. To make the distinction between the two sounds of *ti* other means were used (see below, Part III). As in Beneventan, here too *ci* is rare. It becomes frequent as soon as the Visigothic gives way to the ordinary minuscule in which the two sounds of *ti* are not differentiated.

The absence of such spelling as *nacio*, *leccio* in Beneventan and Visigothic MSS is directly and causally related to the

¹⁾ Cf. MSS: Paris 12168; Laon 423; Laon 137; Paris 8921.

presence of distinct forms for differentiating the assibilated and unassibilated *ti*.¹⁾ Of this there can be no reasonable doubt.

Insular MSS do not make the *ti*-distinction. The form of the ligature used in them is probably of semi-uncial origin, and is found in MSS posterior even to the 9th century.

The transcription of the ligature.

In view of what has been said of the ligature the question of how it should be transcribed may seem gratuitous. Yet this is not the case. For scholars are not at one on the subject. There are those who transcribe the ligature by means of *ci*.²⁾ That this is incorrect is proven not alone by the origin of the ligature which is simply a combination of *t* and *i* but by the fact that for generations scribes and notaries used the ligature in words like *satis*, *tibi*, *peccati* as well as in words like *natio* or *uenditio* etc. There are, to be sure, cases where notaries used a ligature like this for *ci*,³⁾ but in MSS this is hardly possible. That in Beneventan the ligature may never be transliterated by *ci* is proven by the fact that words like *provincia*, *specie*, *Decii*, *socio*, *atrocius* etc. are written with *ci* and practically never with the ligature. We see then that the Beneventan scribe made a careful distinction between *ci*

¹⁾ This observation was already made by Mommsen in his description of the Beneventan MS. Vatic. lat. 3342. See the preface to his edition of Solinus, p. CIV, where he quotes Traube, *O Roma nobilis*, p. 13, note 7. See also Bluhme in Pertz' *Archiv* V, 259.

²⁾ Cf. Federici's description of Rom. Casanat. 641^I in *Archiv. Paleogr. Ital.* III, fasc. 22, also *op. cit.*, Vol. III. *Notizie dei facsimili*, p. XIII, published in 1910. I find the ligature transcribed by *ci* in the word *Translatio* occurring on fol. 31 of the Beneventan MS in the library of H. Y. Thompson. See *A descriptive catalogue of fifty MSS in the collection of Henry Yales Thompson* (1898) p. 87 sqq.

³⁾ See p. 22, note 6.

and soft *ti*. And the fact that he (as well as the Visigothic scribe) possessed a special way of writing assibilated *ti* doubtless accounts for his rarely writing *ci* for *ti*, so that such spelling as *nacio*, *leccio*, *pocius*, which fill the pages of early French MSS, are practically a rarity in Beneventan or Visigothic.¹⁾

The transcription of the ligature ᚩ in documents was some years ago the subject of lively dispute.²⁾ Without entering the discussion I may state that I hold with Lupi against Paoli that the ligature ᚩ should be rendered by *ti* regardless of what its probable pronunciation may have been. When such extraordinary forms are encountered as *acᚩione*, with the superfluous *i*, or *aᚩᚩo* in which the ligature has plainly the value of *z* and not of soft *ti*, the editor ought to call attention to that fact.³⁾ The instance just mentioned of *aᚩᚩo* for *azzo* brings up an interesting question. Is it not possible that in such a case we have perhaps a reminiscence of a form of *z* which vanished in time, but the use of which in documents

¹⁾ There is a form of *t* in Visigothic which strongly resembles *c*, one must therefore be skeptical of transcriptions with *ci* for soft *ti*, if the MS is Visigothic.

²⁾ Cf. C. Paoli, *Miscellanea di paleografia e diplomatica*. TI, ZI, Z in *Archivio Storico Italiano*, Serie IV, Vol. 16 (1885) p. 284 sqq.; C. Lupi, *Come si debba trascrivere il nesso TI*, in *Archiv. Stor. Ital.*, Ser. IV, Vol. 20 (1887) p. 279 sqq.; *ibid.* Paoli's reply. Paoli transcribes the ligature regularly with *zi* when it is assibilated. Cf. *Collez. Fiorent.*, plates 21 and 29. Other Italian diplomatists transcribe the ligature by *ti*. Cf. Fedele, *Archivio della R. Società Romana di Storia patria* XXI (1898) p. 464 and Schiaparelli, *Bulletino dell' Istituto storico Italiano*. No. 30 (1909) p. 53.

³⁾ The question deserves further investigation. I learn through the courtesy of Dr. F. Schneider that this strange phenomenon is to be noted in a Tuscan document of 1043. Cf. *Quellen und Forschungen* XI (1908) p. 33. Curiously enough, I have found two instances of superfluous *i* after the *ti* ligature on a single page (*uitium*, *quotiens*) in the Beneventan MS Paris 7530 (Monte Cassino), saec. VIII ex. This page, fol. 222, is being reproduced in Part I of the *Scriptura Beneventana*.

of the 8th century is fully attested? This form of *z*, by reason of its resemblance to the usual form of the ligature *ti* has presented considerable difficulty to editors who usually transcribe it by *ti*. The two forms are made precisely alike only that the *z* has an affix, as in capital Q, which consists of a wavy line made from left to right, thus: . Examples of its use are to be seen in Bonelli, Codice Paleografico Lombardo. As this feature is scarcely known I give here some instances, and point out where Bonelli reads erroneously.

doc. a. 748 Bonelli, pl. 6, line 5 pezola; line 8 pezola (Bonelli petiola),

doc. a. 765 " " 9, line 9 peza,

doc. a. 769 " " 12, line 1 zenoni (Bonelli tzenoni);
line 2 pezola (Bonelli petzola),

doc. a. 774 " " 16, line 15 florenzione (Bonelli Florentione).

Schiaparelli (in *Bullet. dell. Istit. Stor. Ital.* 1910, No. 30) noted this curious letter in two documents, and even called attention to the difference between it and ordinary , but he did not feel justified in transcribing it differently.

doc. a. 742, pl. 1, line 3 peza (Sch. petia),

doc. a. 758, pl. 2, line 15 pezola (Sch. petiola).

A fortunate find has furnished me the evidence which establishes to a certainty that this form is to be regarded as the letter *z* and not as the ligature *ti* with a meaningless appendage. In the important MS Vercelli 183, saec. VIII (it has $\bar{n}i = \text{nostri}$, $\bar{n}o = \text{nostro}$, $\bar{n}m = \text{nostrum}$ etc.) this form of *z* occurs many times.¹⁾ It differs from the ligature, which also occurs continually in the MS only in the matter of the affix. Examples are: f. 99^v *zelo*; f. 104^v *ezechiel*, *achaz* etc.; f. 91^v *zosimo*.

¹⁾ Cf. Plate 1, line 11.

The regular use of this form of the letter *z* in a perfectly calligraphic book furnishes one of the clearest illustrations of the dependence of early minuscule upon cursive. The scribe of Vercelli 183 was evidently bold in employing this letter. For it appears that the form never got naturalized in calligraphy. On careful enquiry I find that Vercelli 183 is practically unique in its use of this *z*. Through the kindness of Professor Lindsay I learn that in a fairly similar form it also occurs in the north Italian 8th century MS Milan Ambros. C. 98 inf. This form of the letter is not mentioned in our texts on palaeography.

The Evidence.

a) *ti* in Latin MSS.

b) *i*-longa in Latin MSS.

1. To illustrate the usage of *ti* and *i*-longa I give only one or two typical examples which I noted on examining the MS. In some cases I have had to depend on photographs. To distinguish such evidence from that based upon a study of the whole MS, I prefix an asterisk (*) to MSS actually examined.

2. The form of **ſ** used in the examples is the most common. No attempt could be made to reproduce the different varieties found in the MSS.

3. By **ſ** *used indifferently* I mean that the ligature is not reserved exclusively either for assibilated or for unassibilated *ti*.

4. The date ascribed to a MS is an approximate one. To avoid ambiguity it may be stated that saec. VIII in. = 1st third of 8th century; saec. VIII ex. = last third of the century; saec. VIII post med. = 2nd half of the century; saec. VIII/IX = ca. 800.

5. The MSS are arranged as far as possible according to countries, in groups which present common graphic features. It is hoped that this attempt at classifying MSS in *early Latin minuscule* will prove helpful. Inexpensive facsimiles of these MSS will be made accessible to the student in an extensive collection now in press.

Uncial MSS.

a) In the oldest type the ligature **ſ** is not found. But in the more recent type it slips in occasionally at the end of a line for lack of space, e. g. *Lucca 490 saec. VIII/IX in the uncial part: paren**ſ**bus.

b) The *i*-longa is lacking in the oldest type of uncial. However, in MSS of the VIIth and VIIIth centuries it is not infrequently used, thus showing the influence of notarial upon calligraphic writing, e. g. Paris 1732: In, IeIunio; *Vatic. lat. 317: IeIunii passim. *i*-longa initially, passim by one scribe; *Vercelli 188 initially passim; Paris 13246: In, IeIunaut, hulus etc. *Vatic. lat. 5007 (Naples): In, hulus etc.

Semi-uncial MSS.

a) In the oldest kind **ſ** does not occur. In the recent type it is occasionally found at the end of a line, e. g. *Novara 84 saec. VIII.

b) *i*-longa is not used in the oldest kind. In the more recent type it occurs, e. g. Cambrai 470 initially often; *Rome Sessor. 55 (2099): In, Ioseph, maIore; Ambros. S 45 sup. often initially; Lyon 523, initially passim; *Vatic. Regin. lat. 1024 (Spanish) often initially; Autun 27 (Spanish) often initially: In, Iudaei, Ipse, Imago, also medially: elus. In St. Gall 722 it occurs initially, but also finally after *t*: repletI. In Autun 24 it is also used in other parts beside the beginning: ItInerIs etc., in this respect recalling Merovingian cursive.

Early French Minuscule.

Paris 8913 saec. VII. The script is very cursive.

a) **ſ** is rarely used: con**ſ**geret, collegis**ſ**s. The ordinary forms of *t* and *i* are used for both the soft and hard sounds. But *ci* occurs for assibilated *ti*: hospicio, sullercia.

b) Initially often: In, Introeat, Iuxta; but illa, ibi with short *i*.

*Paris 17655 saec. VII ex. The writing hardly differs from that of Merovingian diplomas.

a) θ used indifferently: mon θ um, al θ tudinem. I noted *ci* for assibilated *ti* in the uncial portion: commemoracione (f. 2).

b) Initially and medially: In, culus, elus; occasionally short: iniurias.

*Paris 9427 *Luxeuil type.* saec. VII/VIII.

Lectionarium Gallicanum.

a) θ used before a consonant: sa θ s, sta θ m. Assibilated *ti* is often represented by *ci*: pacientiam, adnunciavi, siciantem, leccio etc.

b) Initially and medially: In, Ita, Ille, obIecit etc.

*Verona XL (38).¹⁾ Same type. saec. VII/VIII.

a) θ occurs for assibilated and unassibilated *ti*, but the ordinary *ti* is more usual: senten θ iam and sententiam; seme θ psam and semet ipsam, to θ ens and fa θ gat.

b) Initially and medially: In, Iob, Ipse, Iste, alt, elus, Iustum, Iudicium etc. but illius with short *i*.

St. Paul in Carinthia MS XXV^d/₆₇. Same type. saec. VII/VIII.

a) θ used indifferently: sapien θ a, noc θ bus; scien θ a, repen θ na.

b) Occasionally long initially: In, but ipse, illum, eius with short *i*.

¹⁾ Verona XL is in precisely the same script as Paris 9427. By means of internal evidence the French origin of the Paris MS is established beyond a doubt. Graphic features point to France also as the home of the script, since it resembles French cursive much more than Italian. Then too, the style of ornamentation and the orthography — the use of *ci* for assibilated *ti* — strongly favor France. These considerations seem so grave that I feel justified in differing with Traube according to whom the Veronese MS was written in Verona. See *Vorlesungen und Abhandlungen* II, 28. There seems to be a slight inconsistency in this passage for the same MS is spoken of as a "Kursivschrift eigener Art" and then again as an example of "Scriptura Luxoviensis".

***Ivrea 1.** Same type. saec. VII/VIII.

a) \eth used for assibilated and unassibilated *ti*: inimi-
ci \eth as and ocul \eth s, silen \eth o and u \eth lis. The ordinary *ti*
is also used for soft *ti*: etiam. The ligature \eth occurs
for *ci*: quanto \eth us, ami $\eth\eth$ as.

b) Initially and medially: In, Iterum, Illius, Idolatriam,
Ipse, Illos; aIt, huIus, conIugum etc., yet cuius with short *i*.

***London Add. MS 11878.** Same type. saec. VIII in.

a) \eth used indifferently: tempta \eth onis, u \eth , sen \eth t.

b) Initially: In; medially not always: eIus but cuius.

***London Add. MS 29972.**¹⁾ Same type. saec. VIII in.

a) \eth used indifferently: quo \eth ens, men \eth mur, \eth bi. The
ordinary form of *ti* is also used for assibilated *ti*: etiam.

b) Initially the rule; medially occasionally: In, culus etc.
but also cuius.

Fulda Bonifatianus 2. A similar type of writing but some-
what more recent than that of the preceding MSS.

a) \eth used indifferently: ra \eth o and ni \eth tur, despera \eth onis
and praesen \eth s. Frequently *ci* is used for soft *ti*: uicia.
A corrector changed it to uitia.

b) Often long in the word *in*, but not always.

Wolfenbüttel Weissenb. 99. Similar type. saec. VIII in.

a) \eth used indifferently: ressurec \eth onem, u \eth que; laeti \eth am,
Ius \eth . \eth occurs for *ci* e. g. suspi \eth onem.

b) Initially: In, Ihm, Iam, Iusti even Ille, yet ipsius
with short *i*.

***Munich 29033 (fragment).** Similar type. saec. VIII.

(Formerly served as fly-leaves of Munich 14102).

a) \eth used indifferently: tempta \eth o, mit \eth t, confes \eth im,
bap \eth sta; *ci* occurs for assibilated *ti*: spacium. Also \eth
used for *ci*: deli \eth osa.

b) Often long initially: Iter, Ingressus, Iam, Iussit; but
ille, ipse, iustus with short *i*.

¹⁾ Similar writing may be seen in Vatic. Regin. lat. 317, e. g. the
additions on ff. 31^v, 180, 180^v etc.

*Admont (Abbey) Fragm. Prophet.¹⁾ Similar type.

saec. VIII.

a) **ſ** used indifferently: adfflic**ſ**onis, sabba**ſ**, por**ſ**s, uic**ſ**mam etc.; *ci* occurs for soft *ti*: poenitenciam, contricione, oblacionem (corrected to oblationem).

b) Initially often; occasionally also medially: In, Ipsa, Iuxta, malestate; but ibi, illut, ipse, maiestas with short *i*.

Würzburg Mp. Theol. Fol. 64^a. Similar type. saec. VIII.

a) **ſ** used indifferently: gen**ſ**um, tribula**ſ**one, gen**ſ**bus, ul**ſ**mum; *ci* occurs for soft *ti*: cognicio, tribulacione, persecucionem, adnunciate etc.

b) Initially occasionally long, more often short: In, but also in, iudicium, huius with short *i*.

*Vienna 847 ff. 1^v, 5^v 6^v. saec. VIII.

a) **ſ** occurs for the hard sound: peccan**ſ**; *ci* is often used for assibilated *ti*: accio, legacio.

b) Initially and medially: In, Iusticiam etc.

*Paris 12168. << type. ca. a. 750. The angularity of the two parts of *a* is characteristic of this group.

a) One scribe regularly used **ſ** for unassibilated sound: res**ſſ**t, procrea**ſ**s and ordinary *ti* for assibilated: otium, potius.²⁾ But *ci* often occurs for soft *ti*. Another scribe (after f. 68) uses **ſ** indifferently. It is evident that the first scribe was trying to make a strict distinction between assibilated and unassibilated *ti*. Curiously enough, the form he chose for hard *ti* became in other schools the regular form for soft *ti*.

b) Commonly in the word *in*, otherwise often short: ita, iudas.

¹⁾ The fragments show two contemporaneous hands. The usage cited is true only of one scribe, the other does not employ the *ti*-ligature nor the same form of *a*. His writing makes a more recent impression and most likely represents the more modern style. The same scribe, I believe, wrote the biblical fragments now in Munich (MS 29158).

²⁾ My attention to this regularity on the part of the first scribe was called by Prof. W. M. Lindsay.

***London Add. MS. 31031.** (Same type.)¹⁾ ca. a. 750.

a) **ʒ** often for unassibilated *ti*: ads**ʒʒ**s, **ʒ**bi, peccas**ʒ**; *ci* very often for assibilated *ti*: inius**ʒ**cie, explanacio etc.

b) Usually short. This cursive element is slowly being eliminated from the book hand.

Laon 423. (Same type.) ca. a. 750.

a) The first scribe (ff. 1—17) has **ʒ** for unassibilated *ti* and ordinary *ti* for assibilated: supers**ʒ**tiose, inues**ʒ**gatione etc. The other scribes use **ʒ** indifferently. Here it may be fair to suppose that the first scribe was consciously making a distinction between the two sounds of *ti*.²⁾

Laon 137. (Same type.) ca. a. 750.

a) **ʒ** is used indifferently, although it seems that here and there an effort was made to have it represent only the hard sound, e. g. pes**ʒ**lentia, res**ʒ**tutione.

***St. Gall 214.** (The *l*-type) saec. VIII.

The characteristic letter is *l*, which has a distinct bend in the middle, somewhat like broken *c*. The script is related to the Corbie *ab* type. See p. 36.

a) **ʒ** not used. Ordinary *ti* is used for assibilated and unassibilated *ti*, but *ci* often occurs for the soft sound: cicius, perdicione.

b) Initially often, but in, impleri, ignorat; occasionally also medially: culus, elus.

***London Harley 5041.** (Same type.) saec. VIII.

a) **ʒ** not used. Ordinary *ti* for assibilated and unassibilated sound.

b) Used occasionally: Iam, maior. Often short, even in the word *in*.

Château de Trousseures. Same type. saec. VIII.

Nov. Testam. See catalogue of sale, pl. 2 (Paris, Leclerc, 1909).

1) To judge from a small facsimile, the Cambridge MS Corpus Christi College K 8 belongs in this class of MSS.

2) Knowledge of this and the next MS I owe to the kindness of Prof. W. M. Lindsay.

a) **ſ** occurs for hard sound: **ſ**bi; *ci* is used for assibilated *ti*: narracio, depraecacio.

b) Initial *i* has a somewhat longer form: In.

*Paris 14086. Similar script. saec. VIII.

a) **ſ** occasionally for assibilated sound: praesump**ſ**onis; but *ci* is very frequent for soft *ti*: senciant, paenitentiam etc.

b) Initially.

*Berne 611. Similar script. saec. VIII.

a) **ſ** is used indifferently: legen**ſ**um, praeposi**ſ**onum, pon**ſ**fex; *ci* very often occurs for soft *ti*: noticiam, monicione, quociens. Ordinary *ti* is also used for the soft sound.

b) Initially as a rule; medially occasionally: In, hulus, culus; but also eius with short *i*. Here and there the *i*-longa extends below the line: ejus, jejunij.

*Bamberg B V 13. Similar script. saec. VIII/IX.

a) No **ſ**. No distinction between the two sounds.

b) No *i*-longa.

*Paris 12598. saec. VIII ex.

a) **ſ** used for unassibilated *ti*, *ci* often occurring for assibilated: **ſ**bi, pe**ſ**cionibus, adfleccione.

b) Found here and there initially and even medially: e**ſ**us, Ie**ſ**uniis; but as a rule *i*-longa is not used.

*Vienna 1616. saec. VIII ex.

a) **ſ** used for unassibilated *ti*: u**ſ**, bap**ſ**zatus, castita**ſ**s; *ci* often occurs for assibilated *ti*: tristicia, poncio, gencium, damnacionis etc.

b) Initially, but illa with short *i*; medially as a rule: ma**ſ**estas, hulus, Ie**ſ**unii, Ie**ſ**unare etc.

Épinal 68. saec. VIII (a. 744). A type of pre-Caroline minuscule out of which the Caroline developed. The cursive elements are few; the general impression is that of a modified semi-uncial.

a) **ſ** seldom occurs: *imperiſsimis*; no distinction is made, but *ci* is often used for soft *ti*: *laetitia*, *uiciis*, *uiciata* etc.

b) Initially and medially by one hand: *In*, *Iam*, *eludem* etc.; short *i* initially and medially, by another. The cursive portion has *i*-longa. The use of *i*-longa in the body of the word, at the end of a syllable e. g. *lacrimarum* recalls certain semi-uncial MSS and Merovingian cursive. There are a number of MSS of the type of *Épinal 68*.

***Oxford Bodl. Douce f. 1** (fragments). saec. VIII post med.

This script is the immediate precursor of the *ucb* type which is manifestly only a further development of it. Very typical is the letter *a* which in combination is often suprascript and has the first curve turned leftward at the top. Otherwise the *a* is shaped like two adjacent *c*'s. The *b* has already the form found in the *Corbie MSS* of the *ab* type.

a) **ſ** used indifferently: *potenſam*, *securitaſs*. Ordinary *ti* is often used for the assibilated sound. **ſ** occurs for *ci*, e. g. *faſat*.

b) not used: *in*, *huius*, *maiestatem* — all with short *i*.

***Vatic. Regin. lat. 316**. Same script. saec. VIII post med.

The MS is in uncial, but several lines occur in this type of minuscule on ff. 2^v and 46.

a) **ſ** used: *substanſalem*, *temptaſone*; *ci* occurs for soft *ti*: *tercia*.

b) A slightly longer form of *i* occurs initially: *In*.

Brussels 9850—52. *Corbie-script*,¹⁾ *ucb* type. saec. VIII ex.

Most of the MSS of this type are of the early ninth century, a few are of the end of the 8th.

1) The name originated with Traube.

The script is very conventional and shows a high point of development.

- a) **ʒ** used indifferently: pa**ʒ**en**ʒ**ssima.
- b) Initially often, but not medially.

***Paris 3836.** (Same type.) saec. VIII ex.

- a) **ʒ** used indifferently: sen**ʒ**endum, proba**ʒ**s; *ci* often occurs for assibilated *ti*: *racione*, *penetenciam* etc.
- b) Not used regularly.

***Paris 8921.** (Same type.) saec. VIII ex.

- a) **ʒ** is not used. However it is evident that the distinction between the two sounds is striven after. When the *ti* is assibilated the *i* is extended below the line (as later in Visigothic MSS); when it is unassibilated the usual form of the *i* is retained. This distinction is observable in many parts of the MS. I cite these examples: f. 31^v *antiocensis* but *cottinensis*; f. 32^v *etiam* but *extiterit*; f. 45 *deuotionis*, *persecutionis* but *multis*. (Yet I noted *nescientibus*); f. 138^v *Laurentius* but *surentinus*; *proiectitius* but *hostiensis*; f. 140^v *etiam* but *sanctitas*. *ci* is not infrequently used for assibilated *ti*.
- b) Often initially and medially: *huIus*, *cuIus* etc.

Turin D V 3. Same type. saec. VIII ex.

- a) **ʒ** occurs for unassibilated *ti*: *omnipotenʒs*, *prosequenʒs*; *ci* is used for assibilated *ti*: *milicia*, *pocius*, *racioni*, *graciarum* etc.
- b) Initially: *In*, *Iohannis*; not medially: *huius*, *cuius*.

***Paris 11627.** (Same type.) saec. VIII/IX.

- a) No **ʒ**. No distinction.
- b) Often used, but not regularly.

***Paris 11681.** (Same type.) saec. VIII/IX.

- a) No **ʒ**. No distinction.
- b) Only occasionally.

***Paris 12134.** (Same type.) saec. VIII/IX.

- a) No **ʒ**. No distinction.
- b) Often initially.

- ***Paris 12135.** (Same type.) saec. VIII/IX.
 a) No **g**. No distinction.
 b) Occasionally.
- ***Paris 12155.** (Same type.) saec. VIII/IX.
 a) No **g**. No distinction.
 b) Used irregularly.
- ***Paris 12217.** (Same type.) saec. VIII/IX.
 a) No **g**. No distinction. *ci* occurs for soft *ti*.
 b) Hardly used.
- ***Paris 13048.** (Same type.) saec. VIII/IX.
 a) No **g**. No distinction.
 b) Often initially, but irregularly.
- ***Paris 13440.** (Same type.) saec. IX in.
 a) No **g**. No distinction.
 b) Rarely used.
- ***Paris 11529—30.** (Same type.) saec. IX in.
 a) No **g**. No distinction.
 b) Often used, but not regularly.
- ***Paris 17451.** (Same type.) saec. IX in.
 a) No **g**. No distinction.
- ***Paris Nouv. Acq. 1628 ff. 15—16.** (Same type.) saec. IX in.
 a) No **g**. No distinction.
- ***Bamberg B III 4 fly-leaf.** (Same type.) saec. IX in.
 a) No **g**. *ci* occurs for soft *ti*.
- ***London Harley 3063.** (Same type.) saec. IX in.
 a) No **g**. No distinction.
 b) Used initially; not medially.

There are doubtless many other French MSS of the pre-Caroline or early Caroline epoch — it would hardly be necessary to enumerate them even if I were able to do so — which employ **g** indifferently. Gradually, however, this cursive element altogether disappears from the book-script. The *i*-longa, especially in the word *in* or otherwise at the

beginning of a word stays longer than \mathfrak{g} . But it too was practically rejected, although it crops up here and there at all times.

Early Italian Minuscule.

***Milan Ambros. Josephus on papyrus.** (North Italy.)

saec. VII.

a) \mathfrak{g} used indifferently: *repe \mathfrak{g} \mathfrak{g} one*. No distinction is made between soft and hard *ti*.

b) Regularly initially: *In, Ipse, Itaque*; even *Illud, Ille, Ibi*; medially regularly for the semi-vocal sound: *pe \mathfrak{g} lor, hu \mathfrak{g} lus, cu \mathfrak{g} lus, a \mathfrak{g} lt, In \mathfrak{g} urias* etc.

***Milan Ambros. C 105 inf.** (Bobbio.) saec. VII/VIII.

a) \mathfrak{g} used indifferently: *prae \mathfrak{g} o, meri \mathfrak{g} s, reper \mathfrak{g}* . No distinction.

b) Initially and medially: *In, Ipsa, ma \mathfrak{g} lorem* etc.

***Naples IV A 8.** (Bobbio.) saec. VII/VIII.

a) \mathfrak{g} used indifferently: *muni \mathfrak{g} onem, sta \mathfrak{g} m, Inno-
cen \mathfrak{g} us, iacen \mathfrak{g} bus*. No distinction.

b) Initially and medially: *In, Iacentibus, prolecerunt*.

***Vienna 17.** (Bobbio.) saec. VII/VIII. See preceding MS of which it formed a part.

***Milan Ambros. D 268 inf.** (Bobbio.) saec. VIII in.

a) \mathfrak{g} used indifferently: *e \mathfrak{g} am, uirtu \mathfrak{g} s, men \mathfrak{g} s, con-
ten \mathfrak{g} oni*. No distinction.

b) Initially and medially: *Ihs, Illud, cu \mathfrak{g} lus, ma \mathfrak{g} lestatem, a \mathfrak{g} lt*. Where the scribe had made it short initially, the corrector made it long.

***Milan Ambros. C 98 inf.** (Bobbio.) saec. VIII.

a) \mathfrak{g} used indifferently: *digna \mathfrak{g} one, sapien \mathfrak{g} bus*. No distinction.

b) Initially the rule, even *Illo, Ipso, Ihs̄, Ibi* etc. Medially not always: *In \mathfrak{g} uria, hu \mathfrak{g} lus, ma \mathfrak{g} lestate, ma \mathfrak{g} lor*; but also *huius, eius*.

***Vatic. lat. 5763.** (Bobbio.) saec. VIII.

- a) **ʒ** used indifferently: no **ʒʒ**a, con**ʒ**nent. No distinction.
- b) Initially: Ignem, Inter, Iudea; medially not always: culus but ejus and eius.

Wolfenbüttel Weissenb. 64. (Bobbio.) saec. VIII.

This MS belonged with the preceding.

- a) **ʒ** used indifferently: to**ʒ**us, alterna**ʒ**o, gra**ʒ**a, noc**ʒ**s, ul**ʒ**mum, **ʒ**beris. No distinction.
- b) Initially the rule: Id, Ipse, Igne; also used medially: culus.

Turin A II 2. (Bobbio.) saec. VIII.

- a) **ʒ** used indifferently: prae**ʒ**i, ui**ʒ**o, ci**ʒ**a, **ʒ**bi, gen**ʒ**s.
- b) Initially: In, Iustis, Ipse, but ille; medially: hu**ʒ**us, Ie**ʒ**uniis, de**ʒ**Inceps, but ejus.

Turin G V 26.¹⁾ fol. 5^v. (Bobbio.) saec. VIII.

- a) **ʒ** used indifferently: essen**ʒ**a, extan**ʒ**bus.
- b) Long in *in* (no other words occur).

***Milan Ambros. L 99 sup.** (Bobbio.) saec. VIII.

- a) **ʒ** used indifferently: stul**ʒʒ**a, dis**ʒ**nc**ʒ**onem. No distinction.
- b) Initially and medially: In, Ipsa, even Illos; hu**ʒ**us, sublectis, a**ʒ**unt etc.

***Milan Ambros. B 31 sup.** (Bobbio?) saec. IX in.

- a) **ʒ** is used for assibilated *ti*, but ordinary *ti* is also thus used: ra**ʒ**onis, but fluctio, tertia, sapientia. No strict distinction.
- b) Initially and medially: In, In**ʒ**uria, cu**ʒ**us.

***Verona I** fol. 403^v, 404^v. (Verona.) saec. VII.

An interesting example of north Italian cursive. Very characteristic is the letter *n* which somewhat resembles our capital M.

¹⁾ A good example of Bobbio cursive may be seen in Milan Ambros. S 45 sup. (Bobbio) p. 44, to which Professor Lindsay has kindly called my attention.

- a) **ŋ** occurs: temperan**ŋ**a. No *ti*-distinction: nequitia.¹⁾
 b) Initially, medially (regardless of sound) and even finally: Iniquitus, Ita, Illi; subiecti, erIt, nequitIa; mel, deI, fierI, subiectI.²⁾

*Verona III. (Verona.) saec. VIII in.

A curious minuscule derived from half-uncial and the cursive noted in Verona I fol. 403^v, 404^v. It has the same form of *n*.

- a) **ŋ** not used.
 b) Initially in the word *in*.

*Verona XXXIII. (Verona.) saec. VIII in.

An excellent example of half-uncial passing into minuscule.

- a) **ŋ** not used. b) Not used.

*Verona XLII. (Verona³⁾) saec. VIII in.

Half-uncial passing into minuscule.

- a) **ŋ** rarely used, e. g. at end of lines: Ius**ŋ**fi||cationis.
 b) Initially and medially: In, Ille, eIus.

*Verona II fol. IV. (Verona.) saec. VIII. Cursive.

Characteristic letters are: *l*, *p*, *r*, *g* and the ligature *nt*.

- a) **ŋ** used indifferently: na**ŋ**ones, gen**ŋ**bus, polluis**ŋ**s.
 No distinction.
 b) Initially: In.

*Verona IV fol. 6, 6^v. (Verona.) saec. VIII. Similar cursive.

- a) **ŋ** used indifferently: men**ŋ**s, **ŋ**bi, uinc**ŋ**, pronun-
ŋans etc. No distinction.
 b) Initially often: In, Iusto, Iudaei, Iussit, but illas, ignis.

1) The word *otium* is spelled *ozium*, the *z* having the same form as in the word *zelus*. Assibilated *ti* must accordingly have had the pronunciation of *z*.

2) A similar use of *i*-longa is to be noted in Milan Ambros. O 210 sup. p. 46^v written in a very old type of cursive. The peculiar form of *n* found in the Veronese MS is also to be seen on this page. The *ti*-ligature is used indifferently: uenera**ŋ**one, salu**ŋ**s, men**ŋ**s. Examples of *i*-longa are: Iam, subIacere, hulus, oratlone, deuotIone, coelestI.

3) The MS has the Veronese *ss* which resembles *ns*.

*Verona **XXXVII** fol. 169^v. (Verona.) saec. VIII. Similar cursive.

a) **g** used indifferently: ter**g**o, dedica**g**onem, la**g**tudinem, can**g**co. No distinction. The ligature occurs for *ci*: prouin**g**ae.

b) Initially: In, Ioachim, Iudae.

*Verona **XXXVIII** fol. 118. (Verona.) saec. VIII in.

Transition script. This well-known page furnishes one of the earliest examples of Veronese minuscule with the typical *g*, *r*, *p* and *l*.

a) **g** not used.

b) Initially and medially: In, Ignes, Illi, Ita, elus, prolecta.

*Verona **LXII**. (Verona.) saec. VIII.

Calligraphic minuscule which is manifestly derived from the above mentioned Veronese cursive. It has the characteristic *l*, *p*, *r*, *g*, the ligatures *nt*, *ae*, *ss* (resembling *ns*) and the superior *a*.

a) **g** used indifferently: nup**g**is, leon**g**o, meri**g**s, legi**g**mam, con**g**nen**g**ae. No distinction.

b) Not used: *in*, *coniugium* etc. with short *i*.

*Verona **LV**. (Verona.) saec. VIII.

a) **g** used indifferently: mundi**g**a, ui**g**a, **g**morem, per**g**naciae. No distinction.

b) Initially often, but not regularly: In, Ita, Iudicium, but also *iustus*, *iustitiae*, *ignis*, *iram*, *illa* etc.

*Verona **LXI** fol. 1. (Verona.) saec. VIII.

a) **g** not used.

b) Initially and medially: In, elus, conIunctio, alt.

*Verona **CLXIII**. (Verona.) saec. VIII.

a) **g** occurs occasionally. It is used indifferently: gra**g**a, rogan**g**, po**g**us, adduc**g**s.

b) Initially and medially: In, Iuuat, Iacit, culus, IeIunas.

*Verona **XV** marginalia. (Verona.) saec. VIII.

a) **g** used indifferently: **g**bi, facien**g**bus.

b) Initially and medially: In, Iacobi, malori.

***Carlsruhe Reich. LVII.** (Verona.¹) saec. VIII.

a) **ſ** used indifferently, more often for soft *ti*: e**ſ**am, egyp**ſ**is, ciuita**ſ**.

b) Used irregularly: In, Inter, but ingressu, imperium, cuius with short *i*.

***Paris 653.** (Verona?) saec. VIII/IX. See plate 2.

a) **ſ** used by one hand (fol. 1—6^v) for assibilated *ti*: gra**ſ**am, ignoran**ſ**a, but *partis*. Distinction made. The new hand on fol. 6^v knows neither **ſ** nor the *ti*-distinction: *etiam*, *uocati*.

b) Used by the first scribe (who knows **ſ**): In, Ipse, Ih̄m, Ita etc. The second scribe does not use it.

***Vercelli CLXXXIII.** (Vercelli?) saec. VIII. See plate 1.²)

a) **ſ** used indifferently: ui**ſ**a, u**ſ**, mul**ſ**. No distinction.

b) Initially always: In, Ipso, Illi, Ibi etc.; medially regularly for the semi-vocal sound: e**ſ**us, hu**ſ**us, cu**ſ**us; also when *in* occurs in the body of a composite word, e. g. de**ſ**Inde. See discussion on p. 12.

***Vercelli CCII.** (Vercelli?) saec. IX in.

a) **ſ** used indifferently: ra**ſ**one, mul**ſ**. No distinction.

b) Usually in the word *in*, otherwise not employed: In but ius, ita, cuius etc.

¹) The MS has the curious *ss* resembling *ns* — a feature to be noted in several Veronese MSS.

²) Knowledge of this palaeographically most interesting MS I owe to the kindness of Father Ehrle, Prefect of the Vatican library. Through the great courtesy of Mgr. M. Vatasso I have the privilege of reproducing the MS. Several full-page facsimiles of this MS as well as of others from the chapter library of Vercelli will be given by Mgr. Vatasso in a forthcoming work. We have no positive evidence that this and the following two MSS were actually written in Vercelli. Since they are manifestly of north Italian origin, the probability is that they were. I mention in passing that the marginalia of Vercelli CLVIII are in a hand which is not Italian. I take it for Visigothic. The rules for *i*-longa are, as may be expected, carefully observed.

***Vercelli CXLVIII.** (Vercelli?) saec. IX.

a) **ŷ** regularly reserved for assibilated *ti*; and ordinary *ti* for unassibilated. Distinction made.

b) Initially often: *In*, *Iam*, but *illum*, *ihm̄*; medially not used.

***Novara 84.** (North Italy). saec. VIII/IX.

a) **ŷ** used indifferently: *penitenŷa*, *naŷuitaŷs*. No distinction.

b) Usual with *in*, otherwise rarely used: *In*, but *iam*, *ita*, *huius*.

Milan Trivulziana 688. (Novara.) saec. VIII/IX.

a) **ŷ** used indifferently: *liŷgia*; ordinary *ti* for soft sound: *cautioni*; *ci* for soft *ti*: *admonicionem*.

b) Initially frequent though not always: *In*, *Iudiciis*, *Iuret*, but *index*.

***Paris Baluze 270.** (North Italy.) saec. VIII/IX.

a) **ŷ** used indifferently: *raŷo*, *mulŷs*.

b) Rarely used: *In* but also *in* with short *i*.

Breslau Rhedig. R 169 f. 92^v. (Aquileia?) saec. VIII ex.

a) **ŷ** used before consonants: *ŷberii*. *ci* is used for assibilated *ti*: *tercie*, *nupcie*.

b) Initially the rule: *Illum*, *circumIbat*, *Ihs* etc.

Modena O I N 11. saec. VIII/IX.

a) **ŷ** used indifferently. No distinction.

b) Initially: *In*, *Iudaica*.

***Lucca 490.** saec. VIII/IX.

a) **ŷ** used indifferently: *Iusŷŷam*, *mitŷtur*, *ŷmeas* etc. No distinction.

b) Not used.

***Rome Sessor. 55 (2099) ff. 89 to end.** saec. VIII ex.

a) **ŷ** used indifferently: *enunŷare*, *isŷs*, *disŷincŷone*. No distinction.

b) Not used as a rule: *in*, *indicaret*, *coniungas*.

***Rome Sessor. 94** (1524) part I = pp. 1—32. saec. VIII/IX.

a) **ſ** used indifferently, but preferably for soft *ti*: *uiſa*, *facultaſbus*. No strict distinction: *pretiosus*, *fortia*.

b) Initially and medially: *Iam* (corrector changed to *iam*), *Ieluniis*, *culus* etc.

***Rome Sessor. 66** (2098). saec. IX.

a) **ſ** where used has soft sound, but no strict distinction is observed between assibilated and unassibilated *ti*: *inocenſam*, but *definitione*.

b) Initially the rule; medially rarely.

***Rome Sessor. 40** (1258). saec. IX.

a) **ſ** used for assibilated *ti*. Distinction observed: *scienſa*, *adtingeret*.

b) Initially and medially: *In*, *Ire*, but *illius*; *hujus*, *eIus* etc.

***Rome Sessor. 41** (1479). saec. IX.

a) **ſ** for assibilated *ti*. Distinction observed.

b) Initially, the rule; but *ipse*, *illi*; medially not always: *hulus* and *huius*, *maior*.

***Rome Sessor. 96** (1565). saec. IX.

a) **ſ** for assibilated *ti*. Distinction made: *propheſam*, *tibi*.

b) Not regularly used: *In*, but also *in*, *huius*, *adiunxit* etc.

***Rome Sessor. 63** (2102). saec. IX.

a) **ſ** for assibilated *ti*. Distinction usually observed: *poſus*, *tanti*.

b) As a rule not used.

In the more recent MSS of this school — for the above named Sessoriani are supposedly all from Nonantola — **ſ** and the *ti*-distinction and *i*-longa are all given up¹⁾. The same is true of the MSS of Vercelli, Novara, Bobbio, Verona, Lucca and other Italian centres. These elements disappear as soon as the Caroline minuscule prevails.

¹⁾ Is it possible that we have a revival of the practice in the MS *Bologna Univ. 1604 (Nonantola) saec. XI/XII, or is it a case of copying? I noted *rationis* (with *i* drawn down) but *utique* (with short *i*).

Roman School.

No very ancient minuscule MSS are known. Those that are posterior to the 9th century lack the ligature **ſ** and observe no *ti*-distinction. The *i*-longa is not seldom used initially.

The Beneventan or South Italian School.¹⁾

a) I. In oldest minuscule MSS (saec. VIII) **ſ** is used indifferently, e. g. Monte Cassino 753: *uiſis* and *mitſtur*. Bamberg H J IV 15: *noſſiam*.

II. In Paris 7530 saec. VIII ex. **ſ** is regularly reserved for assibilated *ti*, and the distinction is strictly observed. Although in some MSS of the 9th century insecurity is still to be noted (e. g. Vatic. 3320, where a later corrector often changed *tio* to **ſ**o, and Naples VI B 12) the majority of the MSS show perfect knowledge of the two uses of *ti*. From the 9th to the 14th century the form **ſ** is regularly used for assibilated, and the normal form for unassibilated *ti*. *This is one of the main rules of the Beneventan script.* A scribe rarely wrote ordinary *ti* for **ſ**. I have noted but few cases, e. g. Rome Valli-cell. D. 5, saec. XI in.: *unguentiam*; Vatic. lat. 595: *petiit*, changed by corrector to *peſit*, and some cases in Floren. Laur. 68, 2.²⁾ Occasionally too, we find *ci* for *ti*. This occurs so seldom that it is without doubt the result of slavish copying from an original in which *ci* stood for assibilated *ti* — and such spelling was certainly not unusual in the schools north of the Beneventan zone. Examples are: Monte Cassino 5: *precio* corrected to *preſo*; Monte Cassino 295: *uicia* corrected to *uiſa*; Vatic. lat. 3973: *ueneciis*, and Vatic. Borgian. 339: *cicius*. On the other hand, there is nothing surprising if

¹⁾ The following summary is based upon an examination of over three hundred Beneventan MSS.

²⁾ Cf. Andresen, In Taciti Historias studia critica et palaeographica I (1899), p. 8.

we find the ligature **ḡ** for *ci*. I noted *perniḡe* in Monte Cassino 187, saec. IX. An 11th century corrector wrote *ci* for the ligature.

b) For the usage of *i*-longa in Beneventan MSS see p. 9—10.

Visigothic Minuscule.

a) The frequent occurrence of **ḡ** is noticeable only in the oldest MSS, e. g. Verona LXXXIX (where it is used indifferently) and Autun 27 + Paris Nouv. Acq. 1628—9 (where there is a tendency to reserve the ligature for the assibilated sound). In MSS of the 9th or 10th century **ḡ** is found here and there at the end of a line to save space. It does not form part of the calligraphic hand. The distinction between assibilated and unassibilated *ti* was in time graphically represented. As this question is of importance in dating Visigothic MSS, it has been treated separately and at greater length below. See part IV.

b) For the usage of *i*-longa in Visigothic MSS see above p. 8—9. The MS evidence is given in part IV.

German Schools.

Early Minuscule MSS from German centres have as a rule neither **ḡ** nor the *ti*-distinction, nor the *i*-longa — owing most likely to Caroline influence. Nevertheless in several MSS of the transition period **ḡ** is found, along with other cursive features such as *ri* and *te*. Its presence, therefore, may safely be taken as a hint of the date of the MS.

I noted **ḡ** sparingly used in the following MSS.

***Munich 4547.**¹⁾ (Kysila-group.) saec. VIII/IX.

a) used for hard sound: **ḡ**meret (f. 11), uerita**ḡ**s (f. 12), inmacula**ḡ** (f. 12), **ḡ**bi (f. 22) etc.

b) *i*-longa is not used.

¹⁾ Dr. Wilhelm of the University of Munich places the Kysila-group of MSS in the region of Utrecht. This judgment is based upon liturgical and philological evidence furnished by the MSS themselves.

***Munich 4549.** (Same group.) saec. VIII/IX.

a) **ſ** used indifferently: *uiſis*, *impaſenſae*, *menſ*, *curaſs*, *laſtat* etc.

b) Initially here and there; not medially.

***Munich 4542.** (Same group.) saec. VIII/IX.

a) **ſ** occurs for the assibilated sound, but chiefly the ordinary *ti*: *sapienſam* (f. 139^v), *corrupſonem* (f. 132^v) but next line: *corruptione*, with ordinary *ti*.

b) Initially in the word *in*; not medially.

***Munich 14421.** saec. VIII/IX.

a) **ſ** like the ligature *te* is found chiefly at the end of the line, and is used indifferently: *ſtulſ* (f. 9^v), *dixeriſs* (f. 12^v), *ueritaſs* (f. 15^v), *laetiſa* (f. 24), *captiuitaſs* (f. 43 in middle of line) etc.

b) Not used.

***Munich 4564.** saec. IX. Hand A is calligraphic, B more cursive.

a) Not used by hand A. Hand B used **ſ** indifferently: *cotſdiae*, *oraſone* (f. 220), *benediciſs*, *faciaſs* (f. 220^v), *turbaſonem* (f. 221^v).

b) Not used.

***Munich 6277.** saec. IX.

a) **ſ** used indifferently: *operaſo*, *perſmescat*, *inſmo* (f. 50), *iuſtiſe*, *niſtur*, *desperationem* with ordinary *ti* (f. 50^v) etc.

b) Not used.

***Munich 6402.** saec. IX.

a) Where found **ſ** usually has the assibilated sound: *porſo* (f. 45), *graſa* (f. 51^v), *eſam*, *generaſo* (f. 52) etc. But *talenſ* (f. 53^v). Ordinary *ti* is chiefly used for either sound, yet *ci* occurs for *ti*: *praecio*, *praeciosi* (f. 61).

b) Here and there it crops up, but manifestly due to the exemplar: *maior* and *maior* (f. 53^v).

***Munich 4719^m.** saec. IX.

a) **ſ** used indifferently: *contestaſo*, *perseueraſ*, *optaſo*, *obstinaſs*.

b) Not used.

In MSS of the St. Gall, Reichenau and Chur districts no *ti*-distinction is observed. In many of them, however, *ci* takes the place of assibilated *ti* — a practice already noted in numerous French MSS, which probably served as models for the Swiss.¹⁾ The ligature **ᑭ** occurs only here and there, used indifferently. As a rule *i*-longa is not employed; occasionally it is found at the beginning of a word, and less frequently in the middle. The following early examples have been examined²⁾: § St. Gall 70, § 238³⁾, 44, 914, 185, § 731, § 348³⁾, § 722; Berne 376³⁾; § Zurich Cantonsbibl. CXL³⁾, § Cantonsbibl. (Rheinau) 30; § Einsiedeln 27, § 347³⁾, 199³⁾, § 281³⁾ and 157.³⁾

*Insular Schools.*⁴⁾

a) The form of the *ti*-ligature found in Insular MSS, as has been mentioned above, differs from **ᑭ** in that the upper loop or curve is missing (see p. 20). The form could easily have arisen from semi-uncial *t* combining with *i*. The absence of the form **ᑭ** in pure Insular products may be regarded as one of the many proofs of the peculiar origin — in which cursive played no part — of the Insular writing. The *ti*-ligature, where found, is used indifferently. No distinction between the assibilated and unassibilated sounds is made.

b) It is fair to say that *i*-longa — which as has been shown is of cursive origin — is foreign to Insular MSS. It

1) Historical and graphic considerations suggest Burgundian influence. Further investigation may disclose relations between Luxeuil and Chur or some other Swiss centre. I suspect that the MSS Berne 611 and St. Gall 214 are Swiss products formed under the influence of Luxeuil.

2) MSS preceded by § have *ci* for soft *ti*.

3) In this MS **ᑭ** used indifferently is occasionally found, especially at the end of a line.

4) Cf. facs. in Lindsay, *Early Irish Minuscule Script*, Oxford 1910.

is often found initially, but not with any apparent regularity. Medially it is used but rarely.¹⁾

I give a few examples. For the *ti*-ligature I use italics.

*Bodl. Douce 140 f. 100^v. a) *canticum*, b) not used.

The Book of Dimma. a) *fueritis*, b) used initially, often.

The Book of Mulling. a) *uultis*, b) used initially, often.

*Vatic. Pal. lat. 68. a) *adnuntiauit*, *demergentis*, b) used in *in*.

*Vatic. lat. 491. a) *gratias*, *pietatis*, b) not used.

*London Cotton Tib. C II. a) *potestati*, b) used with *in*.

*Paris 10 837. a) *timorem*, *agapiti*.

*Vatic. Pal. lat. 235. a) *tibi*, *fontibus*, b) not used.

*Vienna 16. a) *repetitione*, *tibi*, b) In long. Insular influenced by Italian cursive.

Turin F IV 1 fasc. 6. a) *indignationem*, *tibi*, *mortis*. b) In long.

We have seen, then, that the *ti*-ligature originated in Italian cursive of the early middle ages. We have found it in all those types of pre-Caroline minuscule which obviously base upon cursive, and the usage in the MSS corresponded to that of the documents. We missed it, on the other hand, in most of the MSS from about the beginning of the 9th century. This circumstance can be attributed to but one cause — the Caroline script-reform. The hypothesis is confirmed by the consideration that many MSS of about the year 800, written in north Italy, France and Germany show traces of the abandoned practice. They are the MSS of the transition period. Still more cogent evidence is furnished by the fact that in the Beneventan centres where the Caroline influence did not reach, the *ti*-ligature continued in use along with several other

¹⁾ I have found *i*-longa medially in *Palat. 202 deInde; *Bodl. Laud. lat. 108 Ielunandum. I believe that in all such cases foreign influence is responsible for the *i*-longa.

cursive features which elsewhere were abolished. Doubtless for similar reasons **ſ** is found in many Visigothic MSS, though relegated, to be sure, to a place of insignificance. The history of **ſ**, then, is a kind of epitome of the development of Latin minuscule in its first important stage. We have seen, also, that the spelling *ci* for soft *ti* is a characteristic of early French, not of early Italian and that the graphic distinction of assibilated and unassibilated *ti* was regularly practiced in but two schools, the Beneventan and the Visigothic; although the usefulness of distinguishing in script the two sounds of *ti* was elsewhere recognized — as several instances clearly show — before the practice became a law of the Spanish and south Italian minuscule.

From all this the palaeographer may draw a practical hint or two for dating and placing MSS. For example, the regular use of **ſ** in a French MS is a fair sign that the MS was written some time before the middle of the 8th century.¹⁾ Its sporadic appearance, on the other hand, suggests that the MS belongs in the period of transition, i. e. about the year 800. The frequent use of *ci* for soft *ti* in a pre-Caroline MS points to French origin rather than to Italian or Spanish.²⁾ And certain corruptions in the text due to the ligature **ſ** permit a surmise as to the probable nature of the archetype.³⁾

¹⁾ The same is true for Visigothic MSS.

²⁾ See p. 26, note 1. An editor collating a Visigothic MS must be on his guard against mistaking for *c* a certain form of *t* which occurs in ligatures. Even Maffei misread *ci* where the MS has *ti*. Cf. Spagnolo, L'Orazionale Gotico-Mozarabico etc. estratto dalla *Rivista Bibliografica Italiana* (10—25. Aug. 1899) p. 8, line 11. For *precium* read *pretium*.

³⁾ I refer to cases where the text has *q* for *ti*, an error due most likely to copying, from an original which had **ſ**, by a scribe unaccustomed to the ligature. An instructive example is cited by Traube, *Textgeschichte der Regula S. Benedicti*, p. 85.

IV.

Ti in Spanish MSS.

In Visigothic calligraphy the manner of writing *ti* is of signal interest and importance. After a certain time the Spanish scribe, just as the Beneventan, used two distinct forms for assibilated and unassibilated *ti*. From evidence given below it will be seen that it is possible to fix with some degree of precision the period when the custom of making the distinction was introduced into Visigothic book-writing. In other words, a criterion for dating can be won. The assibilated and unassibilated forms differ but slightly.¹⁾ In the case of unassibilated *ti* the normal forms of *t* and *i* are retained. In the case of assibilated *ti* the *i* is prolonged below the line and often turned in instead of out (cf. plates 5, 6 and 7), the whole difference lying in the form of the *i*, the letter *t* suffering no change. The Spanish form for assibilated *ti* (ϣ) corresponds, then, to the Beneventan for unassibilated. But the form ϣ, which is

¹⁾ This perhaps explains how it happened to escape the attention of palaeographers. Steffens has noted the *ti*-distinction in his description of Escor. T II 24 (formerly Q II 24). That he too failed to realize that it was as much a scribal rule in Visigothic as in Beneventan is seen from the fact that in his introduction he speaks of the *ti*-distinction in Beneventan MSS but not in Visigothic. I believe that Delisle's report of my observations on the subject (Comptes-rendus de l'Académie des inscriptions, 1909, pp. 775–778 and Bibliothèque de l'école des chartes LXXI (1910) 233–235) is its first formulation in palaeographical literature, for there is no mention of it in Muñoz y Rivero, Ewald and Loewe, Wattenbach, or in the earlier writers on Spanish palaeography. It is a curious fact that even Paoli with whom the question of assibilated *ti* was a matter of keen interest made no reference to the distinction in his description of the Visigothic MS Floren. Laur. Ashb. 17. Cf. Collezione Fiorentina, pl. 33.

regularly reserved for assibilated *ti* in Beneventan calligraphy, was not unknown in Spanish MSS. However, whereas in Beneventan it was a constant feature of the book-hand, in Spanish it was in time avoided. For, excepting the oldest known Visigothic MSS (Verona LXXXIX and Autun 27 + Paris Nouv. Acq. 1628—9) which employ **ḡ** frequently, we find it chiefly at the end of a line, where economy of space demanded the shorter form, or in additions entered in cursive where **ḡ** is usually confined — as is the case in Italian cursive — to representing the assibilated sound.

It is needless to say that the custom of graphically distinguishing the two kinds of *ti* in the Visigothic book-hand, which dates, as will be seen, from about the end of the 9th century, is in no wise a reflection of a change of pronunciation then taking place in Spain. The rule given by Isidore, bishop of Seville, for the orthography of such words as *iustitia*, *militia* etc. — to the effect that they should not be written with a *z* as they were pronounced but with a *t* as was Latin usage — shows that three centuries prior to the introduction into calligraphy of the graphic distinction between assibilated and unassibilated *ti*, the difference in their pronunciation was already an accomplished fact.¹⁾ And we know from inscriptions that the assibilation of *ti* must have taken place at quite an early date.²⁾ That the graphic distinction should have followed centuries after the phonetic change may be natural enough — we encounter the same phenomenon in Italy — but it is important to observe that the distinction was practiced in cursive writing long before it was employed in calligraphic products, and that the manner of representing the distinction in Spanish cursive (**ḡ** for soft *ti*) was the same as that employed in Italian cursive and in Beneventan book-hand — facts which seem to speak for the Italian origin of the

¹⁾ Isidor. Etymol. I, XXVII, 28. See above, p. 17, note 7, where the passage is quoted.

²⁾ On the assibilation of *ti* in the Latin-speaking countries see the works cited above, p. 16, note 2.

custom. This supposition becomes more convincing when we remember that the Spanish scribe invented a new form for denoting assibilated *ti*, and that this form is found in Visigothic MSS a good century after the Beneventan scribe was making the distinction. That the practice of making the *ti*-distinction in Visigothic MSS dates from about the year 900 is established beyond a reasonable doubt by the evidence of over one hundred MSS listed below.

A word as to the nature of the evidence. It is furnished by two sources: the MSS themselves, and facsimiles of MSS. As for facsimiles, in the case of some MSS I was dependent upon one only; in other cases, however, photographs of several pages or even of the entire MS were at my disposition. More MSS might easily have been added without modifying results,¹⁾ but I preferred to use only those dated by recognized authorities, thus avoiding as far as possible basing an argument upon dates for which I alone was responsible. I also hesitated to use facsimiles when it was not clear whence they were taken, as in older books on Spanish palaeography. Notes furnished me by others were used only when supplemented by facsimiles.

I am aware that the evidence supplied by facsimiles of one or two pages of a MS is not necessarily conclusive, as it may represent (as it sometimes does) the usage of one scribe and not of another. But whereas this evidence taken by itself might seem of questionable worth, its weight as supplementary evidence when used in connection with facts gathered from the MSS themselves will not be gainsaid. The fact that the usage found in the facsimiles is not at all at variance with the usage noted by me in the MSS is a guarantee of their value. However, the brunt of the argument will be borne by the forty-five MSS actually examined by me — MSS which are fairly representative of the different phases of Spanish calligraphy.

In the following list the MSS are arranged approxim-

¹⁾ I have examined photographs of at least fifty MSS not included in my list. In these MSS the *ti*-usage agreed with that of the MSS whose evidence is given below.

ately in chronological order. In most cases my date is identical with that of others. In the few instances where the difference of opinion is essential the reasons for my date are given after the list.¹⁾ I give first the usage of *ti*, with examples taken from the MS or from a facsimile. The italicized *ti* represents the ordinary form of *t* and *i*. For the ligature **ḡ** and the assibilated form of *ti* I have tried to reproduce the typical form found in the MS. After *ti* I give the i-longa usage. I also noted the use of the forked i-longa (shaped like a tall *y*). The form of the shafts of tall letters is given because of its value as a criterion for dating. Lastly, it seemed helpful to give some literature, for the sake of quick orientation. I gave that which I had at hand, without going out of my way to make researches extraneous to the purposes of this study.

The references frequently cited appear under the following abbreviated forms:

- Beer. Handschriftenschätze Spaniens, Vienna 1894.
 Beer-Diaz Jimenez. Noticias bibliograficas y catalogo de los
 códices de la santa Iglesia Catedral de León, León 1888.
 Bibl. P. L. H. Hartel-Loewe, Bibliotheca Patrum Latinorum
 Hispaniensis, Vienna 1887.
 Cat. Add. A Catalogue of the Additions to the MSS of the
 British Museum.
 Delisle-Mélanges. Mélanges de paléographie et de biblio-
 graphie, Paris 1880.
 Eguren. Memoria descriptiva de los códices notables conser-
 vados en los Archivos eclesiásticos de España, Madrid 1859.
 Exempla. Ewald et Loewe, Exempla Scripturae Visigoticae,
 Heidelberg 1883.
 Merino. Escuela Paleografica, Madrid 1780.
 Muñoz. Muñoz y Rivero, Paleografía Visigoda, Madrid 1881.

¹⁾ See p. 81 sqq.

N. A. Neues Archiv der Gesellschaft für ältere deutsche Geschichtskunde VI (1880) p. 219—398 = P. Ewald, Reise nach Spanien im Winter 1878—79.

*) MSS actually examined are starred.

1. *Verona Capitol. LXXXIX. saec. VIII in.¹⁾ ut vid.

a) No ti-distinction: *patientie, utique, tibi*. Noteworthy is the relatively frequent occurrence of **ḡ**. It is found passim on every page and is used indifferently: *nequiḡe* (begin. of line), *frucḡficet* (middle of l.), *menḡbus* (middle of l.), *conscienḡia* (middle of l.). These four examples are taken from one page. In contemporary marginalia: *iusḡḡam* etc. Later MSS use **ḡ** only occasionally at the end of lines.

b) Rule observed.²⁾

Cf. Maffei, *Opusc. Eccles.*, p. 80, pl. IV, no. 18 (whence *Nouveau Traité* III, 449, pl. 60); idem, *Istoria Teologica* (Trento 1742) pl. IV, part XVII and XXI; a poor facsimile also on p. CXXXI of *Thomasii Opera omnia studio et cura Josephi Blanchini, Tom. I* (Rome 1741); Spagnolo, *L'orazionale gotico-mozarabico* etc.,

¹⁾ On f. 3^v (lower right hand corner) there is a rather obscure entry of a personal character ending with the words: *in XX anno liutprandi regis, i. e. the year 732*. As the upper half of the page has the same kind of writing as the body of the MS, the above entry — if indeed we may regard it as chronicling an actual fact which then took place — gives us the *terminus post quem non*, and the mention of Luitprand would connect the MS with north Italy. It must be confessed that the first impression is that the MS belongs in the 9th century, — it is carefully and regularly written — but being a liturgical book, special pains may have been taken with it, which would account for the impression. Furthermore the rather frequent occurrence of certain ligatures, especially of **ḡ**, also favors the earlier date. I prefer to leave the question of the date undecided. The matter deserves further investigation.

²⁾ For the rules of *i-longa* in Visigothic MSS see above, p. 8—9.

estratto dalla Rivista Bibliografica Italiana (10—25 Aug. 1899); Férotin, Liber Ordinum, p. XV, note 2.

2. *Paris Nouv. Acq. Lat. 1628 (ff. 17—18). saec. VIII ut vid.

a) No *ti*-distinction. In the more cursive portions **ḡ** is used indifferently: *terḡa*, *evidenḡssime*.

b) Rule observed. Occasionally even *Illa*.

Cf. Delisle, Les vols de Libri au séminaire d'Autun (Bibliothèque de l'école des chartes LIX (1898) 386—392.¹⁾

3. Escor. R II 18. ante a. 779.

a) No *ti*-distinction in minuscule portion: *resurrectione*, *tertio*. In cursive parts the distinction is usually made, **ḡ** or similar forms representing the soft sound: *Iustiḡam*, *eḡam*. Yet exceptions occur: *segontia*.

b) *i*-longa rule observed in cursive and minuscule: *In*, *Ipsa*, *Ibi*, *culus*; but *illa*. Also *i*-longa with forked top: *acaIa*.

Cf. Exempla, pl. IV—VII, whence Arndt-Tangl, *Schrifttaf.*⁴, pl. 8b; N. A. VI, 275; Bibl. P. L. H., p. 130; Steffens, *Lat. Pal.*², pl. 35.

4. Madrid Tolet. 2. 1. saec. VIII ex. ut vid.

Now kept in *Vitrina 4^a*, *Sala I^a*.

a) No *ti*-distinction: *patienter*, *tertia* and *septima*.

b) Rule observed: *Isti*, *maIor*, *caIn*, *eIus*, even *Illi*; *caIn* with forked *i*-longa.

Cf. Exempla, pl. IX; Bibl. P. L. H., p. 261; Muñoz, pl. VIII—IX. The date there given (10th cent., p. 119) is impossible. The date a. 708 given by Merino (p. 55) is likewise untenable. On the inscription at the end of the MS, which has been the cause of erroneous dating, see Berger, *Hist. de la Vulg.*, p. 13.

¹⁾ These leaves as well as ff. 21—22 of Paris Nouv. Acq. 1629 formed part of Autun 27 which unfortunately I have seen only in facsimiles. Professor Lindsay kindly informs me that the distinction is usually made in the minuscule part of the MS, but not as in later Visigothic MSS, the assibilation being represented by **ḡ** or some similar form. But cases of **ḡ** for the hard sound as well as of ordinary *ti* for the soft sound also occur. It is very important to note that no distinction is made in the cursive portions.

5. **Madrid Tolet. 15. 8.** saec. VIII ex. ut vid.

Now kept in Vitrina 4^a, Sala I^a.

a) No *ti*-distinction: *tertia*, *gratissima*. In the later additions in cursive the distinction is made as in Escor. R II 18. The use of **g** in the word *den**g**bus* (Exempla, pl. XII) recalls older cursive where no distinction is made and **g** is used indifferently.

b) Rule observed, even *Illic*, *Ille*, but *illa* also occurs.

Cf. Exempla pl. X—XII, whence Arndt-Tangl, op. cit. pl. 8 c; Bibl. P. L. H., p. 291, "saec. VIII/IX"; Beer, Codices Graeci et Latini photographice depicti, Tom. XIII (Sijthoff, Leyden 1909), Praefatio p. XXIV, whence Ihm, Pal. Lat., pl. VII.

6. **Léon Eccl. Cathedr. 15.** saec. IX. (Clark's photos.)

a) No *ti*-distinction: *eruditionis*, *antiociam*.

b) Regular, even *Illis* and *Illi*.

Cf. Beer-Diaz Jimenez, p. 16 sq., who date the upper script in the 10th century: "medio vel declinante IX. saec.", p. XVI of Prooemium to Legis Romanae Wisigothorum fragmenta ex codice palimpsesto sanctae Legionensis ecclesiae protulit, illustravit ac sumptu publico edidit regia historiae Academia Hispana, Matriti (1896); Theodosiani libri XVI, edd. Mommsen et Meyer I, 1, p. LXX.

7. ***London Egerton 1934.** saec. IX in. ut vid.

a) No *ti*-distinction: *citius*, *diuitiis* and *antiquissima*.

b) Rule observed: *Idem*, *Iberiam*, *hulus*, even *Ille*.

Cf. Cat. Add. (1854—1875) p. 916; Facs. in Cat. of Anc. MSS in Brit. Mus. II, pl. 36.

8. ***Monte Cassino 4.** saec. IX. See plate 3.

a) No *ti*-distinction: *sapientiam*, *tibi*. But in cursive marginal notes entered apparently by a later hand **g** is regularly used for assibilated *ti*: *sententiam*.

b) Rule observed. Usually *Ille*, but occasionally *illa*, *illum*.

Cf. Bibliotheca Casinensis I, 97 and facsimile. The date (saec. VII) can hardly be correct.

9. ***Monte Cassino 19.** saec. IX.
 a) No *ti*-distinction: *ratio* and *retinere*. But cursive additions by a later hand have **9** to mark assibilation.
 b) Rule observed, even *Illa*, also alt.
 Cf. *Bibliotheca Casinensis* I, 233 and facsimile.
 Their date is saec. VII, which is hardly possible.
10. **Escor. & I 14.** saec. IX ut vid.
 a) No *ti*-distinction: *inventione* and *dogmatibus*.
 b) Rule observed: *Id*, *In*, *Ignem*, *cuIus*, *deInde*, even *Ibi*.
 Cf. *Exempla*, pl. XIII; N. A. VI, 250; *Bibl. P. L. H.*, p. 70 and earlier Pertz' *Archiv* VIII, 815; *Rev. Bénéd.* XXVII (1910) p. 2.
11. **Madrid Tolet. 14. 24** (now 10018). saec. IX ut vid.
 a) No *ti*-distinction: *gratia*, *iumentis*.
 b) Rule observed, even *Illis*, *Illorum*.
 Cf. *Exempla*, pl. XVIII; N. A. VI, 318; *Bibl. P. L. H.*, p. 290.
12. ***Paris Lat. 2994 (part II).** saec. IX ut vid.
 a) No *ti*-distinction: *comparatione* and *peccati*.
 b) Rule observed, even *Ille*, *pro(h)Ibeant*, *coltu*.
 Cf. Delisle, *Mélanges*, p. 54 and *Facs. de l'école des chartes*, pl. 281.
13. **Paris Lat. 8093.** saec. IX ut vid. (Vollmer's photos.)
 a) No *ti*-distinction: *septies*, *Ingentia* and *fluctibus*.
 b) Rule observed, even *Illi*.
 Cf. De Rossi, *Inscriptiones Christianae* II, 292 (where Delisle in his description dates the MS saec. VIII); Vollmer in *M. G. H. Auctt. Ant.*, T. XIV, p. XIX & XL.
14. ***Paris Lat. 4667 a. 828.**
 a) No *ti*-distinction: *Inductione* and *utilitatis*.
 b) Rule observed: *Ipsius* and usually *Ille* but also *illis*.
 Cf. *Nouveau Traité* III, 327 and pl. 52; Delisle, *Mélanges*, p. 54; Steffens, *Lat. Pal.*², pl. 49; Prou, *Manuel de Paléographie*³ (1910), pl. V, no. 2.

15. **Paris Lat. 12254.** saec. IX ut vid.
 a) No *ti*-distinction: *lectionis*, *utilis*.
 b) Regular.
 Cf. Delisle, *Le cabinet des manuscrits* III, 229 (where no mention is made of the MS being Visigothic. His description is: *écriture du VIII^e siècle*). For facs. see pl. XVIII, 4.
16. **Léon Eccl. Cathedr. 22 (CVI).** post a. 839. (Vollmer's photos).
 a) No *ti*-distinction: *dignationis* and *istis*.
 b) Rule observed.
 Cf. Eguren, p. 78—9; Beer-Diaz Jimenez, p. 23 "a. 839"; N. A. XXVI, 397; M. G. H. *Auctt. Ant.*, T. XIV, p. xxxviii, "saec. x in." and p. xl.
17. **Léon Eccl. Cathedr. Fragm. no. 8.** saec. IX ut vid. (Vollmer's photos.)
 a) No *ti*-distinction: *gratiae*, *petenti*.
 b) Regular.
 Cf. Beer-Diaz Jimenez, p. 43: "s. x" and M. G. H. *Auctt. Ant.* T. XIV, p. xxxviii sq.: "saec. x".
 The script is of the oldest type.
18. **Barcelona Rivipullensis 46** (fly-leaves). saec. IX.
 a) No *ti*-distinction: *gentium*, *compositio* and *uagantibus*.
 b) Rule observed. *Ibi but ille*.
 The MS presents several features unusual in a Visigothic MS, e. g. abbreviations of *prae* and *tur* and the Caroline symbols for *nostri*, *per* and *pro*.
 Cf. Beer, *Die Handschriften des Klosters Santa Maria de Ripoll*, I 33 and pl. 1. (*Sitzungsberichte d. Kais. Akad. d. Wiss. in Wien*, Vol. 155 (1907), 3. Abh.
19. ***Berne A 92. 3.** saec. IX ut vid.
 a) No *ti*-distinction: *malitia* and *Irati*, *damnatione*, *mortiferum*.
 b) Rule observed.
 Cf. Steffens, *Lat. Pal.*², pl. 35.

20. **Madrid Univ. 31.** saec. IX.

(D. De Bruyne's photos. of entire MS.)

a) No *ti*-distinction: *letitia*, *humiliatio* and *vestmentis*. At the end of a line the ligature **ϑ** is used for assimilated *ti*: *oranϑum*, *exultaϑone*.

b) Rule observed, even *Illius* (often) and *aIt*.

Cf. Facs. in Merino, pl. VI; Berger, *Hist. de la Vulg.*, p. 22. The date (saec. X) in Wattenbach, *Anleit. z. lat. Pal.*⁴, p. 22 is hardly possible.

21. ***Sigüenza Capitol. Decretale 150.**¹⁾ saec. IX ut vid.

a) No *ti*-distinction: *Iustitia*. But at end of line, for economy of space, **ϑ** is used for soft *t*: *tradiϑonum*. Cf. preceding MS.

b) Rule observed. *Ihū*, *Ipsa* and *Illa*. Also *Iudalsmo*; *aIs*. In the last two examples the *i*-longa splits at the top and resembles a tall *y*.

Cf. De Bruyne and Tisserant, *Une feuille arabo-latine de l'épître aux Galates*, in *Revue Biblique*, July 1910 (with facsimile).

22. ***Paris Nouv. Acq. Lat. 238.** saec. IX.

a) No *ti*-distinction: *discretione* and *statim*.

b) Rule observed, *Illae* but also *ille*: *Ihū* and *ihū*.

Cf. Delisle, *Mélanges*, p. 60—1: "du X^e siècle".

23. **Escor. P I 6.** saec. IX.

a) No *ti*-distinction: *contemplatione* and *dediti*.

b) Rule observed.

Cf. *Exempla*, pl. XXVI: "saec. fere decimo"; *Bibl. P. L. H.*, p. 100: "saec. X—XI". The script is decidedly against this recent date.

¹⁾ These few leaves were formerly attached to the cover of "Decretale 150" in the chapter library of Sigüenza, where they were discovered by D. De Bruyne. They contain a unique specimen of the Latin and Arabic versions of St. Paul's Epistles, and for the present are preserved in the Vatican library.

24. **Albi 29.** saec. IX.

a) No *ti*-distinction: *totius*, *partibus*, *orientis*. **9** is used indifferently but more often for soft *ti*.

b) Regular, even *deInde*, *deInc*, *proInde*.

Cf. Facs. in Catalogue général des manuscrits des bibliothèques publiques des départements I (1849) 487.

25. ***La Cava I** (formerly 14) Danila Bible. saec. IX post med.

a) No *ti*-distinction: *generatione* and *euntibus*.

b) Rule observed: *Ibi*, *Ibant*, but *illuc*.

Cf. Facs. in Sylvestre, Paléogr. Universelle III, pl. 141 and two plates in Cod. Diplom. Cavens., Tom I, Manoscritti Membranacei, p. 1, where it is put in the 8th century. For its proper date see A. Amelli, De libri Baruch vetustissima latina versione etc. Epistola ad Antonium M. Ceriani (Monte Cassino 1902) pp. 7 and 14; Berger, Hist. de la Vulg., p. 15.

This is by far the finest product of Spanish penmanship and book-decoration known to me.

26. **Madrid. Univ. 32.** saec. IX ut vid.

(D. De Bruyne's photos.)

a) No *ti*-distinction.

b) Rule observed.

Cf. Facs. in Merino, pl. VI; Berger, Hist. de la Vulg., p. 15 et sqq.

27. **Toledo Capitol. 99. 30.** saec. IX.

a) No *ti*-distinction: *etiam*, *attingo*.

b) Rule observed.

Cf. Exempla, pl. XVI.

28. ***Paris Nouv. Acq. Lat. 2168.** saec. IX ut vid.

a) No *ti*-distinction: *pestilentia*.

b) Rule observed, even *Illis*.

Cf. Delisle, Mélanges, p. 76 "du x^e siècle".

29. **Manchester John Rylands Library MS Lat. 116.**

saec. IX ex. ut vid. (Lindsay's photo.)

a) No *ti*-distinction: *Iustitia*, *mentis*, *cogitatione*.

- b) Rule observed: Iste, Ipse, Ideo, Ille, but more often ille; also ih̄s. i-longa with forked top in alt, esalas etc. Cf. Facs. in New Palaeographical Society, pl. 162.
30. *London Add. MS 30852. saec. IX ex. ut vid.
 a) No *ti*-distinction: *vocatione*, *uitiorum* and *tibi*.
 b) Rule observed, even Ille.
 Cf. Cat. Add. (1876—1881) p. 121; Facs. in Cat. of Anc. MSS of Brit. Mus. II, pl. 37.
31. *Paris Nouv. Acq. Lat. 2170 (Part I). saec. IX ut vid.
 a) No *ti*-distinction: *etiam* and *cunctis*.
 b) Rule observed.
 Cf. Delisle, *Mélanges*, p. 79: "peut remonter au x^e siècle".
32. Escor. R II 18 (f. 95—95^v). post a. 882.
 This folio contains the famous Oviedo catalogue.
 a) No *ti*-distinction: *conlationum* and *canticum*.
 Cf. Muñoz, pl. IV; N. A. VI, 278; Becker, *Catal. Bibl. Antiq.*, p. 59; *Bibl. P. L. H.*, p. 135; Beer, p. 376 sqq.
33. Escor. P I 7. saec. IX ex. ut vid.¹⁾
 a) No *ti*-distinction: *etiam*, *latinum*, *iustitiam*.
 b) Rule observed, even Illa. Forked i-longa in alt, esalas.
 Cf. *Exempla*, pl. XIV; N. A. VI, 220, n. 4; *Bibl. P. L. H.*, p. 101.
34. Escor. T II 25. saec. IX ex. ut vid. (Fr. Manero's photo.)
 a) No *ti*-distinction: *potius*, *multi*, *iustitie*.
 b) Rule observed, even Illis, proInde. Forked i-longa in alt.

¹⁾ This and the following MS have the acrostic *Adefonsi principis librum*. It has generally been assumed that this referred to Alfonso II (795—843). As the writing of these two MSS resembles that of some dated MSS of about the year 900, I am inclined to believe that Alfonso III (848—912) is meant, especially as there is historical evidence for books having been presented by the latter as well as the former. Cf. Beer, p. 376 and 379.

35. *Paris Nouv. Acq. Lat. 1298. saec. IX ut vid.
 a) No *ti*-distinction: *etiam* and *anticam*.
 b) Regular.
 Cf. Delisle, *Mélanges*, p. 108: "minuscule mêlée de cursive du XI^e siècle". Mixed minuscule and cursive is more in keeping with my date.
36. *Paris Nouv. Acq. Lat. 2167. saec. IX ut vid.
 a) No *ti*-distinction: *pestilentia*.
 b) Rule observed, even *Ih̄s* and *Illis*.
 Cf. Delisle, *Mélanges*, p. 76: "du X^e siècle".
37. *Paris Nouv. Acq. Lat. 260. saec. IX ut vid.
 a) No *ti*-distinction: *uitio* and *voluptatis*.
 b) Rule observed: *Id*, *Ipsē* but *illo*.
 Cf. Delisle, *Mélanges*, p. 114: "du XI^e siècle".
38. *Paris Lat. 10877 (cf. Tours 615). saec. IX ex. ut vid.
 a) No *ti*-distinction: *totius* and *gregati*.
 b) Not regular: *incumbere*, *deinde* (with short *i*). There is something foreign about this MS.
 Cf. Delisle, *Mélanges*, p. 54: "probablement du X^e siècle".
39. *Paris Lat. 10876. saec. IX ex. ut vid.
 a) No *ti*-distinction: *conuersatio* and *excommunicatis*.
 b) Not regular: *inter*, *imperium*, *ista*, *proinde* (all with short *i*) which is a transgression of the rule. This MS belongs to the same school as the preceding.
 Cf. Delisle, *Mélanges*, p. 54: "probablement du X^e siècle".
40. *London Add. MS 30854. saec. IX ex. ut vid.
 a) No *ti*-distinction.
 b) Regular; even *Illius*.
 Cf. *Cat. Add.* (1876—1881), p. 121: "Xth cent."
41. Escor. I III 13. saec. IX/X ut vid. (Traube's photo).
 a) No *ti*-distinction.
 b) Regular.
 Cf. *Bibl. P. L. H.*, p. 81: "saec. X".

42. **Madrid Tolet. 14. 22** (now 10029). saec. ix/x ut vid.

a) Distinction made in some parts and not in others: *etiam*, *parenti* (no distinction); *presen*ϣa, *natique* (with distinction). The marginalia, apparently of the same time, observe the distinction: *depreca*ϣo.

b) Regular.

Cf. M. G. H. Auctt. Ant. T. III 2 (1879) pp. L & LII; *ibid.* facs; N. A. VI, 316 and 581: "saec. x"; Bibl. P. L. H., p. 284 "saec. ix/x"; M. G. H. Auctt. Ant., T. XIV, p. xxxviii.

43. ***London Thompsonianus 97.**¹⁾ a. 894.

a) Distinction made: *for*ϣa but ductile.

a) Regular, even Illi.

Cf. A descriptive catalogue of the second series of 50 MSS in the collection of H. Y. Thompson (1902) p. 304.

44. **Madrid Tolet. 43. 5** (now 10064). saec. ix/x ut vid.

a) Distinction made: *preceden*ϣum but *iustissime*.

b) Regular; but illi, also *prolbendum*.

Cf. *Exempla*, pl. XVII: "s. ix si non antiquior"; Bibl. P. L. H., p. 299. Reasons for my date are given below, p. 83 sq.

45. **Madrid Acad. de la Hist. 20 (F. 186),**²⁾ Hartel-Loewe no. 22. saec. ix/x ut vid. The Bible of San Millan.

a) Distinction made in first part of MS: *tribula*ϣone, but *angustia*, *canticum*. No distinction in last part of MS, which is by a different hand. The marginalia which are added make the distinction.

¹⁾ This excellently preserved MS (which I was privileged to examine in the library of its present owner to whom I here express my thanks) was purchased of Lord Ashburnham in 1897. The script is manifestly of the late 9th or early 10th century, and the subscription which dates it 894 (era 932) may be trusted.

²⁾ The entire MS has been photographed for the Commission on the Vulgate. D. De Bruyne, one of its members, kindly allowed me to examine the photographs.

b) Regular, even Illis. Also slon, ebraIce, with forked i-longa.

Cf. Exempla, pl. XXV: "saec. x"; N. A. VI, 332: "saec. ix"; Bibl. P. L. H., p. 500: "saec. viii". According to a subscription in the MS its date is 662! Berger, Hist. de la Vulg., p. 16. For discussion of the date see below, p. 84.

46. **Madrid Tolet. 10. 25** (now 10 007). a. 902.

a) Distinction made by first scribe: senϣunt but celestium. Often ϣ is used: exeunϣum. No distinction by second scribe. Here the work of the corrector can be watched; he adds the tail to *i* where *t* is assibilated. On f. 47^v eϣam seems to be by second scribe. The scribe toward the end of the book uses ϣ for assibilated *ti*. Likewise a later entry on f. 147^v makes the distinction. These valuable details I have from W. M. Lindsay.

b) Regular, but illut, illo. The second scribe has Itaque occasionally with forked i-longa.

The clubbed shafts of tall letters tend to become angular.

Cf. Exempla, pl. XIX; Monaci, Facs. di antichi MSS, pl. 88; Bibl. P. L. H., p. 265.

47. **Madrid Tolet. 35. 1** (now 10 001). saec. ix/x ut vid.

a) No *ti*-distinction: *tertia*, *tibi*.

b) Regular. Forked i-longa in aIt, efraIm.

Cf. Exempla, pl. XXVII^a; Bibl. P. L. H., p. 296: "saec. ix/x".

48. **Léon Eccl. Cathedr. 14.** saec. x in. (Clark's photo.)

a) No *ti*-distinction: *tibi* and *ratio*.

b) Regular. Shafts of tall letters have angular tops.

Cf. Beer-Diaz Jimenez, p. 15.

49. **Barcelona Rivipullensis 49.** a. 911.

a) No *ti*-distinction: *letitia*, *abstinentie*. But ϣ is used for soft *ti* at the end of a line: *sentenϣa*.

b) Regular: *Ipsa*, *Ihū*, even Illis.

Cf. Beer, Die Handschriften des Klosters Santa Maria de Ripoll, I 34 and pl. 2 and 3 (see above no. 18); Steffens, Lat. Pal.², pl. 66 b (= 54 of 1st ed.).

50. **Escor. a I 13.** saec. x in.

- a) Distinction made: *Iusti*ϣas, *diligen*ϣa.
- b) Regular, even *Illi*.

Cf. Muñoz, pl. V: "a. 912"; Exempla, pl. XV: "fortasse a. 812"; N. A. VI, 226: "saec. ix"; Bibl. P. L. H., p. 10: "a. 912", where the note on p. 13 contains Ewald's discussion of the date. Beer (p. 383 note and p. 384 note 3) favors 812; Traube, Textgeschichte der Regula S. Benedicti, p. 64 (= 662). The reasons for my date are given below, p. 82 sq.

51. **Manchester John Rylands Library MS Lat. 93.** a. 914.

Written at Cardena by Gomiz. (Lindsay's photo.)

- a) No *ti*-distinction by original scribes: *scientiam*, *potes-*
tatibus. But a contemporary corrector makes the dis-
tinction: *ac*ϣo (f. 58), *ac*ϣonibus (f. 292).
- b) Rule observed, but *ille*, *ihs̄* (also *Ihs̄*). Forked *i*-longa
in *aIt*, *hIems*, *IudaIca*.

The subscription which dates the MS will be published by Dr. M. R. James in his catalogue of the John Rylands MSS.

52. **Escor. T II 24** (formerly Q II 24). saec. x ut vid. See pl. 5.

- a) Distinction made: *al*ϣus but *latino*, *quaesi*ϣo but
quaestio.
- b) Regular.

Cf. Exempla, pl. VIII (older literature given); Muñoz, pl. 3; N. A. VI, 272; Bibl. P. L. H., p. 112; Beer, Praefatio to Tolet. 15. 8, p. XXIV; Steffens, Lat. Pal.², pl. 36 (= Suppl., pl. 17). In these works the MS is dated saec. viii, saec. viii/ix, a. 733 or 743. The grounds on which my date is based are given below, p. 81 sq.

My facsimile I owe to the courtesy of Dr. Franz Steffens to whom I here express my thanks.

53. **Madrid Tolet. 15. 12** (now 10 067). a. 915.

a) No *ti*-distinction by one scribe: *etiam*, *perfectionis*. Distinction made by another: *eogam*, but *pertimescit*. See plate 4 containing a facsimile of both hands.

b) Regular. One hand writes invariably *illius*; another has *Illo*. Also *aIt* with forked *i*-longa. The up-strokes of the scribe who makes the *ti*-distinction are strongly clubbed and often tend to end in an angle — a feature of the early 10th century.

Cf. *Exempla*, pl. XX; *Bibl. P. L. H.*, p. 293.

54. **Madrid Acad. de la Hist. 24 (F 188)**. Hartel-Loewe, no. 25. a. 917?

a) Distinction made by first scribe:¹⁾ *districaogone*. No distinction at end of MS: *etiam*, *ratio*.

b) Regular. In first part even *Ille*. Forked *i*-longa in *Igne*. The script is not the compact sort of the 9th century.

Cf. *Exempla*, pl. XXI; *N. A. VI*, 332; *Bibl. P. L. H.*, p. 503. The subscription which furnishes the date seems to have been tampered with. Cf. pl. in *Exempla*.

55. **Madrid P 21** (now 1872). saec. x in. ut vid.

a) Distinction made: *graogas* but *titulo*.

b) Regular.

Cf. *Exempla*, pl. XXVIII: "saec. x/xi". The script is plainly against this date.

56. **Escor. S I 16**. saec. x in. ut vid.

a) No *ti*-distinction: *tristitia*.

b) Regular. *illius*. The script presents a strange appearance.

Cf. *Exempla*, pl. XXXVII: "saec. xi ut vid"; Eguren, p. 82. For my date see below, p. 84 sq.

57. ***Paris Nouv. Acq. Lat. 238** (fly-leaf). saec. x ut vid.

a) Distinction made: *posiogonem* but *martires*.

b) Regular.

Cf. reference cited to no. 22.

¹⁾ These facts I learn from W. M. Lindsay. The plate in the *Exempla* reproduces the portion where no distinction is made.

58. *London Add. MS 25600. a. 919.

- a) Distinction made: pudici σ ga, iusti σ gae, but *timeant*.
 b) Regular, even Illis.

Cf. Cat. Add. (1854—75) p. 208; Facs. Pal. Soc., pl. 95; Arndt-Tangl II, pl. 36; Cat. Anc. MSS Brit. Mus. II, pl. 38.

The shafts of the letters *b*, *d*, *h*, *i*-longa and *l* have a prefix (or serif) at the top consisting of a small stroke made obliquely from left to right and upwards. In some MSS it is made at a right angle with the main shaft and often extends beyond it thus giving it the form of a mallet-head (cf. pl. 5, 6, 7). This graphic feature is noteworthy, as it is lacking in MSS of the preceding periods.

59. Léon Eccl. Cathedr. 6. a. 920. (Clark's photo.)

- a) Distinction made: edi σ gonem but *legeritis*.
 b) Regular.

Cf. Beer-Diaz Jimenez, p. 5; Berger, Hist. de la Vulg., p. 17.

60. Madrid Tolet. 11. 3. a. 945. (Kept in Vitrina 2^a, Sala I^a.)
(Haseloff's photo.)

a) Distinction regularly made by one scribe: ini σ gum, ui σ gis but *extitit*. Yet another scribe (to judge from the facsimile in Muñoz) seems unsteady in his use, for he makes the distinction in some words and not in others: silen σ gum (l. 1) but *silentium* (l. 6); contempla σ gonis (l. 7) but *contemplationum* (l. 4). The examples are from Muñoz' facsimile.

b) Regular. The tops of tall letters have a prefix. Cf. no. 58.

Cf. Muñoz, pl. VI and p. 117.

61. *London Add. MS 30844. saec. x ut vid.

- a) Distinction made: pre σ gum.
 b) Regular, even Illa.

Cf. Cat. Add. (1876—1881), p. 119.

62. **Madrid Acad. de la Hist. 25 (F 194)**, Hartel-Loewe,
no. 8. a. 946.

a) Distinction made: *pigrigam* but *timore, celestia*.

b) Regular, even *Ille*; forked *i-longa* in *hebraica*.

Cf. *Exempla*, pl. XXII; N. A. VI, 331; *Bibl. P. L. H.*, p. 493.

63. **Manchester John Rylands Library MS Lat. 99.** a. 949.

Written at Cardena. (Lindsay's photo.)

a) Distinction made: *poenitengam, tribulago* but *salutis, timore*.

b) Regular. The tops of tall letters have a prefix.
Cf. no. 58.

The subscription which dates and places this MS will be given by Dr. M. R. James in his forthcoming catalogue of the John Rylands MSS.

64. ***Paris 2855 (part II).** ca. a. 951.

a) Distinction made: *acgonem*, but *deserti* and *moles-tiarum*.

b) Regular, yet *ihm, illum*.

The tops of the tall letters have a prefix. Cf. no. 58.

Cf. Delisle, *Mélanges*, p. 53, where older literature is cited; Facs. see Sylvestre, *Paléog. Univ. III*, pl. 206; Facs. de l'école des chartes, pl. 277.

65. **Escor. a II 9.** a. 954.

a) Distinction made: *profanagonibus* but *cunctis*.

b) Regular.

Script not compact. The tall shafts thicken at the top in a triangular form.

Cf. *Exempla*, pl. XXIII; *Bibl. P. L. H.*, p. 19.

66. ***Paris Nouv. Acq. Lat. 239.** saec. x.

a) Distinction made: *tristige* but *celestia*.

Cf. Delisle, *Mélanges*, p. 78.

67. **Léon Eccl. Cathedr. 21** (additions on a page left blank).

saec. x. (D. De Bruyne's photo.)

a) Distinction made.

The script may even be more recent. It shows foreign influence, e. g. \bar{p} = prae; p with superior o = pro; m with apostrophe = mus, etc. The Catalogue by Beer-Jimenez does not describe these additions.

68. *Floren. Laur. Ashburnh. 17. saec. x ex. ut vid.
 a) Distinction made: genera ω onem but *tibi*.
 b) Regular, even Illa, Illius, Illi.
 The tops of the tall letters have a prefix. Cf. no. 58.
 Cf. Facs. in Collez. Fiorent., pl. 33; Rivista delle Bibl. e degli Archivi XIX (1908) p. 5. See above p. 52, n. 1.
69. Madrid Acad. de la Hist. F 212. Hartel-Loewe, no. 44. saec. x ex. ut vid.
 a) Distinction made: spa ω um but complectitur.
 The tops of the tall letters have a prefix. Cf. no. 58.
 Cf. Exempla, pl. XXIV: "a. 964"; N. A. VI, 334: "saec. x"; Bibl. P. L. H., p. 514: "saec. xi".
70. *Paris Nouv. Acq. Lat. 2170 (last 22 leaves). saec. x ut vid.
 a) Distinction made: institu ω onis, ora ω one.
 Cf. Delisle, Mélanges, p. 79.
71. *London Add. MS 30846. saec. x ut vid.
 a) Distinction made: supplica ω one but peccatis.
 Cf. Cat. Add. (1876—1881) p. 120.
72. *London Add. MS 30845. saec. x ut vid.
 a) Distinction made: cessa ω one but peccatis.
 Cf. Cat. Add., p. 120; Facs. in The Musical Notation of the Middle Ages (London 1890) pl. I.
73. Escor. d I 2. a. 976. (Traube's photo.)
 a) Distinction made: ra ω one, sacerdotibus.
 b) Regular. Forked i-longa in laici. Tops of tall letters have prefixes.
 Cf. N. A. VI, 238; Bibl. P. L. H., p. 43; Facs. in N. A. VIII, 357, containing a line of script and one of arabic numerals, perhaps the earliest example in a western MS.

74. *Paris Nouv. Acq. Lat. 2180. ante a. 992.
 a) Distinction made: e σ gam, iusti σ ga, but iuventuti.
 b) Regular; Ibi but illi.
 Cf. Delisle, Mélanges, p. 101.
75. Escor. d I 1. a. 992.
 a) Distinction made: obla σ ones but retinent.
 b) Regular. The tops of tall letters have a prefix. Cf. no. 58.
 Cf. Exempla, pl. XXVII b; N. A. VI, 236; Bibl. P. L. H., p. 43.
76. *Paris Nouv. Acq. Lat. 1296. saec. x ut vid.
 a) Distinction made: auc σ go but estimo, congestio. This is perhaps the oldest Latin MS on paper; sheets of vellum are interspersed.
 Cf. Delisle, Mélanges, p. 109: "du XII^e siècle".
77. *London Add. MS 30851. saec. x/xi ut vid.
 a) Distinction made: stilan σ ga.
 b) Regular, even Illud.
 The tops of the tall letters have a prefix. Cf. no. 58.
 Cf. Cat. Add. (1876—1881) p. 120.
78. *London Add. MS 30847. saec. xi ut vid.
 a) Distinction made.
 Cf. Cat. Add. (1876—1881) p. 120.
79. *Paris Nouv. Acq. Lat. 2179. saec. xi ut vid.
 a) Distinction made: Indign σ go but quaestionarii, vestigia.
 Cf. Delisle, Mélanges, p. 95.
80. Escor. e I 13. saec. xi ut vid.
 a) Distinction made: geron σ us but ualentinus.
 b) Regular, even Illud.
 Tall letters are very long and have a prefix at the top. Cf. no. 58.
 Cf. Exempla, pl. XXIX. "saec. x/xi."
81. *London Add. MS 30850. saec. xi ut vid.
 a) Distinction made: ora σ gone but uoluptati.
 Cf. Cat. Add. (1876—1881) p. 120; Facs. in The Musical Notation of the Middle Ages, pl. IV.

82. *Paris Nouv. Acq. Lat. 2178. saec. XI ut vid.
 a) Distinction made: *pa ω gentis*.
 Cf. Delisle, *Mélanges*, p. 85; Facs. pl. II in catalogue of sale (1878).
83. Escor. & II 5. saec. XI ut vid. (Clark's photo.)
 a) Distinction made: *pa ω gen ω a* but *odisti*.
 b) Regular.
 Cf. *Bibl. P. L. H.*, p. 75.
84. Madrid Tolet. 35. 2 (now 10110). saec. XI.
 a) Distinction made: *Insurgen ω um*.
 Cf. *Exempla*, pl. XXX. The date "a. 1006" is given in index on the authority of Merino. But there is much uncertainty in connection with this date. The script is very ill-formed and may be older than saec. XI.
85. *Paris Nouv. Acq. Lat. 235. saec. XI ut vid.
 a) Distinction made: *aedifica ω o* but *protinus*, *modestiam*.
 The tops of the tall letters have a prefix. Cf. no. 58.
 Cf. Delisle, *Mélanges*, p. 75.
86. *Paris Nouv. Acq. Lat. 2176. saec. XI ut vid.
 a) Distinction made: *ra ω one* but *multi*.
 Cf. Delisle, *Mélanges*, p. 70; Facs. pl. IV in catalogue of sale (1878).
87. *Paris Nouv. Acq. Lat. 2177. saec. XI ut vid.
 a) Distinction made: *Iusti ω ae*, *pa ω genti*.
 I noted *Iusticia* (p. 473). The use of *ci* for soft *ti* begins to creep into MSS during the 11th century, and is often found after that time. — The tops of the tall letters have a prefix. Cf. no. 58.
 Cf. Delisle, *Mélanges*, p. 71.
88. Escor. & I 3. a. 1047. (Clark's photo.)
 a) Distinction made: *ra ω onem* but *continet*.
 The tops of tall letters have a prefix. Cf. no. 58.
 Cf. Muñoz, pl. XI, p. 121; Beer, p. 218.

89. ***London Add. MS 30855.** saec. XI ut vid.
 a) Distinction made.
 Cf. Cat. Add. (1876—1881) p. 122.
90. **Madrid Nacion.** (Beatus super Apocalypsim.)
 a. 1037—1065. Now kept in Vitrina 1^a, Sala I^a.
 a) Distinction made: e ω gam but *altitudo*.
 b) Regular; aIt with forked i-longa.
 Cf. Muñoz, pl. XII (where no press-mark is given).
91. **Madrid Nacion.** (Forum judicum from Léon.)
 a. 1058. Now kept in Vitrina 4^a, Sala I^a.
 a) Distinction made: pre ω go but *facultatibus*.
 b) The tops of tall letters have a prefix. Cf. no. 58.
 Cf. Muñoz, pl. XIII (no press-mark).
92. **Madrid Acad. de la Hist. F 211.** Hartel-Loewe, no. 47.
 saec. XI ut vid.
 a) Distinction made: quaesi ω go.
 b) Regular, but *illius*. The tops of tall letters have a
 prefix. Cf. no. 58.
 Cf. Exempla, pl. XXXVI.
93. **Madrid Royal Private Library 2 J 5.** a. 1059.
 a) Distinction made: gra ω ga but *salutis*.
 b) Regular, but *illo*. The tops of tall letters have a
 prefix. Cf. no. 58.
 Cf. Exempla, pl. XXXII.
94. **Madrid A 115** (now 112). saec. XI (a. 1063?)
 a) Distinction made: nego ω is.
 b) Not regular: in often with short *i*. Sign of decay
 of script. The tall letters have a prefix occasionally, as
 a rule they thicken at the top in the form of a triangle.
 Cf. Exempla, pl. XXXIII whence Arndt-Tangl⁴,
 pl. 8 d.
95. **Madrid A 2** (now 2). saec. XI ut vid. (D. DeBruyne's photo.)
 a) Distinction made.
 Cf. Berger, Hist. de la Vulg., p. 20.

96. *Paris Nouv. Acq. Lat. 2171. ante a. 1067.
 a) Distinction made: Iustiϣam, forϣores.
 b) Regular, but illum.
 Cf. Delisle, Mélanges, p. 68: "premiere moitié du XI^e siècle"; Férotin, Le liber ordinum, p. XIII.
97. Léon Eccl. Cathedr. 2. a. 1071. (Clark's photo.)
 a) Distinction made: iustiϣam.
 b) Regular.
 Cf. Beer-Diaz Jimenez, p. 2.
98. *Paris Nouv. Acq. Lat. 2169. completed a. 1072.
 a) Distinction made: raϣone but mittit, questio.
 b) Regular. The tops of tall letters have a prefix. Cf. no. 58.
 Cf. Delisle, Mélanges, p. 107; Férotin, Le liber ordinum, p. XXXIII.
99. *London Add. MS 30848. saec. XI ut vid.
 a) Distinction made.
 b) Regular: Illa and illuc.
 Cf. Cat. Add. (1876—1881) p. 120.
100. Madrid Acad. de la Hist. F 192. Hartel-Loewe, no. 29.
 a. 1073.
 a) Distinction made: lecϣo but noctis.
 b) Regular, but illa. The shafts of the tall letters have a prefix. Cf. no. 58.
 Cf. Exempla, pl. XXXV; N. A. VI, 332.
101. Madrid R 216 (now 6367). a. 1105.
 a) Distinction made: fornicaϣonem.
 b) Regular, but illa.
 Cf. Exempla, pl. XXXVIII.
102. *London Add. MS 11695. a. 1109 (or 1091).¹⁾
 a) Distinction made: condiϣone but constituta.
 b) Regular: Ipsius, even Illa.
 The tops of tall letters have a prefix. Cf. no. 58.
 Cf. Delisle, Mélanges, p. 60; Facs. Pal. Soc., pl. 48, 49; Arndt-Tangl³, pl. 37; Facs. de l'école des chartes. no. 353. Colored facs. in Westwood's Pal. Sacra Pict.

¹⁾ The subscription which gives us the date is not quite clear. Cf. Prou, Manuel de Paléogr.³ (1910) p. 101, note 4.

103. **Madrid Archiv. Hist. Nacion. 989—B.** Vitrina 40. a. 1110.

a) *palacio*: *ci* is used for assibilated *ti*. The spelling on the whole is that of an ignorant notary.

Cf. Facs. in Muñoz, pl. XIV (where no press mark is given).

104. ***Rome Corsinian. 369** (formerly 40 E 6). saec. XII.

a) Distinction made in Visigothic portion: *cognico*, *persecuconis*. The non-Visigothic hand often writes *ci* for assibilated *ti*.

In Visigothic script are ff. 144—156 and additions on f. 106.¹⁾ The rest of the MS is in ordinary minuscule by contemporaneous hand. This is the sixth example known to me of a Spanish MS in Italy. It has been correctly described by Zacarias Garcia: *Un nuevo manuscrito del comentario sobre el apocalipsis de San Beato de Liebana*, in *Razón y Fé* XII (August 1905) p. 478—493. The MS is palaeographically very instructive. The Visigothic script in it is impure, showing a mixture of ancient and foreign elements, especially in the abbreviations. The tops of tall letters as in other recent MSS have a prefix. Cf. pl. 7.

The above evidence is instructively supplemented by a consideration of the following corrections and additions, and by the testimony of notarial documents.

In Escorial T II 24 (formerly Q II 24) on line 6 of folio 73 (cf. *Exempla*, pl. VIII) the scribe originally wrote *quesitio* with the assibilated form of *ti*. The word however should have been *questio*. The corrector who crossed out the superfluous *i* also changed the form of the second *i*.

¹⁾ The additions it seems escaped the notice of Garcia. As they occur in the non-Visigothic portion of the MS they furnish further evidence for his contention that the whole MS was written in Spain.

One of the scribes of Madrid Tolet. 10. 25, a. 902 does not make the *ti*-distinction. In this part of the MS the activity of the corrector is plainly noticeable: he adds the tail to the *i* where *ti* has the soft sound.

The scribe or scribes of Manchester John Rylands Library MS 93 make no distinction, but contemporary additions have it (f. 58, 292) and a later corrector changes the ordinary form of *ti* to œ where it is assibilated, e. g. on f. 129.

The MS Madrid Acad. de la Hist. F 186 shows a wavering in the matter of the *ti*-distinction. The marginalia, which seem to me by a later hand, invariably observe it. The same indecision with regard to the *ti*-usage is found in Madrid Tolet. 10. 25. The later entry on f. 147^v makes the distinction.

The documents which I have been able to study in the facsimiles of Muñoz furnish data which may fairly be regarded as confirming the evidence of the MSS.¹⁾

In a document of 857 (Muñoz, pl. 16) ſ is used for assibilated *ti*, but not œ .²⁾

In a document of 898—929 (Muñoz, pl. 17) no distinction is made, *ci* doing service for assibilated *ti*. But in a document of 904 (Muñoz, pl. 18) we have the distinction: preœo but *dedistis*.

It is needless to enumerate the later documents. As a rule the distinction is made as in MSS. Occasionally it happens that œ is used indiscriminately (cf. Muñoz, pl. 22 and 41). In the more recent documents *ci* is used for assibilated *ti*. Yet in a document of 1137 (Muñoz, pl. 42) the two forms of *ti* are still strictly differentiated: *uendiœones* but *tibi*.

1) The earliest examples of Visigothic cursive show no *ti*-distinction, as we learn from the cursive pages of Autun 27 (cf. p. 52, n. 1). There is likewise no distinction in the Escorialensis of Augustine (Camarin de las reliquias) in the cursive part containing the *Benedictio cerei*. But this writing, as Traube has pointed out (*Nomina Sacra*, p. 191, note 1), must not be regarded as Spanish.

2) In the cursive portion of Escor. R II 18 (ante a. 779) assibilated *ti* is regularly represented by ſ . The same is true of the additions in cursive found in many MSS posterior to the 8th century.

A study of the usage illustrated by the foregoing data gives us the following facts with regard to *ti*-forms in Visigothic MSS.

1. The distinction is never found in MSS which are indisputably of the 8th or early 9th century.

2. The distinction is invariably made in the more recent MSS, beginning (to use the safest limits) with the second half of the 10th century and extending to the 12th, i. e. as long as the script lasts.

3. Certain MSS, written between the two periods indicated show a wavering in usage, one scribe making the distinction and another not; or one scribe making it in some cases and not in others.

There can be but one interpretation of these facts. The custom of making the *ti*-distinction in book-script was consciously introduced. This graphic innovation, which on the face of it has something formal and conventional (since the ligature **ſ** which did service for assimilated *ti* in cursive was rejected as unsuitable in book-hand), was in all probability introduced in connection with liturgical books, where a need was felt of facilitating the reading aloud. The form **œ** was to tell the reader at once that he should give the soft sound of *t*. As such scribal changes, however, are adopted slowly, and reach some schools much sooner than others, it need not surprise us that scribes of one school should continue in the old way long after those of another had adopted the new one. The absence of the *ti*-distinction may therefore say less to us than its presence. Its presence is at once a hint that the MS is not of the oldest kind. But there are MSS in which one scribe makes the distinction and another does not.¹⁾ These are manifestly MSS of the transition period, in which the struggle between the old and the new can be witnessed, the younger scribe adopting the innovation, the older

¹⁾ Cf. in my list the numbers 42, 45, 46, 53, 54 and 60.

persisting in his old-fashioned way as he had been taught. The fact that these MSS were written, as the dated as well as the undated MSS show, precisely in the interval between two periods the first of which displays the invariable absence, the second the invariable presence of the distinction, is the best possible proof that the custom of making the distinction was then in the actual process of adoption by the various schools of Spain. The question as to which centre was first to practice the distinction and which were the centres more backward about doing so must be left for further investigation.

What are the more precise limits of the transition period? The earliest dated example known to me of a MS with the *ti*-distinction is Thompsonianus 97, written, according to a subscription, in the year 894. As the form of the letters corresponds to that of other dated MSS of the same time, there is no reason for questioning the originality of the subscription. The latest dated example known to me of a MS in which the scribe shows insecurity in his usage is of the year 945.¹⁾ As several dated MSS which fall between 894 and 945 show the *ti*-distinction (at least by one hand), it is fair to consider these two dates as the extreme limits of the transition period. From all this it must follow that a MS without the distinction is in all probability older than 894 (as many MSS of the type of Thompsonianus 97 still ignore the distinction); that on the other hand a MS with the *ti*-distinction is hardly older than 894, and in most cases much younger.

The MSS which may be pointed out as disputing the criterion just formulated are, I believe, so few in number that they could fairly be regarded as mere exceptions to a rule. But such MSS remain exceptions only if we accept their

¹⁾ Cf. no. 60 of list. It is only fair to note that this statement is based on a facsimile of Muñoz which is less trustworthy than a photograph. The photographs which I had of this MS showed the distinction regularly.

traditional dates.¹⁾ If we can show those dates to be untenable or improbable on palaeographical grounds the validity of the *ti*-criterion will thus at once be both tested and confirmed. This I shall attempt to do. I preface my argument with a few remarks on the script as such.

Briefly, we may distinguish four stages of development:

a) The first stage is exemplified in the oldest MSS, saec. VIII—IX. The script has striking compactness. The pen-stroke is not fine. The shaftless letters are rather broad, the arcs of *m*, *n* and *h* are low; their last stroke turns in. The separation of words is imperfect. The point of interrogation is usually a later addition. The suspensions *bus* and *que* are generally denoted by a semi-colon placed above *b* and *q* (cf. pl. 3).

b) The second stage is illustrated by the MSS of the end of the 9th and the beginning of the 10th century. The script is looser and larger; the shafts of tall letters are club-shaped; the shaftless letters have more height than breadth; the final stroke of *m*, *n*, *h* often turns out. The separation of words is more distinct; the interrogation point is used. The suspensions *bus* and *que* are represented now by means of the semi-colon, now by means of an s-like flourish (cf. pl. 4).

c) The third stage is seen in MSS of the 10th and 11th centuries. The letters are better spaced; the pen-stroke is often fine. The body of the letters is rather tall and narrow. The final stroke of *m*, *n*, *h* etc. regularly turns out. Particularly characteristic are the shafts of tall letters, which end in a little hook or mallet-head. The suspensions *bus* and *que* are denoted by an s-like flourish placed above *b* and *q*, i. e. the semi-colon of the first stage is here made in one conventionalized stroke (cf. plates 5 and 6).

¹⁾ Although with great hesitation, I have ventured to disagree with the date given by Delisle in the case of nos. 35 and 37 of my list. If his dates are correct, I should be at a loss to explain the *ti* usage in these MSS.

d) The last stage of the script is characterized by the decay and awkwardness of the old forms and the employment of foreign elements (cf. plate 7).

We are now in a position to test the *ti*-criterion. I select first the most important exception. The MS Escor. T II 24 (formerly Q II 24)¹⁾ containing the Etymologies of Isidore has long enjoyed the distinction of being the oldest dated MS in the script (see plate 5). The traditional date is 733 or 743. A computal note in the text (f. 68) says: "*usque in hanc presentem eram que est DCCLXXI*" which is the year 733. A few lines below occurs: "*usque in hanc praefatam DCCLXXXI eram*" which is the year 743. One of these dates is plainly wrong. From the calculation in the text it appears that 743 is the correct year. In the judgment of Eguren, Muñoz y Rivero, Ewald and Loewe, Beer and Steffens, not to mention older authorities, the script did not seem to belie the date established by the computal note. Steffens gives 743 as the date of his facsimile, but he is cautious enough to add: "unter der Voraussetzung, daß jene Eintragung ein Original ist und nicht etwa eine Abschrift aus einem anderen Codex". R. Beer, in his learned Praefatio to the reproduction of the Toletanus 15. 8 compared that MS with Escor. T II 24, thus trying to determine the age of the undated MS by the aid of the presumably dated one. He says of our MS: "litterae sunt aliquanto altiores ductusque magis tenues", thus pointing out essential differences. But when he continues and says "sed utriusque libri scriptura, ut ex Exempl. Scr. Visig. tab. VIII et ex tab. 17 supplementi Steffensiani perspicere licet, in universum non est dispar", he seems to me to be withdrawing his earlier judgment just quoted. It is also plain that a certain calligraphic difference escaped Beer's notice: one MS uses only one form for *ti*, the other two distinct forms. But indeed a careful examination of the script of the Escorialensis will disclose other traits foreign to the oldest type of Visigothic

¹⁾ For literature see no. 52 of the list.

writing. Foremost is the general impression already noted by Beer: the proportions of the letters, their relation to one another. It is plainly not the old, compact, broadly-flowing writing. In the oldest MSS the *m* and *n* and the arch of *h* all turn in. In the Escorialensis and the more recent MSS these strokes thicken at the end and turn out. In the older type the letter *g* has often a rather short and curved downstroke, in the Escorialensis and the more recent type of MSS it is very long. But the unfailing ear-mark of the recent type is the hook or mallet-shaped end of the shafts of *b*, *d*, *h*, *i-longa* and *l*, which is unknown in the oldest MSS. The Escorialensis has such shafts.¹⁾ The abbreviation sign over *b* and *q* for *bus* and *que* has the form of an uncial *s* as in the more recent type of MSS (cf. plate 5). — In short, purely graphic considerations are against the traditional date of 743. I may state my conviction that the computal note is merely a copied one, and that Escor. T II 24 may be fairly held to confirm the value of *ti* as a criterion for dating.

The MS Escor. a I 13²⁾ furnishes an excellent instance of the caution with which the inscriptions and subscriptions of Spanish MSS must be used.³⁾ According to a note in cursive on f. 186^v the MS was written “regnante adefonso principe in era DCCCCL” i. e. in 912. Ewald has pointed out that in 912 there was no reigning Alphonse, as Alphonse III had died in 910. By assuming that the scribe inserted a superfluous *C* he gets era DCCCL corresponding to 812, which agrees with the reign of Alphonse II (795—843) and thus 812 was (presumably) the date of the MS. Muñoz has 912. The description in the Exempla is “fortasse 812”, the reservation being

1) More precisely one of the scribes of this MS whose writing is seen in our plate. The facsimile in the Exempla shows another hand which does not make this type of shaft.

2) For literature see no. 50 of list.

3) Other examples are not wanting. Cf. nos. 33, 34, 45, 52, 84 and 102 of list.

doubtless a concession by Ewald to Loewe. For according to the latter's notes as edited by Hartel the date of the MS was 912 and not 812. Ewald's explanation did not seem thoroughly convincing to Traube. But Beer's date is 812. In connection with one of the Codices Ovetenses mentioned in the inventory of 882 he notes: "es ist zweifellos der heutige Escorialensis a I 13 'de la yglesia de Oviedo' (vgl. Hartel-Loewe, p. 10 ff.), dessen Beschreibung in allen wesentlichen Stücken mit der vorliegenden übereinstimmt. Durch diese Identifikation wird auch die Datierung (des ersten Teiles des Codex) 812 (Jahr der Alphonsischen Schenkung, nicht 912) gestützt". But can not the Escorialensis be a copy of a MS which was presented in 812 and catalogued in 882? Whereas against this early date is the script of the MS, which is not of the old type. The letters are somewhat irregular and awkward, which lends the script an appearance of antiquity. The shafts of tall letters thicken at the end. The upright strokes of *m* and *n* thicken below and turn out. The abbreviation sign over *b* and *q* is an *s*-like flourish. Judged by purely graphic standards the MS should belong at the beginning of the 10th century. As for the subscription the very nature of the error in it hints that it was copied from an original having DCCCL. The scribe unconsciously inserted the extra C because he was accustomed to writing DCCCC — a type of mistake we commit every January. Thus though the year 912 need not be the exact date when the MS was copied, it is more than likely that it was written after era 900, which would fully account for the presence of the *ti*-distinction, not found in the MSS of the beginning of the 9th century.

The MS Madrid Tolet. 43. 5¹⁾ shows a cruder and less calligraphic type of writing than the MS just considered and that perhaps lends it an impression of antiquity. But it lacks

1) Cf. no. 44 of list.

all resemblance to the earliest kind of Visigothic writing, having the same features as those noted in Escor. a I 13. The editors of the *Exempla* date it "saec. ix, si non antiquior". Again I believe we have a sort of compromise between the *duumviri*. For Loewe's more precise description (in *Bibl. P. L. H.*, p. 299) makes distinct mention of the more recent character of the script. "Die HS gehört jedenfalls dem IX. Jahrhundert: sie zeigt nicht die alte gedrückte Schrift wie der Toletaner Isidor (the same script as my plate 3), zeigt aber denselben Charakter wie spätere HSS." — This MS makes the *ti*-distinction. It shows the more recent type of writing. Loewe's own words tend to confirm the validity of the *ti*-criterion.

The MS Madrid Acad. de la Hist. 20 (F 186)¹⁾ is another of those upon the date of which scholars have expressed the most divergent opinions. According to a subscription it was written in 662, and even this date has had its supporter. The editors of the *Exempla* put it in the 10th century, yet in their separate reports Ewald and Loewe give different dates. The former says "saec. ix" the latter "saec. viii". Again I believe that the awkwardness of the script was mistaken for antiquity. But the script is against an early date. The opinion expressed in the *Exempla* is most likely correct. The fact that the *ti*-distinction is made in one part of the volume and not in another is surely not without importance in dating this MS.

The MS Escor. S I 16²⁾ has for some inexplicable reason been put into the 11th century by the editors of the *Exempla*. I believe that no study of its script could leave this date unchallenged. According to Eguren the MS is by two centuries older. To be sure Eguren is trying to identify the MS with

¹⁾ For literature see no. 45 of list.

²⁾ For literature see no. 56 of list.

one mentioned in the Oviedo inventory of the year 882, which may perhaps have biased him in favor of a date anterior. But even if we do not fully agree with his statement that "the character of the script employed in this important MS corresponds to the first half of the 9th century" it is still much nearer the truth than the date given by Ewald and Loewe. The MS makes no *ti*-distinction. And if, as I believe, my date is right, it furnishes no exception to the *ti*-criterion established by our investigation.

Where there is so much dispute and uncertainty, pure palaeography will have to say the last word. I believe that in the long run we are less apt to go wrong in the matter of dating, if we respect the hints learned from a careful study of the script than if we allow ourselves to be guided purely by inner evidence. The letter is less likely to prove misleading than a subscription. The latter may be copied; but the scribe did not and could not disguise his hand. The form of the letters he made infallibly betrays his epoch.

Plates.

1. Vercelli CLXXXIII. saec. VIII.

An excellent example of north Italian book-cursive. Superior *a* is frequent, *i*-longa occurs regularly initially (l. 2, 5) and also medially, **g** is used indifferently (l. 11). Noteworthy is the form of *z* (l. 11). Of the many abbreviations may be mentioned: $n\bar{i}$, $n\bar{a}$, $n\bar{a}m$ = nostri, nostra, nostram; $\overset{\circ}{n}$ = nunc, $\overset{\circ}{p}$ = pro, $\overset{t}{p}$ = post, $\overset{\circ}{q}$ = quo, $\overset{\circ}{u}$ = vero, *t* with horizontal flourish = ter, *t* with vertical wavy stroke = tur.

2. Paris lat. 653. saec. VIII/IX.

A specimen of transition writing. Our facsimile reproduces two hands. The first shows cursive traditions; it uses *i*-longa, **g** (for soft *ti*), the ligatures of *ri*, *st* etc. Characteristic is the *r* with the shoulder extending over the following letter. The second hand lacks *i*-longa, **g**, ligatures of *ri*, *st* etc. and represents the more modern tendency. Abbreviations are frequent. Noteworthy are \overline{nsr} = noster (5 times), $n\bar{e}r$ = noster, $n\bar{m}$ = nostrum (also $n\bar{r}m$), $n\bar{o}ris$ = nostris, \bar{n} = nostro (once), $u\bar{e}ri$ = vestri; $m\bar{i}a$ and ma = misericordia. For some of these details I am indebted to Dr. A. Souter.

3. Monte Cassino 4. saec. IX in.

Visigothic writing of the first period. The *ti*-distinction is not made (l. 1, 2 etc.) in the text. An addition in the margin has **g** for soft *ti* (l. 3). Note the abbreviation of *bus* and *que*. The last stroke of *m*, *n* and *h* turns in. The tall letters have simple shafts. Observe that a Cassinese scribe of the 11th century transcribed the Visigothic marginal entry in cursive.

4. Madrid Tolet. 15. 12. a. 915.

A MS of the transition period. Our facsimile shows two hands. Col. 1 represents the more modern style, with **cg** for soft *ti* (l. 1, 2, 6). The vertical strokes of *m* and *n* thicken and turn out, the tall

letters end in thick clubs, the letters are rather well spaced. The *us*-symbol is made in one *s*-like flourish. The hand of col. 2 shows the old school. The *ti*-distinction is not made (l. 13 and 14). The letters are not so well spaced. *m*, *n* and *h* recall the oldest type. The tall letters have simple shafts. The *us*-symbol is made in two strokes. The plate is taken from Ewald and Loewe.

5. Escor. T II 24 (formerly Q II 24). saec. x.

The palaeographical features to which attention should be called are: 1. The general spacing and height of letters. 2. The vertical strokes of *m*, *n*, *i* etc., which thicken and turn out. 3. The prefix at the end of tall letters. 4. The *s*-like stroke for *us*. 5. The use of **œ** for soft *ti*. These graphic peculiarities place the MS in the 10th century.

6. Escorial d I 1. a. 992.

Our facsimile illustrates the third stage of Visigothic calligraphy, when the script had already reached the highest point and was beginning to decline. The graphic features noted in plate 5 also characterize this MS, only the writing is more formed and more regular. The plate is taken from Ewald and Loewe.

7. Rom. Corsinian. 369. saec. xii.

A specimen of Visigothic writing in its last stage, showing the decay of traditional forms. The abbreviation of *tur* and the *us*-symbol show the continental influence to which the script succumbed.

Addenda et Corrigenda.

P. 4 and n. 4 for Rivera read Rivero.

P. 17 n. 1. In connection with the MS Paris 13 246 it should be noted that *ci* for assibilated *ti* is also frequently found in MSS of Rhaetian origin.

P. 25 n. 1 for Bluhme read Blume; n. 2 for Yales read Yates.

P. 30 for Vatic. lat. 317 read Vatic. Regin. lat. 317.

P. 34 for Trousseures read Troussures.

P. 39 Vienna 17 cannot be said to form part of Naples IV A 8, although it belongs in the same group with it.

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