Preliminary remarks

Before surveying the history of Latin script it is necessary to refer to several forces and tendencies that fashion and alter writing, things that make this history visible.¹ This should make it simpler to understand the processes at work in writing.

There are two fundamentally different techniques of writing² (though certainly with some overlap); I term them the calligraphic and the cursive. The former is in general proper to bookhands, the latter is proper to the whole spectrum of everyday scripts.

The calligraphic technique, for which a broad (and slit) quill is suited, is required for the realisation of script types such as the canonical capitalis,¹ uncial, half-uncial, caroline minuscule, Beneventan script, and the Gothic textura. In these kinds of script the letters have to be constructed from their various elements with either broad or hair strokes and have to be executed technically correctly, that is either towards the body or towards the right, following the limits of the quill-point(s); the quill should not injure the page surface or spill through shaking. Those 'constructed' scripts are written with the hand firmly supported on the little finger. In their realisation the sequence of strokes must be followed, that is the 'structure'³ of the letters — not haphazard but organically and technically determined; this structure also determines the first alterations that appear in cursive writing. The constructed scripts, especially the established script types, preserve the form of the letters. Only exceptionally is there question of "mutation,"⁴ this occurs with g: at various times the scribes tried to

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¹ Our concern here is with the graphical aspect of the scripts. For other factors which determine the form and the evolution of script, such as the physiology and the psychology of writing, changes in style and culture, political and social conditions, cf. Fichtner, *Mensch und Schrift*, S. Morsman, *Pictura, *Letters and Script* (Oxford 1972); Streeter, *Palaeography*, 45 ff; W. Schöf, *Die Unterrichtung deutscher Könige von der Karolingerzeit bis zum Despotismus durch Kursus und Unterricht* (Kallmünz 1958) 255 ff.

² Cf. the section on 'Terminologia e principii' in Cancatti, *Lucanorum*, 47-6 (idem, *Concordia*, 14-17). ³ This script was previously called 'capitalis rustic'.

⁴ 'Structure' is used by Gumbert, *Utrecht Kartäuser*, 216 n. 7. I prefer this term to 'dactylus', which is more common, but which I would rather reserve for the features of an individual's graphical style.

⁵ For which see principally Gumbert, *Utrecht Kartäuser*, 216 n. 7, who speaks of 'metanalysis'.

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avoid the 3-like right-side of that letter inasmuch as they connected the left-side curve of the head to the lower curve on the right, forming an s-shaped line, and the letter was then completed with other strokes. These scripts, however, participate in changes of style and taste that occur.

The other extreme is a script in which the hand moves swiftly over the writing surface without conscious distinction between broad active and back-strokes, often with the use of a finer quill. It is a script which, as far as possible, writes the letters as a unit, without lifting the pen, immediately attaching them in a natural way to their neighbours. The principal consequences that follow from this kind of writing with more rapid, lighter strokes could be described as follows: because they are simplified, the flourishes (for example, the finials in capitals) drop out. As a result of this more rapid writing the script is, when space allows, elongated by end-strokes up or down (as, for example, in the cauda of the \( Q \) in the older cursive). Individual strokes that are contiguous to one another or that can be brought together in relative positions are joined (for example, the right-angles of capital \( L, B, D \); the concluding, small inner curve of capital \( G \) is attached to the lower curve; the addition of the cauda in capitals \( Q \) is shifted to the upper end of the oval). Angles are rounded off (for example, the right-angle of \( L, B, D \)), and difficult curves are smoothed out (the right-hand side of \( B \) and \( R \)). Neighbouring strokes at angles to one another can be written as parallel strokes (in the open a of minuscule cursive; cp. already \( E, F, L \) and \( M \) in the script of wax tablets). Changes can come about as well through altered division or combination of the strokes (change of direction, for example; the best-known instance is the \( h \), which in older cursive has the bow towards the left but towards the right in later cursive. Another example is the round-s of the later middle ages from which the progenitors of the German final-s and the 'reversed-s' (Rückens-) may derive. The altered division of the letter, especially in ligatures and chains of ligatures, can lead, by contraction of parts of the same or different letters (on the left-hand side), to a further freer rightward shift in the flow of the writing. Ligatures not only alter some letters (particularly \( a \) and \( t \), they also alter the sequence of strokes by beginning at a different point of departure, as in \( p \) (for example, \( a p \), \( c p \) — that is, beginning with the bow). Particularly consequential changes are called forth by tracing on the parchment the normally invisible transitional strokes ('Vatlinen'), that is the often curved or s-shaped path which the quill has to follow in order to reach the neighbouring letters (in ligatures), or to join parts of letters. This is generally used only sparingly. In the new Roman cursive it is the regular practice from the fourth century on, above all in the writing of ascenders and in the heads of \( e \) and \( f \). In this way letters can acquire a 6 For illustrations see J. Vincent, Les capitales d'Angers au Xle siècle (Paris 1924) 132. Further examples CLA VI 146 (s. VII 14a); Bischoff, Schreibansätzen 1, 53, 55 (s. VII-IX to IX-X). In the late middle ages attempts were made to link the right side of the upper bow to the left side of the lower bow; cf. Giumber, Ueber die Kuntaschriften, 217 (plate) and below p. 141.

Preliminary remarks

The history of Latin Script

bodies, as with \( a \) (in half-uncial) and \( e \) and \( f \) in the cursivus, or with the loops on the ascenders of Gothic cursive (including the rounded \( d \)). It is clear from this that it is in cursive 'flowing' scripts that the decisive changes occur and the new letter forms appear.

The recognition of the growing divergence between the utilitarian script (which was in daily use and which everyone wrote) and the bookhand had an impact, in elevated higher grades of writing, on the life of book-script itself. Attempts were made to narrow the gap between the two types and to introduce into the bookhand the innovations that had become normal on the lower level, in order to catch up with the developments in the letter-forms. This was generally achieved not by the adoption of individual, altered letters into the alphabet of the bookhand but by the accommodation of a certain state of the cursive to the requirements of bookhand. In conformity with the principles of the constructed style, in order to realise a calligraphic script the flowing forms had to be consolidated (contracted) and transformed into bodies made up of patterns of individual strokes, with or without shading. An example: the g of pre-caroline cursive was — apart from the tuft — written in one stroke; the consolidation process meant that this was now written with three strokes: the face, back-line, and 'shoe', so that the whole was completed in four strokes. In the same way, letter forms which, in cursive ligatures, had changed markedly, could live on in bookhand in 'condensed' ligatures (cp. \( c i, n \)). Because in such a process a more or less conscious trend towards calligraphy was involved, the desire for legibility could be decisive in the choice of individual functional forms.

In my view, the origin of uncial, the two half-uncials,8 and of early medieval minuscule can be understood as a renewal of letter-forms taken from cursive script according to the principles just described. I see in this a decisive factor in the history of Roman and early medieval writing. The new kinds of script, whose finished forms excite admiration in the observer, mark the great land-marks in the history of writing. If this development does not come to a standstill with these coined forms it is because, after the learning of the type in class, the script changes in the individual's own handwriting (perhaps imperceptibly);11 the pupils, when they come to teach, pass on something that differs somewhat from what their teachers taught them.12
2. **Capitalis**

The oldest handwritten monument of Latin script is the letter of a slave from about the middle of the first century BC. Additional items of more precise date are: an account-book from the time of Augustus and the letters to Macedon; the next most important after that are a legal decision (AD 34-35) and the Berlin papyrus containing the oration of Claudius (probably AD 43). Only the first...

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5. In the inscriptions, which is the only evidence we have up to the beginning of the first century BC, certain cursive tendencies are already visible two centuries before that date. At the time E and F appear as and , forms that are typical of wax-tablet script. In this script, whose best-known monuments, dating from the mid first and the second century, are the tablets found at Pompeii and in Transylvania, the normal script (as already with the incised script ('graaffiti') from Sulla's time) is much altered by the dissolving of the letters into strokes drawn as much as possible in the same direction.

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6. 6 See above p. 48. Plates: *Epistulae latine*, 11; Seider, *Latinae Patristicae*, 11; and 13; Bassi, *Monumenta*, repr. 8-11. J. Mallon has repeatedly explained and insisted that inscriptions on stone represent the definitive and permanent form of monuments that are constructed in several stages; that is, in successive written versions; visualisation of the text and its 'design' on stone preceded the work of the stonemason. In many articles he has shown that this procedure can be detected by the study of errors and imitations of letters forms in the inscriptions or in the copies of the sketch. They complete the palaeographical documentation from the Roman world; cf. especially his chapter 'Palaeographie romaine', in *Histoire et ses méthodes* (ed. Ch. Samaran) (Paris 1964) 284 ff., and 'Scrittura egiziana', *Scriptores* 11 (1957) 177-94.

7. This script is traditionally called 'calligraphia rustica' or 'calligraphy rustica' or 'calligraphy, elegans' used in two manuscripts of Vergil, which initiates the style of inscriptions. This script is distinguished by small letters at the top and base of the letters and by a writing angle of 45° (see note 57). It was considered appropriate for elegant calligraphy for many centuries until, after the disappearance of cursive majuscule, it became a type of bookscript like many others, and from the fourth century it was simply described as 'capitalis'. I borrow the term 'canonical capitals' from G. Concenti.

8. The expression 'scriptura comune', 'scriptura usuale' had become common in various works of Mallon and G. Concenti.
two show the basic Latin alphabet almost unchanged; in the other two, the script has gone over in varying degrees to cursive (with the characteristic letters B, D, R). The two directions into which the script has diverged are illustrated in a rare way by the two fragments of a household inventory of AD 47/48 from Oxyrhynchus: one copy of the identical text is written in a bookish capitals; the other in ‘common’ script, a cursive.

The first literary Latin papyri can be dated from the time of Augustus until roughly the mid-first century. The oldest is probably the fragment of Cicero’s second Verrine oration now in Giessen, written in a skilled cursive; further examples are the Latin papyri from Herculaneum (before AD 79). The script of many of these has the firm canonical form of the book-capitals; it is written with a relatively broad pen and the writing angle lies at roughly 45°. The feet on A and M (way) on F and so on, and the end-strokes above on N and V are firm; the third stroke of G is relatively long and extends somewhat below the line. Simpler, because written without feet (although the A does have a sloping middle bar) is the script of the Carmen de bello Actio from dating from between 31 BC and AD 79 and also found at Herculaneum. In other papyri from there the script approaches cursive. The capitals remained in use as the basic alphabet in public records, for emphasis, and even for whole lists and texts (like the ‘Feriale’, the list of official feasts of the garrison at Dura-Europos, from AD 225–35); these were mostly written in a ductus lacking contrast between thick and thin strokes and without the features of the canonical script.

15 Euvrax tainiae, No. 9:22; Seider, Latomische Papyri, t, No. 64, 68; Mallon, Palaeographiae romanae, plate 8.
17 I use the term writing angle (Tüdter’s ‘Schrägwinkel’) in the same way as Tüdter, ‘Der Ursprung der Umschrift’ (following D.F. Bright, The Origin of the Latin Uncial Script (Diss. Univ. of Cincinnati, 1967) to mean the angle between the widest pen-stroke and the base line.
18 Giovanna Petronio Nikolaj, ‘Osservazioni sul canone della capitale libera romana fra il I e III secolo’, in Miscellanea in memoria di Giorgio Cincotti (Vatican 1973) 33 311 and plates 3 and 32 and CLA iv 385; Seider, Papyri 2/1, No. 3; 36 and CLA iv 386.
19 CLA iii 382; Seider, Papyri 2/1, No. 7, just position of a photograph and an earlier engraved facsimile in Mallon, Palaeographiae romanae, plate 4.
20 Cf. G. Petronio Nikolaj, ‘Osservazioni’, 16 and plate 4; R. Marichal in G.G. Archi and others (edd), Paulus Statilianus Fragmentum Edendum (Leiden 1976) plate 3, 3; Seider, Papyri 2/1, No. 7, 3 1 Euvrax tainiae, No. 24 (= Seider, Latomische Papyri 1, No. 3).
21 Ferrale Durumnum: chl. va 290; G. Petronio Nikolaj, ‘Osservazioni’, plates 1 and 5 ff; Seider, Latomische Papyri 1, No. 41; Mallon, plate 17, 4. On the script see Mallon, Palaeographiae romanae, 89 ff.
appears in uncial, though no uncial or half-uncial manuscript of Vergil has survived. On the other hand, Vergil manuscripts were produced in capitals, both in illustrated copies and in unillustrated bibliopolous ones in the largest format.

The highpoint of refinement was reached with the writing of whole codices of Vergil, not in the traditional capitals but in an imitatio of a monumental, inscriptive script ("capitales quadrata"). The script of the two witnesses (the Vergilius Augusteus, distinguished by its initials for every new page, and the St Gall Vergil) is not a natural one; it demanded a quite different manipulation of the quill. Perhaps due to the importance of capitals in the tradition of Vergil, the term "litterae Vergilianae" is attested in the eighth/ninth century for capitals as verse initials. Probably because of their character as Christian epic writers, Praetorius and Sedulius were also copied in capitals.

With the disintegration of ancient civilisation the de luxe manuscripts disappear and the role of capitals in Roman calligraphy comes to an end. From the fifth century on, capitals, in combination with uncial, became a distinguishing script used for running-titles and chapter-headings and also for incipits and explicitis; for these latter it was often stylised as a monumental script. It was still used for emphasis and for citations from poetry in Spain in Isidore's time. The Anglo-Saxons took up the late-antique use of capitals; already in Ceolfrith's time for St Peter's it is employed for colophons and short introductions. A more plentiful use is made of it in the prefaces of further English uncial codices.

34 Verg. Vaticanus CLA I 117; Steffen3, plate 10; Erleb-Liebert, Specimina, plate 2; Kirchner, Script. Lat. libri, plate 1a. Verg. Romanus; CLA I 119; Steffen3, Latina Baphiopaghe, plate 19; Erleb-Liebert, Specimina, plate 3; Seidler, Papyri 2/1, Nr. 29. Verg. Palatinius; CLA I 149; Erleb-Liebert, Specimina, plate 3.

35 CLA I 13; Steffen3, Latina Baphiopaghe, plate 12; Erleb-Liebert, Specimina, plate 2; Kirchner, Script. Lat. libri, plate 2, Ins. C. Nordenfalk, Vergilis Augustus (Graz 1970). I cannot agree with Nordenfalk's view that the manuscript was copied around the last third of the fourth century and that its decoration is to be explained by the art of the calligrapher and stonemason Flavianus (see p. 154). I regard a later date as more probable, since the script and its decoration correspond to the state of evolution of decorated initials in the sixth century which Nordenfalk has sketched (note 16; cf. A. Perroci, "La scenografia del Vergilius Augusti", in Miscellanea in memoria di Giorgio Crescini (Turin 1973) 29-45 (between 40 and 500).

36 CLA V 677; Steffen3, Latina Baphiopaghe, plate 12; Erleb-Liebert, Specimina, No. 44; Seidler, Papyri 2/1, Nr. 30.

37 A fragment of a short Vergil code, CLA X 1596 (Seidler, Papyri 2/1, Nr. 38), is closer to the script of the Augustus.

38 Bischoff, Mitteleuropäische Studien 1, 1, T, cf. however Sammlungsbeschreib Erzw. B. Samt. 66 (introd. B. Bischoff) (Graz 1973) 32.

39 CLA X 5714; Erleb-Liebert, Specimina, Nr. 42.

40 CLA V 447. The portion of the manuscript written in capitals is trapped in imitation devoid of style; cf. Zangemeister-Wittenbach, Exempla, plates 16 and 50.


42 See above p. 60.

43 CLA I 1851; Millares Carlo, Tratado, reprod. 4. Cf. Bischoff, Mitteleuropäische Studien 1, 173.

44 CLA I 1796, Lowe, English Uncial, plate 9.
of the eighth century, the Vespasian Psalter\textsuperscript{45} and the gospel-book in Paris, BN, Lat. 281 + 298.\textsuperscript{46} The capitals then returns to the continent: in the doublepsalter in Vatican, Reg. Lat. 11 (produced in an outstanding north-French scriptorium of around Pippin’s time) a mannered uncial is contrasted with an equally mannered variation of capitals with $K$-shaped $H$.	extsuperscript{47} That the prologues to the Vienna coronation gospel\textsuperscript{48} and two gospel-books from south-east Germany\textsuperscript{49} were likewise distinguished by capitals was due probably to the imitation of Anglo-Saxon practice.

From the carolingian reform up to the twelfth century capitals is the rival display script to uncial, or else is mixed with it. In the hierarchy of scripts at the school of Tours it occupies the second highest place. Ninth-century de luxe manuscripts in this script are the Utrecht Psalter,\textsuperscript{50} the Leyden Aratus\textsuperscript{51} and descriptions within the zodiac miniatures of the London Aratus.\textsuperscript{52} The quality of the capitals can be taken at this time as a measure of the understanding of antique form: thus it appears that Lupus of Ferrières, who mastered it, liked to write it himself for titles in some of his codices.

Also included in the spectrum of medieval writing are the monumental capitals and the ornamental formed scripts of titles, openings, and colophons, which developed from it with many changes of form and which are often mixed with rounded (uncial) letters. They reveal, according to time and place, many parallels with contemporary epigraphic script, sometimes they take over forms from it. Even the intrusion of Mercogothic lapidary script (with extended shafts) is to be found occasionally in manuscripts.\textsuperscript{53} The Insular scribes were probably the most extravagant in their use of large ornamental script.\textsuperscript{54} In Spanish writing capricious, tall forms are characteristic.\textsuperscript{55}

The carolingian reform returned to the style of inscriptions dating from imperial times; a model alphabet of the kind survives from the circle of Einhard. It is apparently the ‘antiquarium litterarum..., qua maxime sunt et unciales a quisquisdam vocari existimatur, mensura descripta’ which Lupus sought from Einhard (Ep. 5).\textsuperscript{56} Only through the copying of such models can the perfected gigantic forms of, for example, the bible from S. Paolo be explained.\textsuperscript{57}

\textsuperscript{45} D.H. Wright, The Vespasian Psalter. Early English Manuscripts in Facsimile 14 (Copenhagen 1963); Loewy, English Uncial, plate 27.
\textsuperscript{46} CLA I 101, Koecher, Karol. Min. 3, plate 1.
\textsuperscript{47} CLA I 146, Koecher, Karol. Min. 3, plate 3.
\textsuperscript{48} CLA I 146, Koecher, Karol. Min. 3, plate 1.
\textsuperscript{49} CLA I 1347, Krommänttä, Codex millenarius (Cod. Mill. Vallisäidige Fachkolle-Ausgabe des Codex Confluentes Com. 1); introd. W. Neumüller-K. Holter (Graz 1973), Clm 24207/7.
\textsuperscript{50} Facs.: Latin Psalter in the University Library of Utrecht (London 1874); Arnold-Taupet, Schriftenkunde, plate 33; St Basii, Monumenta, repro. p. 127.
\textsuperscript{51} Koecher-Mütherich, Karol. Min. 4, plate 96.
\textsuperscript{52} Koecher-Mütherich, ibid., plates 62, 73.
\textsuperscript{53} CLA I 617; viii 860.
\textsuperscript{54} See below p. 88. Ogham or the style of unces may have contributed.
\textsuperscript{55} Millares Carlo, Tractade I, 28, Blatt 49, 57.
\textsuperscript{57} See Arch. Pal. Ital. IV, plates 9, 14 17.

3 Older Roman cursive

In the eleventh century the coronation-gospels of Vratislav II was written in the Vyšehrad school of Prague entirely in inscription-like capitals.\textsuperscript{58} In other manuscripts of the same atelier only a few display pages are written in this ostentatious style.\textsuperscript{59} The title- and closing-pages of some twelfth-century French codices invite comparison with the intricate majuscule of contemporary inscriptions.\textsuperscript{60}

With the return to pre-Gothic script and the renewed study of ancient inscriptions on the part of the Humanists, their attention was inevitably directed as well to display scripts. For simple titles and closing-scripts they took over another uncial nor the canonical capitals. The decision in the end was in favour of an easily rounded ‘Quadrata’, but earlier, after many experiments and with the use of Greek models in books and inscriptions, a curious ‘early humanistic’ capitals had met with great approval.\textsuperscript{61}

3. Older Roman cursive

Reference has already been made above to the diverging tendencies in the first hundred years for which we have written witnesses. While the canonical capitals is already established at that time as the formal bookhand, the everyday Roman script\textsuperscript{62} (as the papyri attest), certainly at latest by the Augustan period, is affected by changes that must be compared with the rise of Greek script two centuries earlier; they were to go much farther than in the wax tablets and graffitinscriptions. If this unstable script is described as ‘cursive’, because of its fluidity and its ‘running’ character\textsuperscript{63} that encourages the connection of letters, it is not less a generic term for a great diversity in appearances. Despite a good deal of documentation\textsuperscript{64} it can still only be seen in an incomplete and casual way, and it exists in western material up to the fourth century in little more than wooden or wax tablets, ‘tabellae defixionum’, graffitis, and inscriptions on clay from the western empire.

Roman cursive is divided into two great stages: the older Roman cursive or majuscule (or capitals-)cursive, and the later or minuscule cursive. The older cursive predominates into the third century, for the first half of which we must

\textsuperscript{60} P. Deschamps, Paléographie des inscriptions de la fin de l'époque mérovingienne aux dernières années du XIIe siècle, Bulletin monumental 88 (1929) fig. 32, 49.
\textsuperscript{61} See below p. 126 f.
\textsuperscript{62} ‘Ecriture cursive’, ‘Scrittura uncial’, see above p. 35 n. 8.
\textsuperscript{63} See above concerning ‘stretched’ script.
\textsuperscript{64} A collection in K. Marzial, V. Ecrire latine du Ier au VIIIe siècle: les sources’, Scriptorium 4 (1920) 119 ff. (for which see ibid, 9 (1953) 128 ff.)
infer the existence of minuscule cursive from the script of the Livy epitome.65 However, the replacement of one by the other is a very gradual process, which took generations. In the sequence of metamorphoses that this script underwent in different areas of usage, it could in various countries and in changing conditions become the basis for the new calligraphic writing styles: the script of De bellis Macedoniciis, the uncial, the older cursive and later half-uncials, and the minuscule (up to the carolingian minuscule).66

The older cursive67 was not only used for letters, charters, and public records, but also for literary works,68 and this has left its traces in their transmission. The most striking new forms called forth by the acceleration of the writing are: B: a bow on the left with a long rounded neck above it ("B à panse à gauche"); D: a bow with a lefthand or upward directed shaft above it; E: either in a round form or (greatly simplified) a stroke from whose lower end another is drawn obliquely upwards;69 H: whose second shaft loses the upper half; Q: a narrow, oblique oval, on whose upper part the long, oblique cauda rests; R: usually with a long shaft and a curving stroke over the top. Even in controlled forms the cursive of A and R, B and D approach one another; in continuous script the differences between C, P, and T diminish and ligatures make groups of various letters confusingly similar to one another.70 Among the older witnesses, a broader

65 CLA II 208; Seider, Papyri 2/1, Nr. 34. See below p. 32.
67 Cf. especially G. Cencetti, ‘Note palaeografiche’, 40 ff. Description of the alphabets and ligatures. The history of the letter-forms of old Roman cursive has recently been comprehensively discussed by E. Caumassina E. Starum, ‘Variânti e cambio grafico nella scrittura dei papiiri latini’, Scritti e studi (I 1977) 9-110 with 4 folding plates. This fundamental article, which came to my notice long after I had finished this manuscript, establishes conclusively that the precursors for subsequent development consist in a change in the form of cursive and not a change in the writing material which allowed the scribe to turn the page when writing. Cf. J.-O. Tijder in Karen 175 (1977) 1088. See also notes 152 and 140.
68 Besides the Cicero papyri in Gießen (see above n. 16) a historical fragment is also preserved (CLA S 1714; Seider, Papyri 2/1, Nr. 12; Mallon, Palaeographie romaine, plate 10, according to R.W. Hunt and others, The Survival of Ancient Literature (Exhibition catalogue, Oxford 1975) Nr. 46, perhaps Cato, Origines, and Gaius (CLA S 1716; Mallon, plate 16; Kitchell, Script. Lat. Libre, plate 32).
69 On the origin see R. Marichal, L' Ecriture latine et l' ecriture grecque de leae au Vic sicle, L'Antiquité classique 19 (1950) 122.
70 The recognition that numerous Latin literary texts went through a cursive stage during their transmission makes a systematic understanding of corruptions possible; cf. Brunnhal, ‘Zwei in der aegyptischen archaiot der römischen Literatur’, in Festschrift Bernhard Bischof (Stuttgart 1970) 16-31; Michaela Zeller, ‘Palaeographische Bemerkungen zur Vorlage der Wiener Livinhandschrift’, in Anacrisis, Festschrift für Walther Kraus (Vienna-Graz

4 Later Roman cursive

more upright style seems to stand out that is first attested in an edict of Nero's, and lastly in an act of sale of 166.71 From the beginning of the second century on, the script in legal documents as well as in military and civilian administration took on a very uniform character72 which gradually became set. The earlier known, almost exclusively Egyptian material was essentially enriched by the complete publication of the finds from the stronghold of Dura-Europos on the Euphrates abandoned in 272 (Chartae Latinae VI–IX).73 As the older cursive fell out of public use, higher officials, however, did not abandon it.74 Because in the end the imperial chancery raised it in the very narrow oblique form of the 'litterae cælestes' to the status of their exclusive script—it was still so in the fifth century75—in 367 a ban was issued on its misuse by other chanceries.76 Individual letters, among them the f (with the bow on the left) lasted longer in the charter script77 and even in codices not written in calligraphic script.78

4 Later Roman cursive

The second great stage in the history of Latin cursive, the minuscule cursive, must have been reached already in the third century. The remains from this period are sparse but a clear witness to the change is the imperial decreet written between 287 and 304 (PSI 111, with minuscule b d g p beside L and N).79 In other


71 Edict: Ecrinat Latine, Nr. 37; Seider, Latenaec Lapiegane, Nr. 8. Contract of 166 Steffons, Lapiegane Paligraphiae, plate 9; Ecrinat Latine, Nr. 25; Seider, Latenaec Lapiegane Nr. 36; C. 1365 190. In addition a codicil from the time of Domitian, Seider, Latenaec Papyri, Nr. 11 (and perhaps the writing exercises CLA X 1746 f; CLA V 204, Papyri 2/1, Nr. 11). Cencetti, ‘Note palaeografiche’, 17 f. considers them as members of a group in which he claims to detect the influence of writing on wax tablets.

72 Cencetti, ‘Note palaeografiche’, 16 ff. For a text in similar script see CLA S 1755.

73 There is a resumé of the script types preserved there in CLA I 16-20, with illustr.

74 Cf. Tijder, Nichiler, lat. Pap., 139.

75 The textbook example is the papyrus fragments of two imperial rescripts dating from the fifth century in Leiden and Paris; collected in CLA X 1675. J. Mallon, L'Ecriture de la chancellerie impériale romaine, Acta Palaeographica, Pilatus et Lutere 42 (1940) plate 1, idem, Palaeographie romaine, plate 26, 4; Steffen, Lapiegane Paligraphiae, plate 16, Seider, Papyri 11, Nr. 56; C. Marchal, L’Ecriture de la chancellerie impériale, Agrippa 22 (1924) 319-50. The type seems to have been almost fully developed by the second century. C. Marchal, L’Ecriture latine, 135 ff. and plate 6, 6.

76 Tijder, Nichiler, lat. Pap., 123 b ff. The use of majuscule cursive in the 'enlarged opening script' of the Gipsica Municipalis is normal. In Ravenna in the sixth century this ultimately developed highly formal forms; cf. Tijder, ibid., 122 ff. and plate 1, col 3; idem, ‘La maniera "scrittura grande" di alcuni papiiri resennes’, Studi romagnoli 3 (1952) 173-241 with plate.

77 Tijder, Nichiler, lat. Pap., 117 ff.

### 4 Later Roman Cursive

Pieces of writing from between 203 and 217–24 show new forms increasingly appear alongside the old (a, m, n) or indeed these have already replaced the earlier ones, as in the signature of 310 in which only the older b and r are left. The script is now in large part erect, so that ascenders and descendents stand out boldly, and its appearance anticipates the four-line scheme of minuscule. However, vertical and oblique script are still contrasted, the latter for example in salutations and signatures. In increasing measure the ascenders acquire strokes leading up to them. An important novel feature rich in consequences is the materialisation of some necessary joining pen movements; in this way the heads of e and i, which look like the head of a rise obliquely above the writing band, become tall, narrow loops. The new forms of cursive minuscule—almost all of which are to be found occasionally in the first and second centuries—can be derived, without a break, from 'cursivised' older script arising from changes of direction, alteration of the arrangement, and writing dynamics.

Especially striking, beside the b, are: the small n, with the larger curve below the line, which in the fourth century, when written as a separate letter, also acquires a flat head-stroke. The oft-discussed b with the bow on the right ('panse à droite') could have come about if the letter was begun at the upper end and the long neck which the older b had was allowed to run into the left edge of its lower bow, and then its lower part was closed.

With this script the structure of Latin letters in principle, reached a final and definite form, and the dual system which still holds good today—majuscule and minuscule—was created. It provided the raw material for new handbooks: the older and later half-uncial and the continental minuscule scripts. The possibility of forming ligatures is heavily exploited, although it is said that unless extended as a

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5. Capitalis, older and later Roman cursive
raised flourish, can no longer be ligatured. From the fourth century to the sixth, Greek and Latin cursive produce very similar forms of style and because the identical, or (as with η and ρ and ρ) the corresponding letters are written in the same way, the bilingual documents frequent in the east can display a fully uniform appearance.

In the fifth century the new cursive is already recognisable even in western charters, and at the latest by this date in corrections and additions to manuscripts and in complete texts. The structure of the script remains the same in the following centuries, despite much variation in appearance, up to about the tenth century.

5. Uncial

The new bookhands of the Roman period originate from the fixing and, where appropriate, the clarifying modification of a state of cursive script by means of ‘calligraphic’ execution; through this method of writing the forms were consolidated. This may have been due to spontaneous individualistic writing, but it may also be suspected that the script was created by a calligrapher, and in suitable circumstances was then received as a reformed script. At any rate, of the types of script that originated in this way, the uncial, the older and later half-uncial, and the caroline minuscule were successful. These scripts adopted from the changing cursive forms the alterations by which they distanced themselves increasingly from the original alphabet; thus these types mirror the stages of development in cursive.

Early sporadic examples are transmitted from a period of lively literary and professional (above all legal) writing; these are scripts transformed already due to a tendency to cursive and which reappear in consolidated form: a fragment of a juristic papyrus roll in Aberdeen, and the oldest fragment of a Latin parchment codex, *De bello Macedonico*, in London. In the Aberdeen papyrus No. 136.

90 An example in Media Nova, ‘Analogie e coincidenze tra scrittura greca e latina nei papiri’, in *Miscellanea Giovanni Mercuri S. Studi t Testi* 126 (Vatican 1946) plate 5 (and 113).
92 CLA iv 334f l. Seidler, *Papyri v.1*, Nr. 52 and 48.
93 Only a few scripts succeeded in drawing through the loop of the ε, which could lead to a ‘modern’ connection with the following letter: CLA v 66 (Seidler, *Papyri v.1*, Nr. 68); xi 161l6; Tיאdor, *Nicèlare lat. *Pap., 104, repro. 18. Iadem, ‘Later Latin (Common) script’, in *Guilame et coahres, Mélanges de codicologie et de paléographie offerts à Louis Gillison* (Brussels 1965) 189–97, marks the end of the period of ‘New Roman’ script in the first half of the seventh century.
94 On this cf. above p. 31.
95 On these fragments, and a portion of an account (s. H) see also G. Petronio Nicolai, *Observationes, 17* l. n. 96; J.-O. Tיאdor, ‘Der Ursprung der Unzäischrift’, 31, n. 84.
96 CLA vii 120 (‘s. H’), *Écriture latine, Nr. 53*; Seidler, *Papyri v.1, Nr. 1*: Tיאdor, ibid. (wohl

8. Uncial (c. sixth to eighth century)

9. Eastern (Byzantine) uncial (fifth to sixth century)
written with a strong pressure (sec. II). The taut letter forms correspond roughly to a kind of cursive attested from c. 600 to 1169 especially with A and R (and in ligature also ER, B and D, E, and angular H).

The much-discussed fragment of a parchment codex De belis Macedonicis, probably from the period around 100, appears to be controlled to a far greater degree. It is a specimen of an accomplished, stately script with a writing angle of about 50°. Of its letters (R is wanting), the reduced A, bulging D, angular H, M with three strokes, and Q with a narrow head and long, oblique cauda, are all clearly consolidated versions of similar cursive forms, as in Aberdeen 170, E (still narrow), L, and P are somewhat rounded at the base; on the other hand R, with long vertical shaft and the right-hand part attached to it as in capita1is, is not derived from cursive but is an arbitrary form chosen with the intention of preventing confusion with A. 89

The earliest attested new kind of writing that we find in general use is the uncial, which survives in roughly five hundred manuscripts from the fourth century on, its time of origin can only be inferred. Even the new elements in the uncial alphabet were prefigured in majuscule cursive, in which several forms were further developed (by contrast with the state fixed in the De belis Macedonicis). D, h, and g (now upright, with enlarged bow) correspond to the forms in De belis Macedoniciis, E is round, as in an early stylistic group of the cursive. 90 U has two parallel shafts already in a specimen from 313. The M, regarded as characteristic of uncial, appears here in a form corresponding to that of X, which was added two equal arches one after the other, its later customary twin-arched structure, however, appears already in a third-century

even ritus des II. Jahrhunderts. 84. A much later origin - after the Livy Epitome (see p. 72) - is thought possible by G. Cavalli, Scritture e scelte (1986). 94b however, the points after every word are a frequent occurrence in literary papyri of the first and second centuries. See p. 169 n. 46. See above p. 63.

5 Uncial

African inscriptions and in many fourth-century manuscripts. 100 That A is written with an angle (instead of the later bow) can be understood from the existence of a form present in the first century. The letters B and R, which cannot represent consolidated cursive forms, were, I believe, refashioned from capitalis for the sake of clarity, 102 because in cursive they are very like D and A; this replacement may have been established already in an early bookhand which had transformed the capitalis. 101

The uncial can certainly be described as majuscule: it is a script confined between two lines. 103 In the oldest manuscripts only D, F, H, L, P, and Q6 slightly exceed it. Even in later times it retains its weight as against other kinds of scripts.

That the transmission of uncial only begins in the fourth century is probably to be explained by the transition of western book-writing to parchment. Its origin appears to lie in the second century, before models of the later cursive exerted an influence. 104

As for the technique of writing, uncial follows in the line of capitalis, whose writing angle of 40°-50°; some of the oldest uncial codices have clearly preserved, 105 before uncial began to be written with turning of the pen or with a Greek writing angle. It is, however, written broader than capitalis, while the

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84 See below n. 112.
85 E. A. Lowe, Palaeographical Papers I, 23 considered the (generally) straight shaft of M as one of the distinguishing marks of the earliest uncial. The observation is most clearly confirmed by the 'minuscule'-w of the Ciceron Palimpsest CLA I 172 and Codex 8 of the Gospels (CLA iv 499). Strongly-made straight first strokes are found in CLA i 118 Pfider, Papyri 212, Nr. 66), v 494 (Sider, Papyri 2/2, Nr. 664), v 502 (Sider, Papyri 2/1, Nr. 472), and others which are clearly recognizable as Ciceron, De re publica (CLA I 13); Sider, Papyri 2/1, Nr. 52. The dominance of round letter-forms in uncial and the tendency to stylize is made the subsequent adoption of a form which departs from this style (the M with a straight first stroke) most unlikely, both in Europe and in Africa. In cursive scripts M derived the stroke which leads down to the base of the first point, or which separates the first stroke, from ligatures with a preceding letter, such as, and this is already visible in the Claudius Papyrus (see n. 14). The letter is already formed with this approach stroke in 313 (Euripides latine, Nr. 253 and 167 (ibid., Nr. 261; cf. Tjaider, ’Ursprung’. The conclusions reached by E. Cassaunisni E. Staraz, Variante e cambio grafico, 91, are in complete agreement with this account of the development of cursive M (which is stylized with round forms in uncial). 106

87 As stated above (n. 105). For a similar view see Schiaparelli (cf. Tjaider, ’Ursprung der Unzialen’, 10).
88 As is clearly visible in De belis Macedonicus. Cf, however, 68 n. 46 (G. Cavalli).
89 G. Cavalli, Ricerche sullo scrittura biblica (Florence 1967), 123 f., thinks that Greek Bible uncials might have affected this script as a model for the earliest uncial.
90 Tjaider, ’Ursprung’, 36, assumes that uncial was chosen in about the second quarter of the second century, as the script for legal literature. The spur to the success of uncial came from its reception by the book trade.
91 E.g. CLA i 28 (Scholia Boeckhianum) 35 (Sider, Papyri 2/1, Nr. 53) (Cicero, De re p.), 11 283 (Ciussio, Bresciana, nr 546 (Ext. cod. S.) Lowe describes the peculiarities of the oldest uncial in Lowe, Palaeographical Papers 1, 123 f.
bows (which in the appearance of the writing have few angles left) are roughly circular in shape. It is, in my view, possible to hold that uncial, which in the fourth century was used, alongside capitals, in perfected form for classical literature, was created and practised in the homeland of Roman calligraphy—Italy. The Christians (who cannot have been its creators) probably gave preference to the new script, though without totally abandoning capitals for use in biblical manuscripts.\textsuperscript{112} The script acquired its name from the fact that Mahillon mistakenly applied to Roman majuscule an expression of Jerome's that was intended for the 'inch-high' letters of de luxe Christian manuscripts.\textsuperscript{113}

Examples of the script dated or datable to the period up to 600 are: a Leningrad codex of 396/7\textsuperscript{114} with works of Augustine; the Codex Paschalis of 447 in Berlin;\textsuperscript{115} a fragment of the first edition of the Codex Justinianus dated 529–33,\textsuperscript{116} and the oldest manuscripts of the Digests (amongst them the Florence codex) from 531\textsuperscript{117} the Fulda manuscript of Victor of Capua, dating at the latest from 536/7\textsuperscript{118} and the manuscripts from the circle of Gregory the Great (before 604), especially the \textit{Regula pastoralis} at Troyes.\textsuperscript{119}

Amongst the examples from the fourth and fifth centuries great stylistic differences already stand out clearly. The script of a North African group that is close to the circle of Augustine\textsuperscript{120} is angular. Another consists of unconnected strokes so that only the eye links the letters together.\textsuperscript{121} The predominant mode of execution, however, is first that the hair-line ends of the curves run exactly into one another.\textsuperscript{122} In a variant style that was used in Byzantium in the fifth and sixth centuries, and which is known from numerous legal manuscripts, the B is twice as high as the other letters and the bow of the \textit{R} is extended down to the line.\textsuperscript{123}

In the period leading up to the sixth century the uncial loses spontaneity, the writing angle turns to \textit{90}\textsuperscript{o}, and the script is enlarged, fitting now between a four-line band: \textit{D}, \textit{S}, and \textit{L} rise higher, \textit{P} and \textit{Q} (whose bow is enlarged) are set lower, like the \textit{q}, and the cauda of \textit{G} is markedly elongated.\textsuperscript{124} In the hands of calligraphers the Italian sixth-century uncial acquires fine forks at the end of horizontal lines and small upper bows.\textsuperscript{125} Later the script is changed and often transformed by tags on the ascenders and small triangles hanging from the horizontals.

The script everywhere diffused on the continent was also transplanted to large areas of England by the Roman mission of Gregory the Great and his followers, and there it was even used for charters.\textsuperscript{126} In the Northumbrian centre of Wearmouth-Jarrow, home of the Codex Amiatinus,\textsuperscript{127} for whose text script the finest Roman uncial served as a model, an unornamented, usually smaller-written type was contrasted with this ('capitula type'). The John's Gospel in Stonyhurst College\textsuperscript{128} is written in this script, while the carolingian school of Amiens adopted it as one of its models.\textsuperscript{129}

The continental uncial was, generally speaking, more crudely written in the pre-carolingian centuries. On the other hand, when, here and there in France before the carolingian reform, uncial was again practised calligraphically,\textsuperscript{130} it seems to have been under English influence. Thus was prepared its adoption in the carolingian repertory of scripts. Its use in centros manuscripts was confined to gospels and some liturgical books; otherwise it was used (often mixed with capitals) generally as display script and for the initial letters of sentences. In the hierarchy of scripts at Tours it stood between capitals and half-uncial. It is remarkable that in the Thedulf manuscripts, instead of uncial \textit{q}, \textit{Q} is used. The uncial in de luxe manuscripts of late carolingian and Ottonian times\textsuperscript{131} is more artificial and lifeless.

In some regions of Italy, in Rome and Lucca for example, uncial remained in continuous use as a text hand into the early ninth century.\textsuperscript{132} Uncial became an

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\textsuperscript{112} The transmission begins too late to offer decisive arguments for the priority of North Africa, which has been supposed. In several north-African third-century inscriptions there is an apparent understanding of uncial style, but the elements are a mingling of old letter-forms (e.g. capitals \textit{M} and more recent ones \textit{M}, partly open \textit{O}) see the plate in CLA I, plate 7; S. Morison, \textit{Punic and Script} (Oxford 1972) reprints 46–8.

\textsuperscript{113} \textit{See} no. 33.


\textsuperscript{115} CLA I 717; \textit{Seider, Papiri} 412, Nr. 34.

\textsuperscript{116} CLA I 355; \textit{Seider, Papiri} 523, Nr. 25. 11D CLA VIII 1216. 120 CLA VIII 389.

\textsuperscript{117} CLA I 47; \textit{Seider, Papiri} 412, Nr. 34 (Friesy).

\textsuperscript{118} E.g. CLA IV 497 (gospels, before 3217).

\textsuperscript{119} \textit{Lowes, Palaeographica} Papers 2, 496–74 with plates 108–13. According to G. Cavallo (F. Magister), 'Libri e scritture del dio' in \textit{Ebreo e cristiani', in Il mondo del diritto nell'epoca giustiziana} (1983) 43–58, the script which had become almost canonical in the transmission of the Justinian law codes arose in this context, but preserved an archaic character: the \textit{R}-form continues that of the older half-uncial.
element of Romanesque and Gothic title-script and was used also for the initials of sentences as well as in Gothic inscripition majuscule, above all with the letters A, D, and E, h, M, and U.

6. The older (eastern) half-uncial (the script of the Leucy epitome and of related MSS)

Under this term, a further ‘calligraphization’ from the cursive (that is from the New Roman cursive) can be described which is represented by a number of examples almost exclusively of Egyptian provenance (though not by any means necessarily of Egyptian origin); they date from the third to the fifth century. This script—the first minuscule—appears either in upright or in decidedly right-slanting form. Despite slight divergences in the use of the letters, it has a uniform character in both registers. In what follows we shall describe the upright form, whose best-known example is the Leucy Epitome, a papyrus roll from the first half of the third century. In the slanted variety the forms are alike; they have the same relationship to the line and are slanted consistently towards the right. The script arose from a minuscule cursive of whose style we have no witness, and the alphabet (generally with h d, and f having ascenders, and r having descenders) is enclosed within four lines; yet ascenders and descenders are relatively short. A symptom of great age in the script is that the ascenders show no sign of being club-shaped. The left part of the a is either a sharp angle or a small loop; the d, which is now vertical, ends with the shaft on the line; I often swings under the line; w in several manuscripts has the uncial form; the shoulder of r (derived from the rippled upper stroke of cursive) is bent step-like; us is usually majuscule (an upright form of s stands with a slim foot on the line); the shaft of z is straight; above all the a appears in the form common to all later

135 Others are: ‘archaic half-uncial’, Md-uncial. The term ‘roman minuscule’, which fits the historical development ‘minuscule romana’, ‘minuscule primitive’ has failed to gain acceptance. The name half-uncial ‘semicursive’ has been in use since the eighteenth century.

136 I would include fewer witnesses to the script than does R. Marciall in Pauli Sententiarum Fragmenta, 26 ff. where a list is given. Besides the Leucy Epitome (CLA IV 19; Eustatius latine, Nr. 46; Steffen, Lexicon Palaeographiae, plate 10; Seider, Papyri 2/1, Nr. 34; Palaeographie romaine, plate 17, 1 and 3; Kircher, Scripta Latina II, 45), I would include CLA IV 19; Seider, Papyri 2/1, Nr. 34 (Eusebius, CLA IV 19; Seider, Papyri 2/1, Nr. 35 (Greek-Latin letter foundry), CLA IV 19; and II 376 (Vergil, Aen. with Greek translation; Mallon, Palaeographie romane, plate 19, 1) and the legal fragments CLA III 1101 (also Eustatius latine, Nr. 47; Mallon, Palaeographie romane, plate 10, 1 and 2; Seider, Papyri 2/1, Nr. 14) and 1577. The latter are remains of parchment codices and the Vergil fragments of a papyrus codex, the remainder are rolls. C. d. Br. Crevello, ‘Materiali per lo studio della scrittura minussola Latina i papiri letterari’, Scritture e Grecia 5 (1983) 5-49, with illustr.; included here are Latin citations in Greek texts.

137 In several manuscripts with the upright and the slanting form H is capital; see Marciall, Pauli Sententiarum Fragmenta, 46.

138 This is also confirmed by the less formal minuscule portions in a military list of 424-4 (Ch.A v 281).

6 The older (eastern) half-uncial

hands, with the bow to the right. Apart from the new (minuscule) letters, the writing angle is a principal characteristic: here the verticals receive the full breadth of the pen, as in the contemporary Greek ‘bible uncial’. The slanting type, which likewise is used as a text hand, may be an imitation of the slanting Greek script. The items in relatively late slanted script, among them the Fragmentum de formula Fabiana, come (with the exception of a Latin-Greek Vergil) from pre-Justinian Roman law. If the papyrus and parchment fragments were included (though in part later and
B.1. Latin script in antiquity

\[ A (\alpha) b c d e f g h (\iota) i \mu m \n\]
\[ M N O P Q R S T U V W Y Z \]

10. Older (eastern) half-uncial (script of the Livy epitome)

\[ A B C D E F G H I R S T \]

11. Older (eastern) half-uncial (slanted form)

\[ a a a b c d e f f g h i k l m n o p q r s t u v \]

12. Later half-uncial

more carelessly written in 'older half-uncial') the proportion of schoolbooks is increased, including the bilinguals.

That a Greek writing norm (that is, the writing angle) has been taken over in this script, and that the slanting type probably imitates a Greek script, seems to me (together with the Greek element in the texts) to be decisive importance for the question of the origin of this first miniscule script, which I would suppose to be in the East. Given the very considerable component of legal texts transmitted in this kind of writing, the Latin law school of Beirut (Beirut) probably played a rôle, if not already in its formation then certainly in its use from the third to the fifth century.147 The Greek–Latin Codex Bezae (four
gospels, Acts)148 and the Seneca manuscript written by a certain Nicianus149—two further calligraphic witnesses to this kind of script—also fit into the Greek framework.150 In the Florentine manuscript of the Digest originating from Byzantium c. 533, the vertical form of the older half-uncial is the script of the introductory decrees.

In the West this script apparently had no great resonance as a bookhand. In support of this view one can point also to its absence from the combination of several scripts in western manuscripts.151 African inscriptions of the third century, as well as isolated examples from Greece and Italy,152 show familiarity with individual minuscule letters (b d f h m s) within mixed alphabets. In the fourth century they appear more often, above all in inscriptions of poor quality, also in Rome.153

An example with half-uncial \(\eta\) and \(\delta\) is the Codex Claromontanus (Pauline Epistles, saec. V),154 a bilingual uncial with western traits. A Codex Theodosianus155 from Spain and the bilingual Laudanianus (Acts, saec. VI–VII, written probably in Sardinia)156 have only \(\delta\) alongside uncial \(\delta\). In my view the Epitome script should be excluded from the development process of the script in the West that leads to uncial and later to half-uncial.157

7. Later half-uncial

While late Roman cursive in the fourth century emphasises the lateral connection of letters, strengthened by the regular development of the ligature system, another development is the fact that, besides the letters with ascenders, \(l\)-longa, s, and the tall heads of \(e\) (f) in ligatures extend above the middle writing-band, and as a new descender there appears a rounded \(g\) capped by either a flat or curved stroke; certain joining strokes and the approach strokes of the ascenders are written in the same way. It was probably on such a basis that there came into existence in the West the current scripts that were flatter in proportion and that made moderate use of ligatures. These appear in some important late


148 CLA 1.142 has a majuscule \(R\) (with a final stroke on the lower left) broad \(S\); uncial \(M\). The Greek additions (on f. 285 ff) reveal that the manuscript was used for a long time in an area where Greek was spoken, before it reached Lyon. 149 CLA 1.69.

150 CLA 11.205; Seiler, Papst 246, No. 25. Here the slanted type still appears in marginalia.

151 See below p. 77-78.

152 CL 547; cf. "P. Hesbert, Exemps scripturae epigraphicae latinæ (Berlin 1853) Nr. 1148 ff.

153 Cf. Steffens, Lateinische Palaeographie, plate 119.

154 CLA 5.547 (South-Italian provenance is presumed).

155 CLA 1.46 (palimpsest), 'V' VII (f), on the provenance of the upper script cf. CLA 11.657.

156 CLA 11.245.

157 On marginalia in slanting half-uncial in western MSS see below p. 78. They lack the specifically stiff character of eastern scripts, as do the analogous variants which the Spanish calligrapher Dalmía used for the chapter headings in the Codex Cavismas (1555), cf. Lomé, Palaeographische Papyri 1, 338 and plate 55. On the name 'scriptura Africana', which is to be identified with half-uncial, see below p. 86 n. 25.
B.1. Latin script in antiquity

antique grammatical schoolbooks (Probust, Claudius Sacerdos, etc.) and chiefly in scholiast and marginalia; in all cases, in monuments of the fourth and fifth centuries. If one compares these scripts with the older half-uncial, the designation 'cursive half-uncial' seems permitted, although the former is perhaps to be set later in the history of the script's development. The later half-uncial, which rose to be a bookhand of late antiquity and of the early middle ages, and which in general consists in isolated letters, likewise has its origin in the developed later cursive, which in the 'cursive half-uncial' had already approached book script. Its characteristic letters (by contrast with the older eastern half-uncial) are: a in general rounded, in the beginning open and full, then closed and convex on top; the usually long f often with a low-lying tongue; the flat-topped g bent under the line, curved s-like or with a protruding crest; and t that rests on the line; short r (often with a curved low shoulder stroke) and short s, t with a shaft that is sickle-shaped and arched to the right; almost without exception (by contrast with the later cursive) the N is retained. Often a is written v-shaped superscript after q. The consolidation of the ascenders, which have become usual in cursive, gives it a club-shape. There is often a certain propensity to ligature with e, and in earlier examples r and l occur. The script preserved these ligatures and the thickened ascenders from its cursive origin, which was completely independent of the older half-uncial. The lesser degree of standardisation in the organised book-trade probably explains why in some otherwise half-uncial alphabets uncial d, G, M, or R are used.

The designation 'letterprose Africanae' is transmitted as the old name of this script and points to its African origin. We have to acknowledge its historical accuracy, but we can no longer illustrate it with examples that exceed in age those of possible European origin. One of the oldest western half-uncial manuscripts is the St Gall codex of the Vulgate gospels (C), which may emanate from the circle of Jerome's friends. The oldest dateable ones are the Verona Didascalia apostolorum (before 486), with f and g on the line; the Hilarius Basilicanus D. 1824, corrected in Cagliari in 590/10 by the circle of African bishops exiled to Sardinia; and the Sulpicius Severus written by the lector of the Veronese church, Ursinus, in 517. Half-uncial was probably brought to Ireland already in the fifth century by the Christian mission and refashioned there into the Insular script with an expanded alphabet.

On the whole, half-uncial was much less widely diffused than uncial, although it survived in Italy, Spain, and France in the pre-carolingian centuries, and indeed there seem to have been centres (and times) where it was preferred as a bookhand; such was the case in the Severinus monastery in Naples under Eupigipus (first half of the sixth century), Verona, and Ravenna. It also seems to have been written occasionally in the south of England. In France the Corbie 'Leuchar-type' of the mid-eighth century is still a degenerated half-uncial. Around the same time half-uncial was being written at Tours in unsystematic mixture with uncial, half-cursive, and minuscule. But even Tours, before the end of the century, had stylized first minuscule and then the half-uncial after minuscule, and adopted it for use in prefaces, opening lines, etc., in a hierarchy of scripts lasting roughly three generations. For a short time St Germain-des-Prés, St Denis(2), St Amand (with Salzburg), and Fulda all followed this usage. Finally, its influence (apart from imitations) is to be seen in various places in the ninth century, for example in Freising, in a minuscule that achieves an enhanced effect through small finials and additions.

Outside the system of the received writing types stand those (mostly small) manuscripts is the St Gall codex of the Vulgate gospels (C), which may emanate from the circle of Jerome's friends. The oldest dateable ones are the Verona Didascalia apostolorum (before 486), with f and g on the line; the Hilarius Basilicanus D. 1824, corrected in Cagliari in 590/10 by the circle of African bishops exiled to Sardinia; and the Sulpicius Severus written by the lector of the Veronese church, Ursinus, in 517. Half-uncial was probably brought to Ireland already in the fifth century by the Christian mission and refashioned there into the Insular script with an expanded alphabet.

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Outside the system of the received writing types stand those (mostly small)
scripts that appear in marginalia, corrections, and subscriptions of late antique manuscripts. Some are to be seen as personal usages and combinations of uncial or half-uncial forms, occasionally with a tendency towards cursive. In the case of most of the slanted marginal scripts, the fact that they belong to known types, and their nimble and even elegant script, presuppose some training, although hardly any of them occur in a lengthy continuous text; they represent a personal script of the educator for private use. Depending on their elements, they are either pure uncial or uncial (with regular A, M, R, etc.) having minuscule b and d. These scripts may have come into existence through familiarity with the slanted form of the older half-uncial or slanted Greek script. They disappear with the end of classical education. The marginalia of several fifth- and sixth-century manuscripts show use of the ‘roteansque’ area outside the normal bookends.

8. Combinations of various scripts

Almost from the beginning of the western tradition, in the Latin book manuscripts, scripts other than the main text script were used as well as the use of minium (red lead) and often a combination of both, in order to bring out the contrast between the material in the margin, headings, etc. and the main text. The fact that in the oldest codices the closing formula (colophon) was more important than the opening of the book can be explained by reference to the papyrus roll, in which the title stood on the innermost and best-protected part at the end of the text. The emphasis on the EXPLICIT is reflected in a variety of ways through the page sequence, size, and number of words in the text. Lines and even words could be alternately written in black or red, and simple decorations could be set in the same colours or in monochrome between or around the generously spaced lines, so that not infrequently frames came into existence; fishbone patterns, spirals, and leaves

820 Chifly uncial: CLA vi 10, chaufly half-uncial: CLA ii 112, Seeler, Papyri 21, Nr. 56 (Terentius Bembinus) 45, 110; iv 498; viii 1124; similar, but slanting 1 27; iii 296; iv 4994; xi 1629. A. Petrucci, ‘Scritture e libro’, 170 f.
821 Several in Lowe, CLA iv, p. 423, among the others CLA viii 1196 (Victor of Capua). xi 1577 (Dolichius in the Vienna papyrus codex of Hilary).
822 CLA vii 2132 (The Oxford Chronicle of Jerome, the richest witness, cf. the facsimile by J.K. Fotheringham, Oxford 1959, 2714 (Veitius Agorius Basilius), xi 1374 (Agremoruces, where this script is frequently used for compressed line-ends or for runnels).
823 See above p. 73. It occurs still in marginalia in the Florence manuscript of the Digests.
824 W.M. Lindsay, in Zeitschr. f. Bibliothekswesen 29 (1913) 53, and idem, Notos Latinus (Cambridge 1913) xi ff.
825 Lowe, Palaeographical papers 1, 277.

8 Combinations of various scripts are frequent. At least from the fifth century on, the option of using another script had arisen as one of the possible means of emphasis: with uncial as the text script, capitals or capitales quadrata often appears; with half-uncial, uncial is used in some manuscripts several kinds of scripts appear with that purpose. Only exceptionally is the principle of opting for an ‘older’ script abandoned. Between two books of a work a short incipit is connected with the explicit.

The emphasis of the opening was generally restricted at first to writing the first three or four lines or even the first only in red. Insofar as, in Western manuscripts, titles appear from the late fifth century on, they are at first written in a small script in the upper margin of the first page in the same script as the running titles, which likewise could be in a script other than that of the text. The graphical and artistic elaboration of the opening pages took place at the end of antiquity in connection with the development of the initials.

An innovation by contrast with the treatment of the roll is the introduction of running titles into codices; it goes back to the time of the oldest western examples. The names of authors and the book-titles, for the most part abbreviated and in smaller script, are distributed in such a way in the centre of the upper margin of the left- and right-hand side of the opened book that they were to be read as one; in some fifth- and sixth-century manuscripts they stand only on every second opening, and that on the flesh-side. As with the EXPLICIT/INCIPIIT, so the running titles are one of the places in which, from the late fifth century on, the use of a second script is practised, for example, the capitales with uncial, or the uncial with half-uncial text script.

On occasion citations are written as invasions in another kind of script, and in the Florentine codices of the Digests the publication decrees were prefixed in older half-uncial. Additions of this kind were continued in various ways in the

189 Cf. Nordenfalk, Zeitschr. f. Ind. 19 ff. and fig. 30.
190 CLA va 688; iv 884; iv 590 (also Capitale).
191 For instance the half-uncial manuscripts from Aquileia's monastery have both types of capitales and uncial (CLA vii 174; xiii 103). In manuscripts in earlier eastern half-uncial, titles are copied in capitales; CLA viii 1033, x 1577.
192 CLA vi 500 half-uncial (with uncial for text script); cf. also CLA ii 116.
193 Reprod.: e.g. R. Beer, Monumenta palaeographica italicana (Leipzig 1910), plates 5, 8; Zimmermann, Vindob. Min., plate 1b. A richly varied use of a range of scripts, excluding half-uncial, is found in the codices Ausoniensis of the Agremoruces, which is also important for the development of decorated initials; see the facsimile: H. Buxmann, Corpus inscriptionum Romanarum (Leiden 1970).
194 The title in capitales between ornaments in the Leininger Augustinian manuscript 396–7 is especially noteworthy; plate in Ainus Mutzenbecher, Codex Leininger Q, v. 15, Novum Timent 18 (1957) 8 at p. 416.
195 Thus, e.g. in CLA vi 72; iii 1196; x 1491; xi 1644. See below p. 189 f.
196 Lowe, Palaeographical papers 1, 190 ff. and 270.
197 Lowe, ibid., 171 f.
198 Lowe, ibid.
200 Secp. 71. Cf. also Lowe, Palaeographical papers 1, 240–8 and plate 105 f., on the script of the dedication and dating formulae in papal letters in the earliest manuscripts of Bede.
201
following centuries both for grading of texts and for enlivening the appearance of the script.\textsuperscript{202}

9. Tachygraphy

A survey of the kinds of Latin writing in antiquity would be incomplete without mention of shorthand, from Cicero to Gregory the Great, was an important ancillary tool in political and literary life and in the practice of law. What first comes to mind in this regard are the tironian notes.\textsuperscript{203} The name covers the many layers of material that we have in the Commentarii notarum trionianarum (CNT).\textsuperscript{204} A list of roughly 12,000 signs with their explanations, and in examples of their practical use as shorthand in many early medieval manuscripts and charters.

According to a credible statement by Isidore of Seville, M. Tullius Tiro, a freedman of Cicero’s, was the inventor of a basic corpus of signs that made writing from dictation easier for him. Other personalities of the first century AC and of the first century AD developed and expanded the system, amongst them Seneca (probably the philosopher). To the Commentarii that have been transmitted to us special lists of signs for names and concepts were added subsequently (amongst them Christian ones, which must belong to the latest additions, perhaps from the fourth century) The tachygraphic signs consist mainly in greatly reduced letter forms which show sometimes more capital, sometimes more cursive origin. For the word signs either the initial letter suffices or individual letters\textsuperscript{200} are selected and combined in multi-shaped symbols. A great flexibility is achieved in the system by its grammatical structure: the flexion of nouns and conjugation of verbs is indicated in such a way that the fixed word sign (radical) has ending signs (auxiliaries) attached to it in various positions. In the Commentarii a large number of syllable signs too are preserved; with these personal names could be written, for example in charters. Still unexplained, however, is the relationship of the Notae tironianae to another system, of which half-a-dozen similarly constructed word signs are preserved (beginning with a very unusual w form, written in a very firm ductus in one of a Latin-Greek papyrus lexicon (probably sec. IV).\textsuperscript{204}

\textsuperscript{202} Cf. p. 206.
\textsuperscript{203} E. Chaucer, Introduction à la lecture des notes tironiennes (Paris 1910; repr. New York, n.d.); Chr. Johnen, Geschichte der Stenographie 1 (Berlin 1913); A. Mentz, ‘Die Tironischen Noten’, Arch. f. Urv. 13 (1930) 287-304 and 17 (1943) 135-153; also Berlin 1944 (very subjective, in part with speculative resolutions); H. Boge, Griechische Tachygraphie und Tironische Noten (Berlin 1973); Concetti, Linguistica, 372-89.\textsuperscript{204} Ed. by W. Schmitz (Leipzig 1893).
\textsuperscript{205} Recognition of these ‘letters’ makes it possible to decipher the notes using the key in U. Fr. Kopp, Palaeographia cretica 2 (Mannheim 1872); reprint, entitled Lexicon Tironianum (Osnabrück 1952); G. Costamagna-M. F. Baroni-L. Zagali, Notae Tironienses quae in lexicis m castri repertae notae discum in edmaces, Fonti e Studi del Corpus Manzonianum Italianicum, ser. 3, Fonti Medievale 10 (Rome 1983).
\textsuperscript{206} CLA v 696.

\textsuperscript{207} Which may have come from Rome; cf. Traube, Vorlesungen u. Abhandlungen 3 (Munich 1920) 187 f.
\textsuperscript{208} This must be what is meant by the reference in the ‘Admonitio generalis’ of 786 (72) ‘Notas... bene emendae’, A. Boreini (ed.), Capitulare regnum Francorum 1 (Hannover 1883) 60.
\textsuperscript{209} P. Legendre, Un manuel tironien de Xe siècle (Paris 1953); the classroom terminology also in Steffen’s, Latinsche Paläographie, xxiii.
\textsuperscript{210} In the twelfth century a scholar augmented excerpts from a lexicon with notes of his own invention in Oxford, Balliol College, 306, f. 9.
\textsuperscript{211} Johnen, Geschichte der Stenographie 1, 232 f. ‘The ‘Notae Maritannis’ are also in J. López de Toro, ‘Abreviaturas Hispánicas’ (Madrid 1957) xviii-lix.
\textsuperscript{212} In Actas 197, f. 78v-79r (reprod. in R. Robinson, Manuscris 17 (S. 29) and 18 (S. 139) of the Municipal Library of Austin, Memoirs of the American Academy in Rome 19 (1939) plate 46, 3 and 4, Geneva, MSL 16, f. 57r (CLA vii. p. 15); the system is possibly used also in Paris, BN, Lat. 9190, f. 37v, 38r (CLA v 356).
\textsuperscript{214} G. Costamagna, ‘Il sistema tachigrafico sillabico usato dai notai medioevali italiani (sct. VIII-XI), Regole fondamentali (Genoa 1953).
R.1. Latin script in antiquity

attempts were made to devise new shorthand scripts, the oldest definitely in England; they worked with quite arbitrary basic signs which have some connection with 'Greek' and 'Chaldaean' numbers.²²²

215 A. Meix, Zwei Stenographiesysteme des späten Mittelalters - separate publ. of the
Kontersprechkunst 51 (Dresden 1916); Johnson, Geschichte der Stenographie, 147 ff. CLA also below p. 176.

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II

Latin handwriting in the middle ages

1. The Latin script in Ireland

The history of Insular script¹ - by this term we understand the Irish, the other
Celtic scripts, and the Anglo-Saxon together - must begin with the conversion
of the Irish to Christianity in the fifth century and their entry into the Latin
church in the late patristic period. Latin writing established itself in Ireland,
introduced by Christianity, and thereby expanded for the first time beyond
the frontiers of the Imperium Romanum. The script that Palladius, Patrick,
and others brought to Ireland would have been an uncomplicated one.

The series of surviving monuments of Latin script by definitely Irish hands
(with which later developments in Ireland can be connected) begins probably
not before the end of the sixth century, that is to say, a century and a half after
Patrick.¹ These are: the wax tablets with palster texts, from Springmount bog,²
and the Codex Usserianus I (Old Latin gospels)³ that are closely related to one
another;¹ the Orosius (probably written in Bobbio c. 614);⁴ the palster of St

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2 It seems doubtful whether L. Schipperus was correct to date the sixth century the
inscriptions which he discusses in Arch. stor. stat. 24/2 (1916) 21. D.H. Wright lists the
manuscripts which predate the third quarter of the seventh century in A. Dold-L. 
Eizendorf, Das lateinische Palimpsestrnimen in Köln und Straßburg (Münch. Texte und Arbeiten 53/54 (Rhein. 1968) 35 f., in an order which depends on their
decoration. The list has been significantly enlarged by the recently discovered Rutilus
fragment formerly in the Folger Shakespeare Library, Washington, now in Trinity College,
Irish element', 102 f. point out the possibility of provincial Roman influences.
3 CLA 89, D. Wright, 'The tablets from Springmount Bog: a key to early Irish
paleography', Amer. J. Archaeol. 67 (1963) 219. 4 CLA 81, 317.
5 Are these the earliest surviving Irish manuscripts? In my view the question of the date of the
upper script of the Plautus palimpsest in Milan (LIBR Regum) dated by Lowe in CLA 89, 344
'sec. VI' (though he corrected it to VII in Palaeographic papers 2, 485) has not been
satisfactorily resolved. 6 CLA 111, 358. For Bobbio see below p. 151 ff.
Columba (Cathach),\textsuperscript{7} the St Gall Isidore fragment,\textsuperscript{8} gospel fragments in Durham A II 10 and others,\textsuperscript{9} and the Munich palimpsest sacramentary.\textsuperscript{10}

The stages of the script in this series from three-quarters of a century proceed from a script that is very close to an Italian half-uncial (still with $\varepsilon$ ligatures and $i\!D$) through scripts with angular features, with the gradual introduction of alternative forms (uncial $D$, $R$, $S$, and minuscule $n$) into half-uncial, and (with the development of spatula-shaped terminals) leading to an almost fully rounded type of the half-uncial (without the ligatures of cursive origin).\textsuperscript{11}

The Anglo-Saxons became acquainted with this style of script not only through the activities of Irish missionaries in Northumbria (after AD 634) but also because numerous Anglo-Saxons spent many years in Ireland, leading to the emergence of a Hiberno-Saxon calligraphy and book-art in which the respective contributions are blurred.\textsuperscript{12} The rise of monastic schools in Ireland in the seventh century probably contributed as well to a transformation of the script—the development of Insular minuscule.\textsuperscript{13}

In two codices that, exceptionally, are dateable—the antiphonary produced at Bangor in northern Ireland between 686 and 692 (Milan, Biblioteca Ambrosiana, MS C 5 Infernale)\textsuperscript{14} and the Adomnortho codex written in Iona before 713 (Schaaffhausen, Stadtsbibliothek, MS Gen 1)\textsuperscript{15}—the medium-sized script is written somewhat narrower and more compactly. Their script shows a tightly closed at the top, and straight $r$ descending below the line, with a redaction in the use of alternative forms; the shafts end for the most part blunt or narrowing. Two observations suggest that these (modified) scripts are not stages in the development towards minuscule, but rather that they were influenced by a minuscule which had already been perfected;\textsuperscript{16} in the antiphonary some letters on the last lines already have the sharp extended points, and $m$ occurs at line-end already turned sideways, and in Adomnortho a large part of the repertoire of Irish abbreviations that characterises the minuscule is already present. Fully de-

7 CLA ii 266. 8 CLA vii 995.
11 On the term 'Insular majuscule' used for this script cf. E.A. Lowe, CLA ii, p. xv f.
12 For the historical problems relating to the early history of Echternach, see below p. 93 n. 76.
13 F. Mesny's thesis in Essai sur les origines de la miniature dite irlandaise (Brussels, Antwerp 1847), that only Insular minuscule was Irish, but half-uncial and decoration were Anglo-Saxon in origin, has been proved untenable. E. Hede, 'Insular palaeography', 233 f., sees Irish minuscule not as an adaptation of half-uncial but as a new creation drawing on cursive half-uncial ('quarter-uncial'), cf. p. 76 n. 165.
14 CLA ii 311; F. E. Warren, The Antiquaries of Bangor (London 1853); samples of the script in this and the following MSS can be found together in CLA ii, p. xvi.
15 CLA vii 998. 16 The last eleven lines of a column of Durham A II 10 exhibit the oldest flourished minuscule (with short $r$); plate in Northfield, 'Before the Book of Durrow', 105 (reduced). Capriciously florid script is also encountered in later Insular MSS, e.g. in the Book of Armagh, F 103 (see plate 8, infra).
The Latin script in Ireland

The Irish did not use standard uncial or capitals. Their interest in Greek, however, lasted through the centuries, and this found expression also in their script: in the transliteration of words and formulae, in the substitution of ν for γ, and in the use of the spiritus asper (♯) for ς, and also in the restoration of the Greek spelling to the nomina sacra xpc and xfp. It seems possible to speak of a common inheritance which the Irish created at latest, it appears, by the seventh century and which they passed on wherever Insular script was practised. To it belong the two-stage system of script (haf-uncial with the alternating forms, and minuscule); their characteristic style, determined by the triangular, spatulate terminals; a peculiar stylisation of decorative capitals; peculiarities of book-production: use of Insular membrane, black ink, their own method of ruling, a basic stock of abbreviations, the tendency to go over to a lower grade of script at page-ends; enlarged and then rapidly diminishing script at the beginning of passages; the triangular construction of the groups of initials; initials surrounded by red dots. Common Insular also is the frequent substitution of s and st; other orthographical peculiarities are Irish, if not exclusively so: false aspiration (especially χ for h), ṯ for ṯs, for i or c; specifically Irish is s̱ṉt instead of -s̱ṉt. So also is confined to proper word-division (for example, dēcẖa-m̱t, M̱-s̱artha) is not confined to Ireland.

The mature, well-rounded Insular half-uncial, which c. 700 was written so magnificently in the Anglo-Saxon Book of Lindisfarne and its relatives, was also used, with more or less success, in Ireland for liturgical and biblical manuscripts, occasionally in combination with minuscule. Probably in the late-eighth century — when the Irish ornamental repertoire had opened up to new possibilities — the arts of Irish writing and painting present themselves at their sovereign best in the Book of Kells, which, although considerably later, stands comparison with the greatest achievements in Anglo-Saxon book illumination and is itself under the Northumbrian influence of the Lindisfarne tradition. 23 24 25

17 Examples in CLA II 270, 275, 277. Lindsay, Early Irish minuscule; idem, ‘Irish Cursive Script’, Z. deut. Philol. 6 (1913) 501-8 with plate.
18 An almost identical repertoire of abbreviations was probably received by the Anglo-Saxons from the Irish, together with minuscule, before 665; cf. W. M. Lindsay, Early Irish Minuscule (Oxford 1910) 3 f. (CLA vii 998) with idem, Notae latino, 40f-500.
19 Lindsay, Notae latino, 40f-500.
20 Lindsay, in Zeitschr. f. Bibliothekswissen 26 (1912) 58, stresses that the Irish may be credited with the invention of some of these.
22 CLA II 466, 273-7; VIII 1165 (on which see G. Mac Nosaill in Scriptorum 15 (1966) 225 ff.).
23 Cf. Bischoff, Mittelalterliche Studien, 2 f. The Irish commentary on Jerome’s Pref. in lob (in half-uncial) Sunt et Africanae, quae tunciae appelantar, quas in usu frequentissimae.
Chapter 11: Latin handwriting in the Middle Ages

Here the well-rounded half-uncial, which is very closely integrated with the decoration, is magnificently written, and not infrequently at line-ends it is varied in very fanciful ways29 while on ornamental pages the Irish decorative capitals appear.

Half-uncial and minuscule were used side-by-side in Ireland for several centuries, the former principally for gospel books and psalters;30 in the older Liber hymnorum it is used for the Latin hymns;31 while in the double-psalter of Rouen (sae. X) it is contrasted with a script closer to minuscule. From the twelfth century on only the by now extremely pointed minuscule remains in use.32

The Irish script produced some innovations even in post-carolingian times, like the abbreviation $f$ for $fr$. Some Latin abbreviations were also used in an Irish context for the Irish equivalents, like $v = vicari$ and, especially remarkable, $q$ with cross-stroke (Latin quia) for the preposition ("for", "since") and for this group of letters in any combination.33

When used for Irish (which was sometimes also written in Gothic script)34 the pointed minuscule survived into modern times;35 it also determined the printing fonts for Irish.

During the sixth century the Irish undertook missionary activity from the island monastery of Iona (Hj, off the western coast of Scotland) to the Picts, and from the first half of the seventh century to the northern Anglo-Saxons. Of those who went to the continent, many saw in exile a pious undertaking, others became teachers. As a result of all this they became the teachers of the middle ages, not least through their script. After Columbanus (?615), who founded monasteries at Luxeuil in Burgundy and at Bobbio in the Lombard kingdom, near Piacenza, his pupil Gallus, at the site of whose cell the monastery of St Gall later grew up, and Furseus (?6, 609), whose memory lived on in 'Perrona Scotorum' in Picardy, some of those who visited the burial places of their holy countrymen and sometimes even settled there. In Bobbio, where, after the founding generation had died out, the Irish were only a small minority, in the seventh and eighth centuries manuscripts were still being written in Irish script, some of them with

29 Codex Cumanus, ined., plate 5.
30 CLA II, 311, 272, Zimmermann, Vork. Min., plates 210, 212.
33 Bieder, 'Insular palaeography', 167.
34 The succession of thirty-nine hands from c. 1100 to 1221 in the Annals of Lismore is especially instructive (Fascimile ed. R.I. Best- E. MacNeill, Dublin 1935); in the thirteenth century even scribes writing gothic cursive use the symbol for $ar$.
35 L. Bieder describes the stages in Scriptum 3 (1948) 283 ff. as 'forms' (eleventh and twelfth centuries), 'standardisation' (thirteenth to sixteenth centuries), 'fossilisation' (from the seventeenth century).
2 Anglo-Saxon script

tions was t with a downstroke through the bar for -tur. For writing in Anglo-
Saxon the rune ð (wynn, for Old English ðr) and þ (thorn) were taken over into
the alphabet, the latter as an equivalent of the round d with oblique top-stroke, as
well as for the voiced and voiceless fricatives.

At the beginning of the tradition stand four gospel manuscripts that are
among the most important works of Anglo-Saxon illumination. In the Irish-
Northumbrian style which they represent in their decoration, the Irish impulse
and the experiences of Anglo-Saxon artistic craftsmanship are amalgamated.
The Book of Durrow, which is regarded as the oldest Northumbrian gospel book
(c. 670), 50 is written in what is still a slightly angular half-uncial; the
'interpretations' on f. 124r are partly in a script closer to minuscule. 51 Of
the three others dating from c. 700, the Book of Lindisfarne (named after its place of
origin), 52 the fragmentary Durham A. II. 17 (f. 2-102) 53 and the Codex
Epternacensis in Paris, 54 the first two are written entirely in majestic half-uncial;
the Epternacensis on the other hand (which is apparently by the same hand that
wrote Durham A. II. 17, and which begins in the same script) is written mostly in
a no less imposing blunt minuscule. 55 The use of pointed minuscule in codices
of the Codex Epternacensis, 56 and in the last lines on some pages of the
roughly contemporary Cologne Canones MS 212, 57 indicates the simultaneous
existence of these three fully-developed kinds of script. 58 On these three levels
(half-uncial, blunt minuscule, pointed to cursive minuscule) 59 the development
of Anglo-Saxon script basically proceeds in the eighth century through various
mixtures (of the forms a, d, r, n, s, t) innumerable transitional forms and
variations of style, leading to a fluctuating general appearance. A specifically
English variant of half-uncial is a compressed, at times even with letters half as
broad as they are high. 60 Northumbrian minuscule is represented by, for
example, the codices of Bede's Historia ecclesiastica of 737 and 746. 61

The Anglo-Saxon script spread in the course of the eighth century from the

44 Half-uncial: gospel book of St Gratian, s. VIII (CL A v, 684), with ornamental capitals, and
Sedula (Oleaster 302, s. IX): miniscule: Latin Breton texts in Leiden, s. IX (place: L.
Fleuryart, Dictionnaire der boeueurs de France Breton (Paris 1924) plate 2: Celtic abbreviations are a
distinctive group until the tenth century; cf. W.M. Lindsay, 'Breton scriptoria: their Latin
England seems to have left reciprocal traces: in the mid tenth century at the latest, the Breton
Eotsches (Oxford, Bodl. Libr., Auct. F. 32, f. 1-9) was in Gloucester (R.W. Hunt, Same
Dunstan's chalkefrom Gloucester (Amsterdam 1961) v. v: f.), in the Annals of Redon
(probably 911) besides Insular g, the wynn-rune and thorn (i) are used (Bischoff, Ancieta
Nequitia 1964) 104. 45 CL A v, 698: cf. also IX 1380.
46 Cf. the literature cited in n. 2. See also T.J. Brown, Late Antique and early Anglo-Saxon
47 Cf. above p. 87 f. The task of distinguishing Irish and Anglo-Saxon elements is often very
difficult; cf. T.J. Brown, Codex Lindisfarneus, 68 with plate 133.
48 Only in the Book of Durrow are traces of this feature to be found; CL A v, 272r: Facs.: A.A.
Luce-G.O. Siemens, P. Meyer, L. Bieler (eds), Evangelium paschalis codex Durmancensis, 2
vols (Oleaster 1926).
49 See above p. 86, Lindsay, Notitiae Lectionar, 496-502.
50 See n. 48.
51 Reprods. of this page also in CL A iv 273 (vol. I, 1160).
52 CL A iv 167: Facs.: T.D. Kendrick, T.J. Brown and others (eds), Evangelism paschalis codex
Lindisfarneus, 2 vols (Oleaster 1926-26).
53 CL A iv 149; Chr. D. Verney and others (eds), The Durham Gospels, together with fragments of
a gospel book in uncial, Durham Cathedral Library MS A. II. 17, Early English MSS Facs 20
54 CL A v 578. Cf. T.J. Brown, ibid.
55 There are fragments of two further gospels in half-uncial in CL A iv 212 and 213 355. There is a
selection of other Northumbrian groups in Brown, ibid., 90 ff.
56 Cf. Codex Lindisfarneus, plates 12 and 14. 57 CL A iv 1163, see the reprods.
58 In these and other English manuscripts Irish ornamental capitals appear (cf. n. 23): cf.
Brown, ibid., 75 ff.
59 Especially cursive: CL A iv 184, Kirchner, Script. Lat. libr., plate 20. For a south-west
English group see above p. 81 (illus. 13).
60 Cf. CL A iv 138, in addition 194b and further instances ("compressed majuscule").
61 CL A iv 139 and 1621; both reproduced in full: Early English MSS 2 (Copenhagen 1952)
and 9 (1939).
north southwards (perhaps also from south-west England), and supplanted the uncial that had been introduced by the Roman missionaries to England and which had an important stronghold even in the double monastery of Wearmouth-Jarrow in Northumbria. The half-uncial and the minuscule, which is amply attested in the southern kingdoms as a charter script too, acquired new styles during this process. In general it can be said that the southern script (of Kent and Mercia) was weaker in style and that this style declines altogether in the course of the eighth century, and instead there appears a tendency towards bizarre and precious traits. From south-west England comes a very versatile minuscule with cursive traits, especially in the flat s-shaped c which is also found in the circle of Boniface. The history of the development of Anglo-Saxon script in the eighth century is to be completed by reference to the large production of the Anglo-Saxon foundations on the continent. In England examples of Anglo-Saxon half-uncial are only exceptionally attested after the eighth century, although the script was still being used even in the tenth. The minuscule continued to be used for manuscripts and charters, and among the stylisations which it underwent there occurs a very heavy, upright angular type ('square minuscule'), which was cultivated in some scriptoria into the eleventh century. But from the tenth century, when Caroline minuscule spread from France, writing takes on a double face: Latin is written in common minuscule which is more or less Insular in ductus, but for Anglo-Saxon (for example, names in charters) scribes pass over immediately to the national script. A reflex of that is seen in the Old High German parts of the Ottoline and Salian 'Cambridge Songs', whose manuscript was written in England. Anglo-Saxon script was written until beyond the mid-twelfth century; and even when the use of common minuscule for English became customary, the Anglo-Saxon additional letter ð was retained until the twelfth century, the runes ð and þ into the fourteenth and fifteenth respectively. From Anglo-Saxon there now developed a new ð-shaped sign used for various fricatives (þogh), while the caroline-Gothic ð denoted a plosive stop. The material for the earlier history of English script is considerably enriched by the transmission in Germany. The great differences of style within the Anglo-Saxon script in England in the eighth century can also be traced in the German foundations of the Anglo-Saxons and in their area of influence. In the monastery of Echternach (founded 686) throughout the eighth century Northumbrian scribal art was alive on German soil until roughly the mid eighth century half-uncial and minuscule appear side-by-side. The Northumbrian script character disappears only with the latest Anglo-Saxon writings from Echternach. An almost distinct area of Anglo-Saxon influence and Anglo-Saxon script was established in Germany by the activities of Boniface and his pupils, as well as by the monks and nuns who followed them. It stretched from Main-Franken over Hesse and Westphalia. Just as Boniface and Luit had come from southern England, so the script that took root here has a southern English stamp. Nonetheless, many English manuscripts from various regions reached the monastery of Fulda, founded in 744, just as did the older Italian manuscripts that had passed through England, amongst them Victor of Capua's codex with the gospel harmony of Tatian (with explanations in cursive Anglo-Saxon minuscule that may be, in part, in Boniface's own hand). It is possible, however, that the oldest surviving manuscript of Boniface's grammar was written in Fulda itself. In the region of Würzburg, whose transmission can be more easily studied and whose Anglo-Saxon script stems from the same root, it can be seen how the
writing of the founders was followed by unskilled imitations of the half-uncial and minuscule that must be ascribed to their German pupils, until the last generation to use Insular script fixed its style at the beginning of the ninth century.79 Women too wrote here.

What has survived of Anglo-Saxon writings from the late eighth century and the early ninth from Hereford,80 Frithrar,81 Amorbach,82 Mann,83 and finally Werden84 all show the southern English tradition of this missionary area. In Regensburg too,85 and in Freising,86 Salzburg,87 Lorsch88 and St Gall,89 scribes trained in Anglo-Saxon script were active in the later eighth or early ninth century, although none of these scriptoria had an exclusively Anglo-Saxon appearance. The last phases of the Anglo-Saxon script in Hesse and in the Main region, from the period when no fresh support was arriving from England, are relatively easily recognizable. Slightly before and about 800 the script is mostly straight with long descendents, often somewhat listless.90 In this script are written the Saxon baptism vows and the Basil recipes, both from Fulda.91 From about 820 on, Fulda is the only stronghold of Anglo-Saxon script in Germany. Among the last witnesses to half-uncial are the Frankfurter psalter,92 a monumental manuscript of Hrabanus’s Matthew commentary (probably 822)93 and several lines of the Frankish baptism vow.94 The minuscule takes on finally a somewhat stiff and often nail-shaped appearance.95 In the Fulda cartulary the script changes in s 28 to caroline minuscule,96 scribes writing an Anglo-Saxon

2 Anglo-Saxon script

script are still involved in the Gellius manuscript of 838 and in Hrabanus’s Ezekiel commentary c. 842 (Wolfenbüttel, Cod. Weissn. 84 and 92).97 After Hrabanus’s era (856) – he himself wrote a somewhat mixed Anglo-Saxon minuscule98 – the script died out in Fulda very rapidly. The Anglo-Saxon tradition of book-making and its disciplined writing technique had a noticeable effect, both in Germany in the ninth century and in England in the tenth and eleventh, on the caroline minuscule that replaced it.99 Partly, no doubt, because the Anglo-Saxon missionaries were the first to write in German, partly also doubtless due to conscious borrowing from Anglo-Saxon handwriting, the Anglo-Saxon phonetic symbols made their way into German writing and were used in several manuscripts: s for w in the Hildesbiindel (from Fulda); w for w in the Lex Salica (from Mann, to judge by the script)100 and in the Leipzig glosses;101 and finally d in the Lex Salica and in the Cotton, Vatican, and formerly Prague, now Berlin, copies of the Heliand.102 Based on the latter sign is the b with cross-stroke in the Vatican and Cotton Heliand. From an Anglo-Saxon source also comes the ɣ (Latin r, Anglo-Saxon ond) for enti, and the writing of gn- by means of a runic X with horizontal cross-stroke in the Wessobrunn prayer (from the diocese of Augsburg, probably from the monastic of Staffelsee).103 The latter occurs also in the glosses in London, British Library, MS Arundel 391.104 Finally, the earliest tentative attempt at an OHG accent-system is to be seen in the imitation of the earlier Insular general usage of the acute accent as a mark of length.105

79 B. Bischoff, Litterae Saxonicae Kylianae (Würzburg 1953) 6 ff.
80 CLA vii 1133. 81 CLA vii 1133. 82 Arndt-Taug, Schriftstifte, plate 47.
83 W. M. Lindsay in Palaeographia Latina 4 (1925) plate 4; CLA ix 1400.
84 Chrout, Monumenta 5, 22, plates 6-8 (80a hybrid type, crossed with continental cursives); R. Dieenbacht, Wurden und der Heliand (Essen 1943) plates 1-10, 164b; perhaps also from Werden.
86 CLA ix 1294, 1295, 1283; Bischoff, Kalligraphie Nr. 6.
87 CLA i 150, 5 1740. In several manuscripts the opening lines were copied in Anglo-Saxon half-uncial; see B. Bischoff, Chrout in Speigel seiner Handschriften (Munich 1972) 25 and plate 1.
88 CLA v 110.
89 E.g. CLA I 100, 101 (cf. Chrout, Monumenta 1, 22, page 6 (also with half-uncial) and 2. For what follows see Herrad Spelling, ‘Augsbische Schrift in Fulda’, in A. Brall (ed.), In der Klosterbibliothek der Landesbibliothek Stuttgart (1978) 47-98.
90 Baptista auctore J.H. Gellert, Altsächsische Schreibkunst (Leiden 1895) plate 11; Konnecarrow, Bilderrätsel, 8. Reciproc Enecone; Die ältesten deutschen Schreibkünem (Frankfurt/M. 1987) plate 17.
92 Fragmente in the Stadtbibl. Hamb. Münden; I owe my knowledge of these to Ludwig Doncker.
93 Fischer, Schriftstifte, plate 5.
94 E.g. Chrout, Monumenta 5, plate 6; Steffen, Lateinische Paläographie, page 49b.
95 Steffen, Lateinische Paläographie, plate 143. E. Heydenreich, Das ältere Fulaidar Caroll (Leipzig 1899) plate 2.
96 Bischoff, Litterae Saxonicae Kylianae (Würzburg 1953) 6 ff.
3. Visigothic (Mozarabic) script and Sinaitic script

In seventh-century Spain, which was freed from religious dissension after the conversion of the Visigoths to Catholicism in 589, there still existed a flourishing Roman-Germanic culture which, in the literary field, conserved later pagan and Christian features. Here even capitals existed in use alongside uncial and half-uncial, and later Roman cursive of the sixth and seventh centuries is preserved in numerous charters, on slate tablets, and in several parchment fragments of diplomas. As a result of the Arab conquest, from 711 on the country was divided into two zones of separate cultural development, though they still communicated with one another. The Christians who lived under Arab rule are called Mozarabs, and the Visigothic script used by them is called Mozarabic.

The new Visigothic minuscule that appears from the early eighth century on in Spanish manuscripts, and which remained the characteristic script of Spain into the early twelfth century (with the exception of Catalonia), and which indeed in some places was still used even in the thirteenth century, appeared not just as a calligraphic counterpart of the preceding cursive but is probably to be seen in other contexts as well. Its oldest monuments are the Visigothic caroline written before 722 in Tarracon, now Verona, Biblioteca Capitolare, LXXXIX (84), and Autun, Bibliothèque municipale, MS 27 (5. 20), f. 63-76, which is probably even older. The script in this has the following characteristics which basically retain their validity until this particular type dies out: it is slanted towards the left (or vertical); the distinctive letters are: open a made with two identical horns (similar to ɔ); straight å and narrow uncial å side-by-side; narrow

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1 For what follows cf. Z. García Villada, Palaeographia española (Madrid 1933); A. Millares Carlo, Tratado de palaeographia española (Madrid 1952). Vol. 1, 327-42 contains an index of Visigothic MSS. A.C. Florescu Cândulescu, Palaeographa y diplomatique hispana (Oviedo 1940); Genzmer, Lineamenta, 134-58; idem, Compendium, 60-1; John, Latin palaeograph, 161. Reprod.: P. Ewald G. Loevke, Exempla scripturae visigothicae (Heidelberg 1883); Ch. U. Clark, Codicis Hispanicae (Paris 1926); A. Canellas, Exempla scripturarum Latinae a R. Saragossa 1666; Anscarri M. Mundo, Para una historia de la escritura visiga, in Bismar, Horaz, 146. Manuel Crispo Díez y Díaz (Madrid 1932) 155-60, with illus.
2 Spanish half-uncial generally used half-uncial: CLA XI (s. VII); v (s. VII), 92a (s. VII), vii 729 (s. VII): et: vii 729 (s. VII); vi 168a (s. VII); vii 169 (s. VII): this last has also uncial G.
3 In the manuscripts of the Málaga Breviary (Escorial B. R. 11, 4, s. VII; CLA XI 1661) from southern Spain, the poems and other passages are copied in capitals (Millares Carlo, Tratado, plate 4). 4 See the literature cited on p. 15.
4 A. Mundo, Los diplomas visigodos originales en jergonomus (Des. typed, Barcelona 1970).
5 Mundo, "La datación de los códices visigóticos toledanos", Hispania Sacra 18 (1951) 1-29; J. Jamin-Serrato, Manuscritos librarios de la Biblioteca Nacional (Madrid 1954) 313 f. and plates 14, 20, 21 in s. XIII CO XV.
6 The last slate tablet, copied after the reception of the new style (M. Gómez-Moreno, Documentación y planis, R, Academia de la Historia 1966 (5) f. and reprodn. 253 shows uncial G in its curves.
10 The use of 7-longa as the beginning of a word in general (except before letters with ascenders), and as a semi-uncial from the late tenth century assimilated 0 is rendered by 0 (plate 15, penultimate ligature); Loevke, Palaeographia Pals. 1, 9, 99 f.
11 In addition there are peculiarities of Spanish orthography: substitution of b and v for b and v, and f", and f": see: for a: aphaeresis: Seraf instead of Israel etc.
13 Loevke, Palaeographia Pals. 1, 4-21, 207-74 and plates 121-3, 126.
14 Loevke, Palaeographia Pals. 1, 4-21, 207-74 and plates 121-3, 126.
15 My hypothesis of a north-African origin for the half uncial Paschas (CLA XI 1125) in K. Gamber, Codices literarii Latin ones. 1 (FreiburgSchw. 1906) 54 remains uncertain.
16 J. Gribomont in Analectes Hollandans 75 (1957) 132.
3 Visigothic script and Sinai script

Equally early, that is still in the seventh and the early eighth century, various Visigothic varieties of minuscule cursive must have arisen, one of which appears in many manuscripts until the eleventh century and sporadically later for marginalia and brief texts, often together with Arabic marginal notes. This typical Mozarabic-Visigothic cursive is markedly inclined towards the left and heavily ligatured; of the unconnected forms especially noteworthy are t-shaped a; the four letters c, d, e, f that often begin with additional strokes on the left either on or above the line; the p whose bow often stands left of the shaft; u often as a vertical i-line; x with horizontal second stroke.

In Spain the number 40 is written as a cursive connection with an X that has a small angle attached above on the right, instead of M (for 1,000). T is often written with a top-stroke on the left curve down towards the shaft. Display script is almost exclusively an enlarged, narrow, often arbitrarily handled capitalis. Nevertheless, in the ninth century, Danila, the scribe of the three-columned bible of La Cava, mastered capitalis, uncial, half-uncial, a slanting half-uncial with uncial admixture, and minuscule, all with equal elegance.

The Visigothic minuscule dominated not only in the northern kingdoms but remained also the script of the Mozarabic Christians living under Arab rule. Especially in the monasteries of Asturia (Albares, Albeida, Cardexa, San Milan de Cogolla, Silos, Valeranica, etc.) in several manuscripts from roughly 900 the Christian reckoning by thirty-eight years. In the south, bilingual codices were written, such as the Pauline letters and a Latin–Arabic glossary.

20 A. Millares Carlo, Consideraciones sobre la escritura visigótica cristiana (León 1923). There is a particularly rounded script in Asturias, 37 f. 6 by 61 f. 35 f. and plate 37 f. 60 f.; Meneses, Los diplomas visigóticos, 94, dated 920.
21 This seems still to be developing in the Veronensis I, 17 and 6 (Robinson, Manuscripts of Asturias, 38, and plates 63 f. 63 a).
22 Schiaparelli, ‘Scrittura visigotica’, 16 f., suggested that the script was formed under the influence of Arabic scripts. Robinson, Manuscripts of Asturias, 37 f. (plate 68 f.) lists a number of manuscripts with minuscule, C.I.A II 574 f. 59 b. There are scarcely any links with the script of Iberian scriptaries (including Catalan scriptaries); plates in Robinson, Manuscripts of Asturias, plates 71–3 (text, p. 46, 50 f.), Millares Carlo, Tratado, plates 98–9. It is close to the capricious ‘scriptura filiformis’ used for titles and colophons (E.g. Evandro Loco, Excerpta scripturae Visigothicae, plate 35, compare the script of the ‘libro de los testamento’ of Oviedo (c. 1026) in J. Dominguez-Bodiola, Los manuscritos paleográficos del siglo X. 2 Edistas, 17 f. Johalaiers, H. Pid, (Muniche-Florence 1949) 1, plate 2.
33 Millares Carlo, Tratado 1, 79 and plates 49, 87.
26 Cf. the collection in Ch. U. Clark, Collections, 66 f. M.C. Diaz y Diaz, Libros y literatura en la Roma altomedieval (Logroño 1970); Idem, Codices visigothici en la monarquia leonesa (León 1958).
27 Echeverri-Lebèrri, Specimina, plate 25.

16. Spanish (Visigothic) minuscule

17. Sinai minuscule

18. Spanish (Visigothic) cursive

have taken place; this may have brought with it the minuscule that may have originated in the first half of that century. This explanation of the indisputable relationship between the Sinai and Spanish minuscules offers the possibility of a new approach to the problem of the origin of the Visigothic minuscule, whereas it had been looked upon exclusively as a derivation from purely Spanish antecedents.

17 As resulting from the settlement of African monks at Serviusinus; cf. P. Ribé, Education and culture in the barbarian west (Colombia, S. Carolina 1976) 298.
18 Which shows the presence of this script also in the East.
19 As L. Schiaparelli attempted to do in ‘Intorno all’origine della scrittura visigotica’, Arch. stor., ser. 7, 12 (1930) 165–207.
4 Towards minuscule in Francia and Italy

...since lost their spontaneity, were in part transmitted in calligraphic form, and in other cases they lost their quality, so that on occasions they appear well-nigh deformed.42

The cursive, which is now more extensively visible in the West, developed its forms in many directions. We deal first with Italy. The Ravenna papysters testify to the continuity of their narrow, slanted, later Roman cursive up until 700.43 But one item from the Ravenna archbishop's chancery in the mid-seventh century shows an upright, rounded, elegantly curved script44 which is clearly imitating a style used in Byzantine imperial charters.45 From the stylisation of this script, used by one of the highest ecclesiastical offices in Italy, it could be concluded that the curials that is related to it—the special script of the Roman curia—had already by the seventh century developed its bulging rounded form;46 it appears first in St Gall, Stiftsbibliothek, MS 154 (between 731 and 741) and then in a letter of Hadrian I dated 798. It is particularly characterised by its broad omega-like a (o), the e and i which are completely closed as a result of the simultaneous writing of the joining strokes, the high-casing g,47 and several ligatures. This script remained relatively unchanged into the late tenth century. The notaries in the city of Rome also wrote a similar cursive. Shortly before 1000 a second phase of this style begins in which minuscule elements enter into the curials, the ligatures lose their suppleness, and the general impression becomes more rigid and cramped. The last documents in this 'later curials' date from the years 1121 and 1123. It is possible to compare with this curials of Ravenna and Rome the upright, curved script of the early medieval chancery of the archbishops of Naples.48

Elsewhere, the field of Italian cursive49 seems rich in individual, tempera-
mental forms, often full of irregular capriciousness, whether it be in the charters of the Lombard kings (from the early eighth century),\textsuperscript{50} or in those of the urban notaries. They range between compressed, forms on the one hand slanting\textsuperscript{51} to left or right, that are occasionally extremely pointed, and on the other quite loose, weak forms.\textsuperscript{52} It was possible, however, to demonstrate from an analysis of the transmission from Lucina (sæc. VIII–IX)\textsuperscript{53} that a local school tradition existed there. Many lay people too of middle and upper rank were adept in this script. Their mastery extends from being able to write ordinary separated letters to practised cursive flowing scripts.\textsuperscript{54} The construction of the ligature \textit{z} in the north-Italian cursive is perhaps a trace of Longobard influence on the script.\textsuperscript{55} A fundamental change in this notarial cursive gradually comes about when the correct connected character (the proper expression of the cursive type) disappears, and the script dissolves into greatly altered individual letters and small ligatures which can appear grotesque and unreadable. In Naples, Amalfi, and Sorrento it lives on in this form, until its use was banned by Frederick II in 1231.\textsuperscript{56}

If in seventh- and eighth-century Italy cursive was used for books — with a certain reserve,\textsuperscript{57} to judge by the transmission — it is significant that it then in general took on more set forms than in the charters. Examples of such scripts survive from Bobbio\textsuperscript{58} and Vercelli.\textsuperscript{59} In Bobbio, where in the same manuscripts Irish and cursive miniscule are written side-by-side,\textsuperscript{60} Irish influence had apparently a moderate impact on the cursive, while it appeared also in the abbreviations.\textsuperscript{61} However, a Merovingian influence was also at work there, probably from Luxeuil.\textsuperscript{62} At various places in eighth-century Italy scribes created stylised half-cursive\textsuperscript{63} and plentifully ligatured miniscule scripts,


52 An example: Bonelli, Codice, plate 19 (1946).


55 The Milan Josephus papyrus, v. VI, is written in new roman cursive: CLA 112. 204; Seider, Ippoi 11, 7. 20th; Seiffert, Lastronica Palaeographica, plate 234b.


57 CLA 112, 334, 350, 444.


60 E.g. CLA 112, 334 (Influenza cursive); 442 and 458 (Bothluxellus influenced), all three perhaps come from Vercelli. Schiaparelli, Influenze, 17 ff. and plate 2, and 25 ff. and plate 34.

61 Among them some of somewhat precious character.\textsuperscript{52} Just how varied the rhythm of the development could be is shown by the chaotic picture of the scripts that appear in MS 490 in the Cathedral Library at Lucina (c. 800): uncial, half-uncial, visigothic-influenced script and other mixtures.\textsuperscript{63} While Caroline minuscule later ousted all the scripts from northern and central Italy,\textsuperscript{64} of an early rounded minuscule of that kind led to the genesis of the Beneventan script.\textsuperscript{65}

In Francia\textsuperscript{66} a continuous evolution of the cursive is manifested in the charter script of the Merovingians (preserved from 625)\textsuperscript{67} and of the Carolingians, which ends in France in the tenth century and in Germany already around the mid-ninth. Merovingian chancery cursive, a form of later Roman cursive, is narrow, steep, and compressed, and its convoluted letters and ligatures are not easily decipherable. The habit of using an elongated and enlarged script for individual sections of text (especially the first lines), which gradually becomes a fixed practice, passed from this script into many later charter hands. Other non-literary remains from the seventh century are the list of names on the back of the Barberini ivory\textsuperscript{68}, and, from the second half of the century, the census lists from St Martin’s at Tours.\textsuperscript{69} In addition, some of the entries in margins and on flyleaves of manuscripts are written in current script, not in bookhand.\textsuperscript{70} These are in a language with distinct Romance forms. An almost invariable sign of Merovingian cursive is the \textit{b} that sends out a connecting-stroke to the right;\textsuperscript{71} a second recurrent distinctive feature is the ligature \textit{cv} in which the tongue of the \textit{c} is drawn down to the line, from where it continues at a pointed angle upwards towards the right-hand stroke of the \textit{x}.\textsuperscript{72}
In Francia too the cursive was drawn upon as a bookhand; the earliest extant example is the papyrus codex containing the homilies of bishop Avitus of Vienne, from the sixth century.74 Here again it is noteworthy that the script in books generally takes on a more solid, more disciplined form (semi-cursive) than in the charters.75 Two recurring features have characteristic significance: the script is either consciously stylised (usually including a large stock of ligatures) or, if it loses something of its clan and rapidity, it increasingly disintegrates into individual letters.

In Italy and France not only do bookhands of smaller proportions derive from the cursives, but there also come into existence new individual forms corresponding to the general tendencies: in this development analogy is partly at work, and in part new differentiations appear. In ligatures the top-stroke (flat at first) of g or t from the tip of the vertical can reach the following letter with an extra curve or crest towards the right.76 On the other hand, the flat top-stroke of the letter g, when isolated or when in ligatures to the left, can be divided so that the left half continues below the line in two curves, whereas on the right only a tuft remains, which can again be attached to ligatures.77 In this way the last new minuscule letter form is fashioned, the g with the round head.78

In cases where fixed writing patterns come into being, their fate is directly related to the continuity and level of organisation in the writing schools. Thus in an active scriptorium a calligraphic script which ultimately acquired a special polish in the hands of an individual artist can retain its normative value over generations. A stylised half-cursive of such type is the slender, somewhat leftward-leaning so-called Luxeul type, named after the monastery founded in 750 in the southern Vosges by the Irishman Columbanus.79 This type, in which the g- and t-ligatures with crests stand out in the script, is attested from before 800 until the time of Boniface. A lengthy marginal addition in the best-known representative, the 'Luxeul lectionary',80 which is written in closely related but not regularised cursive, can actually provide an idea of the material from which it was constructed. In Luxeul it was used with uncial (occasionally half-uncial) and very slim ornamented capitals (amongst them lozenge-shaped a) for display.81 The type may also have been wider spread, or may have provided the stimulus towards similar formations, through the numerous daughter houses of Luxeul, whose scriptal art was held in great esteem.82 One of the oldest manuscripts of the Corbie school, Paris, BN, lat. 17652,83 was begun by a Luxeul hand, and instances like Berne, Burgerbibliothek, MS. 199 (gospels),84 and Hannover, Kestner-Museum, MS. Cul. I 48 (Ps. Hieronymus)85 betray the
influence of the type; this can be recognised also in Bobbio and probably in several Veronese manuscripts as well. Without a doubt, the Luxeuil type was drawn upon as a model in the creation of a rougher writing style that was practised in the second half of the eighth century in Laon, probably in the nuns' convent of St Marie and St Johannis; this is called 'ab-type' after two of its distinctive letter forms.87

The transmission from Corbie (founded c. AD 660 on the Somme), which goes back to and even beyond c. AD 700, gives the impression that here — by contrast with the mother foundation Luxeuil — the route from the early half-cursive to the perfected caroline minuscule leads via an unclear succession of style groups which to some extent are not sharply distinguished one from another. The earliest Corbie manuscripts are written in semi-cursive.88 In the eighth century, late half-uncial with uncial G exists there in the so-called 'Louthchar type' (c. AD 765),89 as well as minuscule that is still almost half-uncial, in which occasionally the peculiar features of the older half-cursive breaks through, or which can develop into a kind of writing that is influenced by Insular ductus ('cn-type').90

Corbie, which from its foundation was closely connected with the royal court, is also the principal theatre for a peculiarly anachronistic movement in the prehistory of the carolingian reform whereby an adaptation of a pure charter hand was practised as a bookhand, but this was restricted to very few centres. It appears first in the mid-eighth century.91 This script, constructed by borrowing from the script of the royal chancery, became at Corbie the ab-type that was practised alongside the early carolinian 'Maurdrumus minuscule' beyond the turn of the century.92 A similar script, the 'b-type', distinguished above all by its use of the cc-a, was written at the end of the eighth century as a transitory type in Chelles, the convent ruled by Charlemagne's sister Gisela.93

The script occupies a position at Chelles between the uncial (which is disting-

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86 Above see p. 122. This remark does not apply to the palimpsest MS XL (38) written in unfinished type; CLA v 407.
88 CLA v 614 ff., 571. 89 CLA vii. p. xxii ff. 90 E.g. CLA v 556.
91 CLA vi, p. xxv. Cf. also CLA v 618.
92 In St Gallen 214, of north-west French origin; CLA vi 444; Steffen, Latinišche Paläographie, plate 29 (a).
93 CLA vii. p. xxviii. The last datable example, perhaps not copied at Corbie, in Geneva, Lat. 139, c. 830. It has been suggested that the ab-script was not written at St Pierre de Corbie, but in a nearby monastery; cf. H. Vanderhoven-F. Massé-P.B. Corbetti, Regula Magistri, Les publications de Scriptorium 3 (Brussels, etc. 1955) 25; J. Vezin, 'La réalisation matérielle des manuscrits latins pendant le bas moyen âge', Codicologie 2 (Litterae textuales) (Leiden 1972) 27 n. 72; T.A.M. Bishop, 'The prototype of Liber glossatorum', in Medieval script, manuscripts & libraries. Essays presented to N.R. Ker (London 1978) 69 ff. The problem needs further clarification.
94 Bischoff, Mittelalterliche Studien 1, 31; CLA vii. p. xxvi ff. cf. e.g. CLA vi 714 and 792. Noteworthy is the high number of authenticating strips in b-type found beneath the church of St Andre in Chelles; CLA xvii. 609.
minuscule as early as AD 750 to 760.\textsuperscript{101} Around AD 760 the somewhat clumsy hand of the assiduous scribe Winibarth\textsuperscript{102} begins to appear in manuscripts and in one charter. In a charter of AD 758\textsuperscript{103} the characteristic form of the round 'Alemanisch minusculus' is already discernible, which appears in perfected form in the slightly younger St Gall MS 44.\textsuperscript{104} These minuscule scripts can apparently slip into cursive.\textsuperscript{105} On the whole, however, the early Alemanisch minuscule is already so advanced that it can hold its own basically unaltered in the face of competition from the caroline minuscule until AD 850.\textsuperscript{106} In Bavaria the manuscript evidence begins first c. AD 770, but with a minuscule already so developed that hardly any earlier cursive forms can be supposed, and around the same time a pure Italian (probably Veronese) minuscule exerted its influence in Regensburg.\textsuperscript{107}

The ground gained by the early minuscule was at the expense of half-uncial, which was less used in those places where uncial had not been retained. A mixture of genera through adoption of the cursive elements or minuscule letters into the half-uncial seems to have happened rarely in the eighth century; there are examples from Verona and Tours.\textsuperscript{108} Steps that led to the gradually emerging awareness of the goal of a bookhand free from the cursive appeared in many places;\textsuperscript{109} and in spite of the great variety of styles of script the pre-carolingian period too prepared the ground for the harmonisation of writing that culminated in the new standardisation of the carolingian epoch. From the individual monasteries local scripts were spread through daughter foundations or through the exchange of monks; the regularisation of the canonical and monastic rules, the appointment of bishops, the organisation of the palace school, and the increasing means of communication in the early carolingian period were able to complete this process.

In order to account for the origin of the 'caroline minuscule', which is primarily a generic term for a situation that was reached as a result of related tendencies and changes of forms) it was not necessary to postulate either 'direct descent from the half-uncial'\textsuperscript{109} or a harking back to the highly disparate forms

101 Cf. CPLA i 46, 48, 50 ff.
102 761: CPLA i 57; Stiefelholz, Latinische Paläographie, plate 439; Chronum, Monumenta i. 14, plate 1. F. CLA viii 85a, Brucker, Scriptura i. 2, plate 24; Köchel, Scripta Lat. idei, plate 338. In Winibarth's script too uncial a and d predominate. 103 CPLA i 51.
104 Chronum, Monumenta i. 14, plate 3; Brucker, Scriptura i. 2, plate 1.
105 Cf. e.g. Brucker, Scriptura i. 2, plate 106. ibid., passim.
106 Bischoff, Schreibschulen, s. 60 ff. and 172 ff.
107 Verona: CLA i 502; Tours: Rand, Studii i, plate 1; CLA i 682.
108 H. Steinauer, Zum Liber Diaconis und zur Frage nach dem Ursprung der Frühminuscule, Miscellanea Francesca Ehrle 4, Studi e Testi 40 (Rome 1924) 103-76.
109 E.A. Lowe in CLA vii, p. xii. The view expressed there (and in Bischoff, Paläographie, vol. 413, 8, p. 39) that the Maerzdunnus type, the earliest calligraphic caroline minus-
cule, is the transformation of half-uncial resulting from the substitution of the crucial letters, is invalid. The Maerzdunnus scribe in Berlin, Theol. Lat. 60, 332 (CLA viii 1069 a.) was
trying to supply the gap of a half-uncial manuscript in an appropriate script. Lowe repeats his thesis of half-uncial origin in CLA vii p. x.

111 This was G. Condenti's theory in Postilla nuova a un problema paleografico vecchio: 'Origin della minuscola "carolina", Nova Historia 7 (1953) 1-46, 100 p. 15 ff.; idem, Lincenceni, 183-6; idem, Compendio, 67-8.
112 E.A. Lowe, The Beneventan Script (Oxford 1914); second ed. prepared and enlarged by Virginia Brown 1, 2, Sundi Fraulini 3 (Rome 1982); E.A. Lowe, Scriptura Beneventana 1-2 (Oxford 1949); Condenti, Lincenceni, 126-34; Compendio, 56-64; G. Cavall, 'Struttura e articolazione della minuscola beneventana libraria tra i secoli X-XII', Studi Medievali, ser. 3, 11 (1970) 343-68, idem, 'Aspetti della produzione libraria nell'Italia meridionale longobarda', in Cavallo, Libri, 99-129, 270-84; F. Newton, 'Beneventan scripts and sub-
scriptions', The Bookman 43 (Chapel Hill 1933) 1-52.
113 G. Condenti, 'Scritture e scritti nel monachesimo benedettino', Il monachesimo nell'alto medioevo e la formazione della civiltà occidentale, Serrinnante 4 (Spoleto 1957) 206-11; here historical arguments are also presented. G. Cavall ("Struttura", 334 n. 5) considers that influence in the opposite direction should not be ruled out, M. Palma, 'Nonantola e il Sud', Contributo alla storia della scrittura libraria nell'Italia dell'alto medioevo, "Scrittura e civiltà 3 (1979) 77-98, with 8 plates; idem, 'Alcune origini del "tipo di Nonantola": nuove testimonianze meridionali', ibid. 7 (1983) 141-60, with 8 plates.
114 The manuscripts Naples, Bibli. Naz., Lat. 4 (earlier Venice 730) and XVI. A.9, both in caroline minuscule, appear to come from there.
Gulf of Gaeta. The script was common there also in more cursive versions as a charter hand.\textsuperscript{115}

The Beneventan tends from the beginning to rounded and flowing forms with delicate, moderately bold strokes. The bases of the shafts are slightly turned to the right. From the tenth century on it attains its distinctive character. The c-ı is closed like ŋ, c is frequently two-tiered; the ı, whose large bow is replaced by two bows, is regularly so; the bar of the ı is divided: its left half consists of a large bow that rests on the line, at the upper end of which the shaft begins, while the right half of the bar is a separate horizontal stroke; the upper and lower halves of the \( \gamma \)-shaped \( \gamma \) are roughly equal in size. The use of \( \lambda \) longa and of the ligatures is subject to certain rules: \( \lambda \) longa is used at the beginning of a word (except before the letters with ascenders) and as a semi-vowel; \( \gamma \) with extending under the line is obligatory for ordinary \( \nu \), whereas the \( \nu \)-shaped ligature form with \( \nu \) is used for assimilated \( \nu \).\textsuperscript{116} Other distinguishing features are some abbreviations like ŋ with cross-stroke through the \( \gamma \) (for \textit{eius}) and the punctuation system with the special question-mark.\textsuperscript{117}

Within the Beneventan bookscript several local styles develop.\textsuperscript{118} Best-known is that of Monte Cassino, which organises what are at first delicate, barely thickened shafts and bows into a refined interplay of short broad strokes: thereby the shafts of \( \nu \) and \( \mu \) are not traced in one movement but are formed each from two slanted, discretely curved rectangles, of which, in the cases of \( \nu \) and \( \mu \), the upper, in the lower is somewhat longer. Bows in which the full pressure of the pen is on the diagonal stroke seem angular in construction; thus closely connected bows can, with slight contact (different from gothic script) appear to grow together. The strong compactness presented by the written line is enhanced by the fact that the horizontals of \( \gamma \), \( \epsilon \), \( \lambda \), \( \lambda \) can appear like a continuous binding line. This 'mature' style makes its appearance around \( \nu \) in Monte Cassino in the early eleventh century and reaches its highpoint under the abbots Desiderius (1058–87) and Oderisi (1087–1108). In the twelfth century the form fossilises with exaggerated mannerisms. Through the influence of Monte Cassino this style was imitated in the whole region.

In Bari, probably already in the late tenth century, the more rounded type that came to predominate in Apulia (Bari type) was created, from the same raw material. In this the shafts are not broken, while the stroke remains even more even than in Monte Cassino. Among the letters that differ are short \( \gamma \) and \( \lambda \), among the ligatures \( \eta \) with semi-circular shaped \( \gamma \); the two-tiered c is even more frequently used. Absent from the appearance of the script are the continuous binding lines;

\textsuperscript{116} Cf. Lowe, Beneventan Script, 148; Lowe, Palaeographical Papers 1, 20 f.
\textsuperscript{117} See p. 170. 118 Here I follow G. Cavallo, 'Structura e articolazione.'

\( 5 \) Beneventan

above the abbreviation stroke there often stands a point. A certain relationship of form that exists with rounded Greek scripts\textsuperscript{119} could be explained by the re-establishment of Greek rule in Bari in \textit{AD} 871.

A peculiarity of the Beneventan region are liturgical rolls,\textsuperscript{120} above all for the Easter vigil (= Exulert rotuli); of these the liturgy was sung from the pulpits, in the course of the reading the illustrations that were inserted upside-down in relation to the text were gradually unfurled to face the congregation.\textsuperscript{121}

Monte Cassino supported Latin monasticism in Dalmatia, which was connected by commercial contacts with southern Italy, and the church of Bari possessed diocesan rights on the opposite coast of the Adriatic. Thus from the tenth to the thirteenth century Beneventan became the regional script in Ragusa, Split, Trau, and Zara, and the remains that survive from there are divided between the two types.\textsuperscript{122}

Where it had predominated in Italy the script yielded generally to the gothic in the thirteenth century. All the same, even from the fourteenth to the sixteenth centuries there were still scrivies competent in the Beneventan.\textsuperscript{123}

The attractive power exerted by Monte Cassino, and its radiation throughout the whole Benedictine world, created connections that have left their mark on the text transmission and, in sporadic cases, on the script as well.\textsuperscript{124}


\textsuperscript{120} See above p. 32.


\textsuperscript{122} V. Novak, Latina paleographia (Belgrade 1963) 124–64.


\textsuperscript{124} A Beneventan cursive was active at Fiesol. c. 1000, and his writing gradually lost its characteristic ductus; another (s. XI) in northern France; cf. Lowe, Palaeographical Papers 1, 479. A more skilled in Beneventan writes a very personal hybrid miniscule in Chin. 15.84d (cf. 45 ff., s. XI) cf. Lowe, Beneventan Script, 269. Monte Cassino MS 83a is the work of a scrivio accustomed to both Beneventine and caroline minuscule; cf. H. Millard, 'Cod. Casin. 83a,' Le lesion prosodaica sec. XI, Casenova 1 (Monte Cassino 1950) 207–204, with plate. In contrast the chronicler Peter the Deacon wrote a careless and undistinguished minuscule, but not as was rather thought, a decorative and correct caroline; cf. P. Meyvaert, 'The autographs of Peter the Deacon', Bull. John Rylands Library 39 (1955) 115 ff. with plates. Further evidence for the closeness of the two scripts in St. Tristant, 'Scrittura beneventana e scrittura carolina in manoscritti dell'Italia meridionale', Scrittura e Cinque XVIII (1979) 115–20, with 4 plates. The occasional occurrence of Beneventan interrogation signs may imply copying of a Beneventan exemplar; cf. Lowe, Beneventan Script, 83 ff. and below 170.
B. H. Latin handwriting in the Middle Ages

6. The perfection and triumph of Caroline minuscule

When Charlemagne came to power fully developed minuscule scripts already existed alongside many types of half-cursive in various regions of the Frankish kingdom, and likewise in the Lombard kingdom conquered in AD 744. Some scriptoria like Corbie, with the Maurdrannus type, were in advance of the others in calligraphic discipline. Without any doubt Charlemagne’s reform of ecclesiastical Latin culture, which tried to restore the bastardised language, also strengthened the tendency toward discipline, order, and harmony that was present in the script, and it is on the whole probable that the more advanced style and successful solutions found in one monastery were taken over by others as a model in the search for a clearer and more balanced script. Charlemagne loved scholarship and art and at his palace the leading intellects of the kingdom came together; a library was assembled for him, and it is inconceivable that fine scripts and able calligraphers would not have found recognition and encouragement there. On the contrary, from the verse dedications in the de luxe manuscripts written under Charlemagne’s eyes by Godescalc and Dagulf (who is praised in turn by his pupil Deodatus) there speaks, besides loyalty, the pride of the artist.

Godescalc wrote his evangelistary between AD 781 and 783 and it appears possible that in the school in which he learned the beautifully harmonious script of his dedicatory verses the teachers of the early carolingian groups of scribes in Lorsch and Metz were also trained. The significant feature of the first phase of carolingian writing, however, is freedom in the formation of the script in local schools. Even the principle of the unitary alphabet, which in the classical scripts was generally respected, is only rarely observed, for example, by some scribes of the Maurdrannus type, in the Theodulf Bibles, and in parts of the Dagulf Psalter. Rather it is a part of the characteristics of a house style in most cases that a special selection of double forms and ligatures was admitted or required. Because they contributed to the clarity of the script, certain improvements were carried out: the general introduction of the small uncial $a$ and the clear distinction between the abbreviations for $-ar$ and $-ac$ ($-ar$ (-aur) and $-ac$ (-aut)); the symbol for $-ar$ was probably invented in the palace circle c. AD 800. The use of the question-mark, which immediately took on very varying forms, was first adopted at this period.


22. Beneventan

23. Carolingian minuscule

24. Early gothic

25. The formation of the letters in Gothic ‘Textus fractus’
6. The perfection and triumph of Caroline minuscule

In northern Italy,\(^4\) Verona had already, before AD 800, adopted a very clear, composed script\(^5\) which was then practised even after the time of archdeacon Pacificus (AD 848), who had 218 volumes written for the library.\(^6\) In other places there predominated around and after 800 still round and richly ligatured scripts with individual forms like ρ with upturned shoulder-stroke\(^7\) but on the whole the reception of the simplified minuscule was completed during the second quarter of the ninth century. In Nonantola, whose round script had perhaps become the prototype of the Beneventan in the eighth century,\(^8\) the local type with tall e and pronounced r ligatures was retained even longer.\(^9\) In Rome, non-liturgical manuscripts were still being written in uncial in the ninth century; after the middle of the century canon-law manuscripts were produced there\(^10\) (now in minuscule), probably in the circle of the curia.\(^11\)

In explaining how Caroline minuscule took root in Italy the influence which the activity of non-Italian personalities brought about can hardly be underestimated: we know about the missions of Dungal\(^2\) in 825 and Hildemar c. 840;\(^23\) it is notable also that a Tours scribe collaborated in the writing of the north-Italian MS, Vercelli, Bibl. Cap., CIV(47),\(^24\) and a Frank collaborated on the Bibliotheca Vallicella Codex A 5, which was written in Rome.\(^25\)

With the change of style the c-s and the ligature γ (which is replaced by N) gradually disappear. In some places, for instance in many manuscripts of the school of Tours, the new alphabet without variant forms appears now to be accepted as the ideal. Numerous other schools come close to this ideal at times.

\(^{14}\) Cf. also Pagnini, 'Formazione della scrittura carolina italiana'.

\(^{15}\) CLA vii 1057 and 1076.

\(^{16}\) Teresa Venturini, Ricerche palaeografiche intorno all'archeologia Pasifica di Verona (Verona 1969). G. Turrini, 'Mellinium scrittori e Veronesi dal IV al XV secolo (Verona 1867) plates 15-17.

\(^{17}\) Ebele-Liebert, Specimen, plate 10; Chatelet, Pal. class. lat., plate 168; cf. Bischoff, 'Panorama', plate 241. See p. 102.

\(^{18}\) G. Cancetti, 'Scrittura e scrittori nel monachesimo benedettino', Settimane 4 (Spoleto 1957) 206 ff. with plates (also in Cavalli, L'erro, 77 ff., 194 ff.). Cat. mon. manosc. datate 1 plates 1-3.


\(^{22}\) L. Traube, 'Textgeschichte der Regel S. Benedikts', 6th K. Bayer, Akad. Wiss. 3 Kl. 21 (1880) 450 ff.

\(^{23}\) A. Wilmart, 'Manuscrits de Tours identifiés ou proposés', Rev. Bénédictins 45 (1913) 263, believed that the first (turbanian) quartus was sent from Tours as a model (followed by Leones, Leores, 146 and 341 ff.), however, the colour of the ink proves the unity of production.

\(^{24}\) Pl. Münchher, 'Manoscritti romani', 82.
Other scriptoria, in contrast, include variant forms: open-a with two points (presumably taken over from Anglo-Saxon script), and uncial d and V are never banished from the minuscule; French schools (for example Fleury, Auxerre) show a preference for half-uncial a in the minuscule. The majuscule forms a and v also re-establish themselves in the ninth century, at the end of a word, v for u at the end of a word, and less often at the beginning. Simultaneously with the perfection of the caroline minuscule the majuscule scripts, which in the early carolingian era still appear partly mixed or greatly distorted, were reformed in accordance with good old models. Tours and several other scriptoria also use half-uncial as a display script.

The early and middle carolingian era is distinguished by its literary culture and calligraphic taste, and until the third quarter of the ninth century and beyond many local styles can be recognized and described (if their transmission is favourable), especially if attention is also paid to the ornamentation. Tours, which retained its style of script almost unchanged, is an exception. The majority of the well-known French schools change their styles in the course of the ninth century, for example, Corbie, Rheims, Lyons, St Denis, St German-des-Prés, Fleury and Auxerre (St Germain) seem to have been in very close contact in the middle third of the ninth century, so that their house styles cannot always be sharply distinguished in the manuscripts, whence Arn, when he was made bishop of Salzburg (785–821) had summoned scribes, became after the mid century the main centre of the Franco-Saxon style also cultivated at St Berin and Arras; its script achieves an almost typographic regularity. In contrast, manuscripts of other centres with once great libraries, like St Riquier, have been wholly or almost entirely lost.

30 Catal. mus. datis 5, plate 211 (and plate 2 Hartweiler); F.M. Carey, ‘The Scriptorium of Rheims during the archiepiscopal Hincmar’, in Classical and Medieval Studies in honor of Edward Kennedy Rand (New York 1938) 41–60. The very richly attested Rheims script of the second half of the century avoids in a peculiar fashion the strengthening of the ascenders (or else they are very steeply) and also sets the a steeply. The same traits are to be found in the affinities school which produced the Bible of St. Paulus fortis in manuscripts.
31 Catal. mus. datis 5, plate 3, 6, plates 3, 4, 6 to 10; CLA vi, p. xiv.
32 CLA vi, p. xxxi.
33 Bischoff in Der Stuttgarter Bildersalat i (Stuttgart 1968) 11 ff.
34 CLA vi, p. viii ff.
35 CLA vi, p. viii ff.; Bischoff, Schreibschulen i, 56 ff.

6 The perfection and triumph of Caroline minuscule

Of the ninth- and early tenth-century Breton manuscripts37 in caroline script only Orléans, Bibl. Mun., MS 221 (103) – one of the scribes is Junobrus – shows interminings of the Insular g. The Breton script is often conspicuous either for its angular forms or for particularly developed rounding. It can betray itself through Insular abbreviations and, not infrequently, through Breton glosses. Also characteristic are the relatively numerous subscriptions in hispanic Latin, whose other remains have been transmitted principally from Brittany. In northern Italy the carolingian writing schools of the monasteries of Bobbio38 and Nonantola,39 Verona40 Novara,41 and several other episcopal cities were especially important.

In Germany the schools of the German-Saxon area: Fulda,42 Mainz,43 and Würzburg44 occupy a special position. Here the caroline miniscule made its entry around the turn of the century. In Würzburg the Insular hand dies out c. 800-820; in Fulda, where occasionally Anglo-Saxon and caroline hands work on the same manuscript,45 and where abbot Hrabanus himself wrote a hand more Anglo-Saxon than caroline,46 the Insular script disappeared only after 880. The training by the Anglo-Saxons was so lasting in effect that the habit of using their cut of the quill and their way of holding it also gives an unmistakable appearance to the caroline miniscule in Fulda, Mainz, and in part Würzburg.47 Under the influence the script is erect, occasionally even inclined towards the left, more angular and formed with sharper points and fuller bows than the normal minuscule. The ascenders terminate in wedges, in Mainz they actually

37 A number are named by W.M. Lindsay, ‘Breton scriptoria: their Latin abbreviation symbols’; Zentralbl. f. Bibliothekswesen 29 (1924) 264–72; L. Fleutot, Dictionnaire des glosses en Frans breton (Paris 1945) 8 ff.; and plates p. 8.
38 P. Collet, Les Precurseurs de la Caroline à Bobbio, Fontes Ambrosiani 22 (reprint Florence 1983).
39 C. Cipolla, Collezioni palegrafiche bolschese 1, text, plates (Milan 1937).
40 See above p. 136. 41 See above p. 132.
44 B. Bischoff, Hofmann, Litre Sacré Kyklos (Würzburg 1955).
47 Examples: S. Bonifrat et Iudal Episcopi, ed. by M. Tanguy, MGH, Ep. sel. i (Berlin 1916) plate 1 (probably from Fulda) and 3 (from Mainz); B. Bischoff, J. Hofmann, Litre Sacré Kyklos, reprodu. 1 (from Würzburg). Even the Bamberg sacramentary from Fulda dating from after 905 shows unmistakable traces of this Insular tradition (Chronost, Monumenta 2, plate 12); cf. also ibid., 11, plate 4b (from Echternach).
form small oblong triangles. The shafts that end on the line are in some manuscripts even broken towards the right in characteristic fashion.

In several other German Carolingian writing rich transmission provides informative insights into the succession of styles, and the decisive role that individual personalities played in the efforts of the scriptorium is often evident. In Cologne, for example, an evolution: Hildebold (755-819), in Reichenau, the librarian Regimbert, in St Gall amongst other abbots Grimuald (892) and Hartmut (872-883). In Lorsch, where book production was extensive, the greatest activity took place in the time of Adalang (804-37), who was simultaneously abbott of St Vaast in Arras. In Weissenburg Otfrid, a pupil of Hrabanus, seems to have directed the collecting of bible commentaries which he himself expanded by the addition of marginal commentaries on various books. In south-east Germany bishops Arbo (764-84), Hitto (811-12-36), and Anno (854-75) of Freising, Baturich (817-47), bishop of Regensburg and abbot of the monastery of St Emmeram, and the archbishops Arn (785-821), Adalram (821-36), and Liuparich (839-59) of Salzburg spurned on their respective scriptoriums. The monastic school of Benediktbeuren can also be mentioned. The Salzburg school is distinguished by the fact that already before Arn's time it had become a centre where west-Frankish script could take root through the activities of French scribes (from St Denis) and did so again when Arn brought with him some scribes from St Amand. Besides these can be distinguished numerous other localised or unlocalised groups.

7. The development of handwriting from the late ninth to the twelfth century

After the demise of 'Insular' scripts in Germany and Brittany the realm of Caroline minuscule, both as bookhand and also as charter-hand, extended from Catalonia to East Saxony and Dalmatia, from Denmark to east of Rome. In southern Italy by contrast the canon of a new style of writing, the Beneventana, developed. The impulses received and the cultural unity on the one hand, and on the other a decline of the inner vitality of the script prevented a new disintegration of writing after the partitions of the empire. In the following centuries Caroline minuscule from its broad heartland conquered England as well as

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Spain, whose inherited scripts were finally driving out the traditional scripts. From Germany this script was exported to the large areas won to Christianity from Salzburg, Regensburg, and Passau, and from Hamburg-Bremen, Magdeburg, and Gnesen.

In German Caroline minuscule signs of a deeper transformation of script are already visible in the late ninth century. Up to that time writing was dominated—despite conscious calligraphic stylisations—by free, spontaneous formation; each letter, and each part of a letter, was formed according to its natural function in the whole. This harmonic form now disintegrated. The swing was checked and restricted, the individual parts of the letters were put together in an inflexible and clumsy way, and reconstructed in part according to false analogies. Bows now became claw-shaped (for example in h, m), other curves were inflated, a gentle curve becomes angular (in r), in place of the easy lowering and raising of the pen little additional strokes become visible (for example in i, m), at the end of a word even horizontal end-strokes were tucked on. The few remaining old cursive ligatures were no longer formed fluently but hesitantly, and misunderstandings of the forms led to imitations, especially rt written as st with an added horn. The ligature cs, whose parts were again separated, called forth inorganic imitation. The impoverishment of the script manifests itself around the same time in the deliberate renunciation of cursive in the German royal chancery.

In southern Germany St Gall appears to take the lead in this development; thanks to its rich holdings it can serve as a model case for the demonstration of the individual processes, especially since, thanks to its influence in the period of reconstruction in south Germany after 1005, it provided norms and forms. In the St Gall scriptorium various levels of style are observed which can be defined in three grades—calligraphic bookhand, ordinary functional script (for library manuscripts), and school style. This gradation of scripts recalls that achieved in Ireland already in the eighth century. Without a doubt Irish influence is present in the appearance of the two lower grades, in the preparation and composition of abbreviations, and in the introduction of ligatures with attached i and open a under the line. The possibility for this was provided in St Gall by the activity of the Irish teacher Moengal in the second half of the ninth century. These forms too were widely disseminated.

In the tenth century this stylistic phase, which began in the early ninth
century, continues and in the process the harshness (or at least the irregularity) generally increases. When in the late tenth century the great Ottonian schools of illumination began their activity an adequate script was, for the most part, unavailable. Still, it seems that handwriting from the circle of the Registrum Gregorii Master stands out especially early by its high quality. In some scripts of the late tenth century, and also of the eleventh, the knobby effect achieved by the thickening of the beginnings of c, n, f, m, long-s, f, r, and p determines the impression made by the script, for example in the script of Frohunmund of Tegernsee and in the Bamberg Apocalypse from Reichena. In general, it is only around 1000 and shortly thereafter that what had previously, to a greater or lesser degree, lacked cohesion could be harmonized to form a coherent, smooth script. This script, now fully mastered calligraphically, avoids the extremes of both neatness and fullness, and achieves an element of tension through its tendency towards stretching: a slanting oval is the essential form. In the first half and in the mid-eleventh century this 'slanting oval' style is disseminated over a large part of Germany. It is formed at its most elegant in south Germany by the scribal generation that was growing up in Henry II's time and that was active until the middle of the century. 

The calligraphic skill of Oloth, the prolific Regensburg scribe, must have enjoyed an unusual esteem because, besides working for his own monastery of St Emmeram, he also worked for numerous outside patrons and places. This style is the script of the great south-east German schools of illumination of the eleventh/twelfth centuries, the 'Bavarian monastic school', for which a group of outstanding Tegernsee calligraphers wrote numerous texts, and of the

68 Cf. Steffens, Lateinische Paläographie, plate 70a (Codex Egeriae); Chrost, Monumenta 11, 4, plate 2 (letter collection from Trier); Lowe, Palaeographic Papers 2, plate 85, 87. 
70 Chrost, Monumenta 11, 22, plate 6, also in St. Gallen, ibid. 11, 16, plate 10 (f. XIX).
71 Cf. the script of Ellinger; Tegernsee, Chrost, Monumenta 1, 1, plate 5; and the treatment by Edler, Tegernsee, 55 f., 75 ff. Comparable script from Regensburg: Chrost, Monumenta 1, 1, plate 5. The apparently German script of Clm 14453, f. 138v-207v, developed a quite individual strong script probably in the eleventh century: vertical, compressed, with tall final S and ligatures of n (and other letters) with a pendant a or i. Ns, NS, ss, st, st, (the manuscript was not rubricated; initials and verse capitals were added in the twelfth century).
72 Bishop, Kalligraphie, 34 f. Cf. the Ura-evangelistry from Regensburg: Chrost, Monumenta 1, 3, plate 4; Baltimore, Walters Art Gallery MS 71 (Jacques Rosenthal) Bibliotheca manuscripta 1 (Munich 1952) plate 9 (Ne. 40). Samples of Oloth's book-scripts: Chrost, Monumenta 1, 1, plate 7; Arolsd-Taupf, Schriftdarstellung 15, plate 19. 
74 Peters-Glauning, Deutsche Schriftde. 3; Heinz Schaewitz, Oloth von St. Emmeran (illuminated excerpts from Stud. Mittelr. 74) plate following pp. 48, 56, 112; Bishop, Kalligraphie, 35 and Nr. 25. 
75 Edler, Tegernsee, 57 f., 62 ff. Reprod. E.F. Bange, Eine bayerische Maierschule des XI. und XII. Jahrhunderts (Munich 1943) c.g. plates 6, 8, 12, 17 f., 35, 46; Chrost, Monumenta 11, 2, plate 1 f., 4 f.

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7 Handwriting from the ninth to the twelfth century

Salzburg school.55 Sporadically changing, sometimes sharper, sometimes blunter, this slanting oval type of caroline minuscule lived on in south Germany and Austria up to 1200, and in some cases beyond, undisturbed by the gothic mode encroaching from the west.56 Meanwhile, west German and north-west German schools in the eleventh century do not appear to have perfected the slanting oval stage to the same degree, if they achieved it at all.57 A certain similarity with slanting oval style (probably without any genuine connection) exists in the script of the calligrapher Goderamus of Stavelot and Lobbes (c. 1100).58 One must not, however, formulate the picture of writing in this century exclusively on the basis of the de lux codices and the library manuscripts. The vigorous rise of the schools, and the reading and commentary of the bible and school authors often demanded more economic writing, which could be achieved by greatly reducing the space between the lines and by the use of a smaller type of writing for entering glosses, etc. Such a script, in which very many OHG glosses were also written, developed more and more from a simple reduction in the size of the text script and led ultimately to certain divergent forms: for example a with lengthened shaft, long-s and / (in which the text hand only slightly cut through the base line), and especially r, which extends far below the line. 

I add here further remarks concerning alterations of the caroline minuscule (in Germany) between the late ninth and the twelfth century (before the transition to gothic); these also partly apply to France, England, and Italy.59 The letters k and z are multiform and often fit badly into the line; but any attempt to determine the time and place of the individual forms seems hopeless.60 The h,
whose bow already in the ninth century is mostly claw-like in shape, usually extends the bow under the line from the twelfth century onward. While N soon disappears from the minuscule, and also the use of open a with two points gradually retreats, round d and e (also frequent in internal position from the eleventh century) are now integral parts of the script. The mostly raised i frequent in final position appears already in the tenth century often in ligature with s. In the upper swing of the round d in the twelfth century the small head of an e is added (\textit{de}).

For the sound v, long expressed by doubling the u-sign (uu, uv, etc.), there appears in the eleventh century the composite form \textit{ve}. As a survivor from cursive writing, the wedge-shaped thickening of the ascenders generally goes out of fashion after the tenth century,\textit{a} after it had already been frequently contracted in button-like fashion or in a way similar to the Insular one, by a triangular addition. From this there develops an open fork in France already before 1050,\textit{a} and in West-German writing c. 1100.\textit{a}

The cedalata (c), which is very frequent even in pre-carolingian times for the diphthong ae, replaces the latter more and more in the tenth and eleventh centuries; the result is an uncertainty as to where ae should rightly be used and where not (often cila, etc.). In the twelfth century simple c replaces the e. For the German diphthong au was formed already in the tenth century the grouping of a with an open bow above it,\textit{a} which in the tenth century, particularly in initial position (in names) becomes the set ligature /\textit{de}/, in the twelfth century the equivalent \textit{ae} becomes more frequent (occasionally also for the diphthong \textit{au}).\textit{a}

From roughly 1100 (and in Italy already at the end of the eleventh century) two consecutive f's (for which \textit{f} often stands in western manuscripts) acquire strokes (\textit{ii}) to distinguish them from \textit{u}, a feature which occurs in the case of single \textit{i} already in the twelfth century.\textit{a}

I mentioned above Irish forms that were apparently disseminated from St Gall. A much more general symptom of Irish influence, which is probably to be traced to the important position of Irish teachers in carolingian education, is the surprisingly frequent use of the spiritus asper instead of h, in corrections but also in text script (for example in the Strasbourg oaths),\textit{a} sometimes it even stands on the line.\textit{b} Less frequent is the spiritus lenis in vocalic initial position, or in the

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\textit{a} E.g. Pater-Graising, \textit{Specimen}, plate 20.
\textit{b} It is almost attested in the tenth century "Houblize Bedas" (s xi: J.J. Gallée, \textit{Aachische Sprachmedenmuster}, Fuss. (Leiden 1862) plate 1.
\textit{c} In Angers the old practice was followed sporadically around 1000 and even later: cf. J. Vein, \textit{Les scriptoria d'Angers au Xe siècle} (Paris 1974) 134 and plate 1, 28 ff.
\textit{d} Catal. nos. darts 3, plate 1 (Diessen), 5, plate 7a.
\textit{e} E.g. Claire, \textit{Mannenstirn} i 11, plate 10a, resp. 2, 5, 5, plate 5, 6, plate 6b.
\textit{g} Perhaps inspired by the Greek \textit{i} ligature.
\textit{h} Pater-Graising, \textit{Specimen}, plate 5.
\textit{j} Clm 14.070c, f. 54, 14.292, f. 60.
way the tendency was encouraged towards economy of writing in the school milieu which can already be observed in ninth-century glosses. With the beginning of gothic writing occasionally the old and the new style can be observed in use side-by-side.

In Provence the problem arose, when writing vernacular texts, of graphically differentiating the z sounds, by the attachment of a sickle-shaped cedilla on t or (round) d signs were created in the thirteenth century for tz and dz.

Caroline minuscule was transplanted to England in the tenth century. Amongst the various contacts with the continent - dynastic ties, contacts with Brittany, and finally the powerful Benedictine reform, which had its leaders above all in archbishop Dunstan of Canterbury and Ethelwold, abbott of Abingdon and later bishop of Winchester - the latter influence was the most lasting. Their Consuetudines stand under the influence of Fleury and St Peter's in Ghent, but for English Caroline manuscripts from other schools, such as Corbie and St Amand, probably also served as models. In the process the script was subjected to the stronger English scribal tradition; whereas Caroline and Anglo-Saxon minuscule were written by the same hand, the letter forms they have in common assimilate themselves to the Anglo-Saxon form. Like Anglo-Saxon script, the Caroline minuscule was also used for charters.

Various styles stand out rather clearly. For example, the bibliographical of Ethelwold is written in a broad, rounded script executed in a large mode especially suitable for imposing manuscripts. The earliest examples of this style come from Winchester and Abingdon. The style at St Augustine's, Canterbury, with its narrower forms, pointed ends of the ascenders and of r, and other particularities, has taken over in free borrowing more from the Anglo-Saxon minuscule, while for Christ Church a finer script is characteristic.

In a second, slightly later style at Christ Church (first half of the eleventh century) the long rounded script already approaches the earliest Anglo-Norman script, without possessing its firmness.

From the late eleventh century and from the twelfth there are manuscripts from England in which Norman and English scribes clearly collaborated.

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in Norway and Iceland among various influences the English was strongest.

In Norway and Iceland among various influences the English was strongest. In Norway and Iceland the script had to be extended by the addition of new sound symbols. Likewise ð and ð were taken over in Sweden, the former in Denmark as well, the vowel series in both was extended by the addition of signs for the umlauts ae (Æ) and oe (Ø and similar).

In Italian bookhands the lack of stylistic vigour in the post-carolingian period is generally less noticeable than in Germany and France. Many scripts remain more solid, less elongated, and the inclination is less marked; the tendency increases to draw the shafts vertically. Thus is the process prepared that leads to the rotunda. In some scripts the ligature rt and the two-tiered cursive ti persist into the twelfth century.

All the more striking is the appearance in the eleventh and at the beginning of the twelfth century of a slanting style in Rome and its environs. This also frequently stresses the round bodies of the letters (ο), the very common round d (g with closed full bowls). Here it is a very general phenomenon that the shafts (including even that of μ, often extended slightly below the line) are provided with finials, and i and the end-stroke of m and n acquire a horizontal stroke. Terminology used to describe this script varies: 'fara style', so-called because it is richly and characteristically attested from the monastery of that name in the Sabine mountains, 'minuscules romaines' so-called because it was used in Rome, even in the circle of the curia, and in Subiaco, Tivoli, and other places in central Italy. Attempts have been made to derive this 'romanesca' from the Roman minuscule, which is, however, very poorly documented. Considered from the view-point of the development of German script, it appears rather that it might be explained as being the result of a strong

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102 Cf. the literature listed p. 93, n. 73.
105 For the assumption of the forms from the tenth to the twelfth century are listed by A. Perruzi in Studi Mediev., ser 3, 9 (1968) 115-26.
107 Battil, Lexicon, 176.
108 Cf. the collection of ðs in Duce, copied between 1097 and 1118 (Ehre-Lieberer, Specimen, plate 33).
superposition of south-German script on the local minuscule styles, whose cause has not yet been studied. But it should probably be seen in connection with the extensive influence of the Alamannic style of initials. In the twelfth century Rome also participates in the production of giant Bibles with their now generally straight, 'reformed' minuscule which is disseminated in northern and central Italy. 121

In Spain several factors contribute to the introduction of Caroline minuscule, above all the expansion of the Cluniaecs beyond the Pyrenees and the adoption of the Roman liturgy effected under Gregory VII, which has as a consequence the adoption at the Latin synods of 1200 of a ban on the use of 'littera Toledoana' for ecclesiastical books. There are also late Visigothic manuscripts in which the Caroline letters (a, t, f) have penetrated the now listless script. 122 A Lucan (c. saec. XI/XII) was written by a Visigothic scribe and by a Caroline one whose Spanish stamp is, however, quite unmistakable. 123

Regarding the charter hands of the period up to the twelfth century, some remarks have already been made concerning Italy, Spain, 126 and England. 127

In Francia the crowded, elongated Merovingian chancery hand 128 was continued in the Carolingian chancery script, but it had become more uniform, open, and cursiv 129. It was retained in this form by the French royal chancery into the tenth century. In the east-Frankish chancery of Louis the German, however, parallel with the changes in the bookhand, 130 the decisive break with the cursive tradition took place. The changeover can be traced back to the notary Hebarhod, who is attested in the chancery from AD 859. The newly created 'diplomatic minuscule' generally adopted the letter forms of the ordinary book minuscule, but the script none the less acquires a particular composite appearance as a result of the long-swing ascenders, the open a, long r, spiral-like additions to the crosses of c, e, and p, and the similar alterations of the long letters.

120 Daniel, Feingerichtsbriefe, 41. Plate IX in P. Supino Martini may be compared with a choice of 35 Gall scripts from the last ninth to the eleventh century in Bruckner, Scriptoria 3, plates 28a, 27b, c. 324 a, 348a. The theory has been declared unsustainable by B. Bischof in Paleographie (1981) 122 f.
121 Numerous samples of script in E.B. Garrison, Studies in the history of medieval Italian painting 1-4 (Florence 1923-59).
122 A. Holsel, 'Studien zur Ausbreitung der karolingischen Minuskel', Arch. f. Ubr. 7 (1914) 197-202; A. Millares Carlo, Traite 1, 190-3. Cf. however 123.
123 Cf. Twidale, Exempla, plate 56 (from 1105; Arnulf-Tang, 2°, Schriftenreihe, plate 37 a subscription from 1105).
125 The elongated script of the king's name was extended to the whole of the first line from Charlemagne's reign.
126 The script of the Hamelburger Marktbuchvorlage tried to imitate this type of script: Christou, Monumenta 1, 5, plate 7; Arnulf-Tang, Schriftenreihe, plate 72, Chf.A XI 144.
127 P. Lot-Pb. Lauer, Diplomata Karolinarum, i-4 (Toulouse-Paris 1936-46); for the tenth century see vol. 6-8. 131 Above p. 119.

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and also by means of several ligatures and the spiralled abbreviation sign. In the eleventh and twelfth centuries the discipline of the chancery acquires a stern solemnity; all around Germany it is imitated in royal charters, 122 and in those of many ecclesiaries and ecclesiastics; 131 it even affected the stylisation of 'palap minuscule' 124 in the twelfth century. Under Frederick II it goes out of use.

The emasculating of personal names by the use of masque letters, customary in the Salian period but already sporadically before that date, is found both in the diplomas and in, for example, many legendaries that emphasise the names of saints. The script of private charters is initially in general bookhand, partly with occasional spirallings, later in increasingly narrower script, often with long ascenders and descenders.

126 To some extent also in France; cf. Françoise Guerpont, L'écriture des actes de Louis VI, Louis VII et Philippe Auguste (Geneva-Paris 1973).
127 Some scribes surpassed themselves in exaggerating the mesh-like fouronds on the r and the s-like extension of e; numerous examples in J. Stennsen, L'écriture diplomatique du ducat de Liége du xii au milieu du xiii siècle (Paris 1967), idem, Paléographie, 104-5; idem, 'Le rôle paléographique de la "resselle"', in Miscellanea silvestri L. Maas Hs. MCMXLIX 1 (Ghent 1979) 385-388.
128 Which soon became an international model too.
129 J. Kirchner in Crous-Kirchner, Schriftenreihe, 7-23; idem, Scriptor. Gotik; idem, Bookhands. Censcorr., Limes-commercialis, 205 f. idem, Compendia, 21 ff. Z. L. Romošová, Bukovskýa křesťanské poľo sa Francou z XIII-XIV storočí (Moscov 1975). On the gothic systemic scripts: G. L. Liebfroh, in Nomenclaries, 11-13; idem, in Misc. dern. Parii-Bon, i, tests, p. xiv ff. (with some changes in terminology); the system depends chiefly on Italian fourteenth- and fifteenth-century MSS. In a new and simplified form it is used by J. G. Knecht, ‘A Proposal for a Carlsundian Nomenclature’, in Oeuvres, 4, pp. 95-108 (an attempt to define gothic scripts according to the letter-forms of a long r and according to the presence or absence of braces); idem, ‘Nomenklaure als Gradenzin Ein Versuch an spätmittelalterlichen Schriftformen’, Codices manuscripti 1 (1957) 122-5 (as before).
128 It has not yet been sufficiently clarified whether it could depend on 'Inscular influences' (J. Bossard) or an analogical formation of a technical and stylistical kind; cf. J. Bossard, 'Influences insulaires dans la formation de l'écriture gothique', Scriptorium 5 (1951) 238-46. On the fundamentally different form and function of broken shafts in Beneventan see above p. 127.
also been widely disseminated in Insular and Insular-influenced scripts of the eighth and ninth centuries, as well as in later English scripts. The Ghent type of this fraktur script, with short shafts and almost square proportions in \( \alpha \) and \( \iota \), had only a short lifespan. In contrast, the oblong, fractured north-French script was a creation of wider consequence. In England this Norman script encountered a Caroline minuscule that had been amalgamated with English writing technique. The Norman script gained there in dignity, harmony, and density, as for instance in the type practised shortly before 1100 at Christ Church Canterbury, the seat of the primate. If in the twelfth century western early gothic script takes on, besides the compactness, a certain fullness and suppleness, then this is because an English component is at work.

The most striking features of this north-French script and of all later gothic textura — by comparison with Caroline minuscule and the predominant German script of the eleventh — are the extension and the vertical alignment of all shafts, including the shaft of \( \kappa \). Just as essential, even for the basic appearance of gothic script, is the fact that (with the exception of \( \varepsilon, \iota, \rho, \varphi, \upsilon, \gamma \), and the bow of the \( \alpha \), whose point touches the line or cuts through it) all letters, including \( \lambda \) and long-s, stand on the line. It is one of the principles of the gothic transformation that all vertical shafts standing on the line are handled in the same way, that is either broken or provided with connecting strokes. The kinds of shafts in early French and English gothic are generally dictated by a clear norm: \( \alpha \), the shafts of \( \mu, \nu, \rho, \varphi \), and the leading (first) shafts of \( \eta \) and \( \theta \) are on the upper end constructed like ascenders, that is with forks, often very pronounced. The following shafts of \( \mu \) and \( \eta \) are attached with hair-strokes and very frequently broken on the upper third. If the hair-stroke is set at an angle to the broad stroke, pointed arcades, comparable to the pointed arches in architecture, come about. The forking of the medium (first) shafts, which in Germany too is generally adopted in the course of development toward a gothic script, for example in the Rufinus of 1181 from Trier, is still clearly to be seen in the sumptuously written Bredelar Bible of


4 Eleventh-century examples of this script from Mont-St.-Michel in J. J. G. Alexander, Norman illumination at Mont St. Michel 966-1100 (Oxford 1972) plates 4-6; Catal. mas. datur 7, plate XXIII. Compare the Carolin Bible in Durham, R. A. B. Mynors, Durham cathedral manuscripts to the end of the twelfth century (Oxford 1939) plate 161 (with forking of the base). 5 Kat, English MSS, 27 ff.

6 This can be seen by comparing the French and English scripts in the mortuary roll of abbot Vitalis of Savigny from 1122-3; Facs. L. Delisle, Rouen mortuaire du B. Vita, abbé de Savigny (Paris 1909).


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1238. Around the middle of the thirteenth century it is finally replaced by another way of forming the approach strokes, which began in the twelfth century. In contrast with the forked ascenders — which later often acquire only a light decorative stroke — there appears already in the twelfth century the tendency, in the case of the medium length shafts (minims), to contract the forking of the addition to form lozenge-shaped reinforcement. The constructive sense of the gothic era did not cease until the clearest solution had been found for the relationship between the predominating straight stroke and the oblique parts; the latter became lozenges placed on their lower corner, or, in the case of attached shafts, rectangles, or in this case too, squares.

In order to produce rows of shafts all constructed in the same way, it was often necessary to suppress the hair-strokes, and the ‘quadrangles’ touch each other at the points. According as the shafts were broken either above and below or just above, the writing-masters called the script ‘textus fractus’ (‘t. quadrangularis’) or ‘textus semifractus’ (‘t. semiqadrangularis’). As well as that, however, the simple approach with short hair-stroke continued in use, including for the first shafts. The textura without shaft-breaking was called ‘rotunda’ by the Dutch and German writing-masters. 12 The oblique approach strokes are mostly slanted, 13 only sporadically in early gothic scripts is the attempt made to restructure them into horizontal basic strokes. Much more often \( \iota, \mu, \eta, \kappa, \tau \), etc. are cut off flat on the line. For this script the name ‘textus praecexus’ is later attested. Especially favoured in England, it was occasionally used also in Germany. 14 In a particular precursor of the later biting bow fusions, \( \beta \beta \) and \( \beta \beta \) are often so combined that the second shaft cuts the first bow. 15 Breaking, stretching, and the identical handling of all shafts that stand on the line appear as symptoms of the transformation to gothic from the eleventh century, and where they work together one can speak of ‘primitive gothic’ script in order to express the formal difference by comparison with the carolingian script.

The Italian route towards gothic is different and it leads to another form. Many Italian scripts remained erect but were lower (\( \mu \) and \( \eta \) are more or less square). The tendency towards heavier, vertical and round script, which perhaps has to do with a change in the cut of the pen, makes its appearance early in the twelfth century in Tuscany, later in Rome, and then determines the script

8 Steffen, Laterneiche Paliographie, plate 86; Chronous, Monumenta 11, 6, plate 2.

9 Chronous, Monumenta 11, 6, plate 2.

10 This development can be traced in the English episcopal professions from 1138 to 1180 in Kat, English MSS, plate 16 f.


12 These styles, which also occur intermingled, are discussed by W. Oester, Das a als Grundlage für Schriftvarianten in der gotischen Buchschrift, Scriptorium 23 (1967) 25-43 with plates 10-12; cf. below p. 208. 13 E.g. Rufinus of 1181.

13 E.g. in the Antiphonary of Leubus c. 1282-92, in E. Kloos, Die schlesische Buchschriften des Mittelalters (Berlin 1946) plate 29 ff.

14 E.g. Chronous, Monumenta 11, 22, plates 22 and 3.

15 B. Bischoff in Nomenclature, 7-14.
By contrast with the narrow gothic textura scripts, whose formation took place in France and England, and which spread throughout the whole Latin West (with the exception of Italy and southern France), the Italian textura retained the broad, regulated character that, in combination with the biting, justifies the name 'rotunda'. Also a rotunda is the 'litura bononiana' in which, at Bologna, the university literature of Roman and canon law was copied by professional scribes. It was written with very narrow space between the lines and many abbreviations; it was very economical and yet very clear. Types approaching the rotunda were also written in southern France in the thirteenth and fourteenth centuries. Such types are also attested from Spain. After the humanistic script had come into fashion the rotunda gradually lost its impact, though in Italy its position as the script for legal literature and for liturgical books survived longest.

The reception of gothic script in Germany was facilitated by the fact that German scholars were accustomed to seeing France as the home of higher learning, and they frequented the schools there. In this way sporadic western writing features had perhaps already been introduced (for example a bow-shaped abbreviation-stroke). The allure of the French schools was inherited by the university of Paris. The expansion too of the strongly centralised Cistercian script, which in France was characterised by a book production with very uniform script and decor, facilitated the transition to gothic. However, one can speak only with reservation of a typically Cistercian script in Germany.

25 Northern textura was written in Norman southern Italy; see H. Buchthal, 'A school of miniature painting in Norman Sicily', in Late Classical and Medieval Studies in Honor of Albert M. Farmbrough Jr. (Princeton 1953) 312-39 and plates.
26 E. Steffens, Latinitetische Paläographie, plate 101; Kirchner, Scripta Gotich. latein., plate 25; Thomason, Bookhands, plate 75; Arch. Pal. Ital. ii, plate 34 (A. Pratucci, La Scrittura di Francesco Petrarca, plate 19).
28 C. E. Mommsen, Fasciculi di antichi manoscritti (Rome 1886) plate 11; M. de Madr, Archives Départementale, Rouen (1788) Nr. 90, 109, 174; Cavaliere, Deline, plate 26 ff., 426; Steinmann, Palaeography, 257; Kirchner, Scripta Lat. libr., plate 42.
29 Thomason, Bookhands, plate 128 (1476).
30 The gradual shift in the use of both scripts can be observed in the library of the Dukes of Milan; cf. Elisabeth Pellegri, La biblioteca dei Visconti e delle Sforza duc de Milan, Supplementum (Florence-Paris 1946). Among the scribes who worked for Ferdinand of Naples only the Bohemian Wenceslas Cyspis wrote rotunda, for instance when he copied Thomas Aquinas; see T. de Marins, La Biblioteca Napoletana de r e d'Anglais (Milan 1947) 63 f.
31 E.g. Chronicon, Monumentum ii 22, 5 from Hildesheim 1103.
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because the numerous south-German and Austrian Cistercian monasteries generally clung to the slanted oval script of these regions. In contrast with the western orientation of German writing practice, an influence of the round Italian gothic script is only exceptionally to be perceived there.

In western Germany the slightly more angular writing character facilitated the adoption of gothic script. A look at the school of St Matthias in Trier as an example allows us to see how, after already distinctively elongated but still unsure scripts of the first half of the twelfth century, a strong, straight, steep script follows with consistent observance of the steep approach and finishing strokes (in the case of f and long-s as well); in a band of 12344 fracturing and biting are fully realised. Thus the symptoms of gothic appear in stages. An approximation of it comes about hesitantly, after 1150, in the Bamberg school. In other regions where script development offered fewer gothic elements to start from, above all in southern Bavaria and Austria, the adoption of gothic script may have resulted for the most part in a sharp break with tradition. But even here in the late twelfth and early thirteenth centuries there are transitional forms, stiff and occasionally even prickly scripts. In the course of the thirteenth century the textura script becomes filled with vitality and vigour.

While it is a general feature of the northern gothic script that the stretched shafts and the interconnecting bows result in dense, block-like word units in which the individual letter seems to be absorbed into the word shape, this striving for closeness is entirely lacking in many scripts of German texts from the thirteenth and early fourteenth centuries. Small scripts above all, with the use of a broad 3-shaped z and the v that begins with a bulging swing at every place in the word, combine a very loose distribution of letters, whereas other German hands do not depart at all from the normal image of the textura. The difference is probably to be traced chiefly to the fact that some of the scribes were already used mainly to German texts, others (principally monastic) mainly used to Latin texts.

The high tide of the textura in Germany was reached in the thirteenth and

32 Cf. for instance, a typical Cistercian school like Heiligenkreuz: Chroust, Monumenta ii 14 and 15.
33 Cf. Chroust, Monumenta i 21, plate 4 (Bamberger); ii 14, plate 36 (Heiligenkreuz c. 1230). E. Klos, Die schlesischen Buchmalerei, plates 49 ff., 52 ff. (from Silesia around 1320); more frequent in south Germany in the fifteenth century: Kirchner, Script. Got. Ill., plate 36 (1425).
34 Chroust, Monumenta ii 5, plate 8a from 1350; ii, plate 9, after 1357.
35 Ibid. ii 6, plate 22 from 1351.
36 Ibid. ii 6, plate 6a.
37 Ibid. iii 21/22.
38 E.g. Chroust, Monumenta i 17, plate 10 (St Gallen); ii 3, plates 2 and 32 (Tegernsee); iii 4, plate 64 (Weingarten); similarly Petzet-Glauning, Deutsche Schriftformen, plate 21 (Augsburg).
39 An example is the Carmina Burana from the first half of the thirteenth century: Facsimile edition ed. B. Bischoff (Munich 1967).
40 E.g. Petzet-Glauning, Deutsche Schriftformen, plates 26ff. and 36.
41 Ibid., plate 26.
42 See the juxtaposition in Civil-Kirchner, Schriften, reprods 12 and 13.
fourteenth centuries, though the script in the fourteenth takes on an embellished, over-embellished, or even knotty character. Thus theat word-end acquires a long decorative stroke, and neighbouring ascenders are connected by a hairstroke. A special variety of textura in which the upper quadrangles begin with finely curving points like small flames appears to have been based principally in the area of south-east Germany. Austrian scripts display this phenomenon sporadically already c. 1300.43 These flame-like squares became the hallmark of a regional style in Bohemia, Silesia, and Poland under Charles IV and Wenceslas, but also lasting into the fifteenth century.44

In contrast with this mannequin in the north-west of the empire, a sober and heavy textura in two grades is used in Holland and Germany among the Brethren of the Common Life and the Augustinians of the Windesheim congregation, both of which, from the last quarter of the fourteenth century, developed an extraordinarily active book production. The two grades are textus quadratus (with squares on both shaft ends), and textus rotundus (without these), both principally for liturgical books. In some missals only the canon of the mass is written in enlarged quadrangular script.45 As a third grade is added the "bastarda" c. 1425.

In the fifteenth century the large textura, which now often appears somewhat sober and box-shaped, seems to be restricted more and more to liturgical manuscripts of large format and to the elementary schoolbooks - those areas in which early printing continues the tradition. Amongst the factors that contributed to its decline, besides the appearance of bastarda scripts, is probably also the increasing use of paper, which was little suited to the writing of this script; in paper manuscripts it is often restricted to the opening words. Textura with pronounced quadrangles is, however, the first kind of script in which the formcutters of the early printing era achieved a mastery. Besides the formal types, the textuales formatae,46 according to which the history of textura has been sketched in the foregoing, this script comprises from the thirteenth century, in contrast with the 'gothic cursive' and its stilted variants, a broad gamut of less formal, mostly smaller scripts, 'textuales', down to forms that verge on charter and letter scripts (for example the script of the

43 Chroust, Monumenta i 12, plate 70; 13, plate 4.
46 Cf. G. I. Liefeninck in Nomenklaturen, 32; in his system for the fourteenth and fifteenth centuries (Gleimber, Utrecht Kardinaal, 204 f.) textuales, defined on p. 204, is distinguished by the following levels: 'T formata', 'T libretta', 'T currens'.

8 Gothic textura (textualis)

Munich Tristan and the Munich Parzival manuscript G.47 The great majority of manuscripts are written in these scripts. In England, towards the end of the twelfth century, the grade of script used for text was not only separated from the smaller, slightly modified one used for commentary, as before, but the character of both scripts was more strictly differentiated. But the smaller glossing script too, for its part, rose to become a text hand.48 A descent in style is also frequent between a text hand and the corresponding gloses and commentary. In the smaller grades the script connects rounding and fracturing or slurring; in these scripts the forms of e and o often become one. The heavily abbreviated university script of the thirteenth and fourteenth centuries in Paris and Oxford is, for example, generally a simplified textura,49 and even more, its refined descendant type, the tiny though clearly legible 'pearl-script' that was created in the fourteenth century for pocket copies of the Vulgate and the New Testament.50

The letter forms of the textura51 undergo only a few changes, several of which have already been mentioned. At the end of the thirteenth century the a takes on a two-tiered form through a bending of the shaft - as was the case in many places with the cushion - and this is especially pronounced in the fourteenth century. On the other hand, the line of the bow in a on the left is often drawn as a straight line and the letter divided in the middle ('box-a').52 In place of the stroke on the i the dotted i appears from the fourteenth century on. The r, from the twelfth century, acquires a flourish, and in the twelfth and thirteenth centuries the shoulder-stroke is often separated from the stem. The a has various striking forms in German manuscripts, for example with three bows,53 and in the Carmina Burana partly the c-like form which became the norm in the southern Romania.54 W is frequently written for v, for example ilti. The superscript vowels a and i in umlaut and diphthongs show the tendency in the fourteenth century to simplify into mere strokes, and are finally replaced by a' and groups of points, to which the modern a' and the small umlaut point go back.55

The capitals (the initials, not the coloured 'Lombards') give up their simple majuscule forms and change in accordance with the same principles as ruled the large letters of the charter hands and cursive, by doubling of strokes, sinew-like.

48 Keu, Engels-MSS, 24 ff.
49 The distinctions between 'scripctura Parisimesi' and 'scripctura Ooniensis' (see Cecotti, Lexicon, 220 f. and Comparetti. 76 f.) need further investigation.
50 Repro: New Pal. Soc., ser 1, 2, plate 217 copied from four examples; Creon-Kirchner, Schriftarten, repro. 9; Degering, Schrif, plate 81; Exempla scripturarum i, plate 11; Masaal, Gorl, repro. 4; 51. Cf. Gumbert, Utrecht Kardinaal, 215 ff.
51 E.g. Creon-Kirchner, Schriftarten, repro. 40; cf. Gumbert, 226.
52 Examples: Keim, Biederstätte, 37; Petzet-Glasing, Deutsche Schriftarten, plate 42b and 48.
53 See above n. 19.
54 Petzet-Glasing, Deutsche Schriftarten, plates 37, 39, etc. and vol 5, index.

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flourishes, and attached small teeth. Many scribes master several minuscule styles and in the subscription they often reveal their proficiency in a different kind of script.

Before the fifteenth century, a regular book trade did not exist in Germany, and hence no development of types resulting from it. Nevertheless, through use and purpose, certain conventions came into vogue relating kind of script, book type, and content, and these were retained for centuries. Large textura was used not only for missals in folio or imposing psalters, but in the most solemn proportions also for pontificals, canons of the mass, and also in Bibles, homilies, in books for monastic refectory reading, martyrologies, anniversaries, etc. In law codes and statute books the use of large formats and textura attests to the importance of the decrees, for that reason the stately charter affirming the Magdeburg Law for Breslau (12. X. 128) exceptionally is written in textura. That manuscripts of German poetry were relatively frequently laid out in large formats and large textura indicates already in its execution appearance what work was attached to these books by their patrons.

A very different area of preference for the use of regular textura up to the fifteenth century are - despite their smallness, and under - brevitiaries, books of hours, and books of private edification, and hence also manuscripts of the German mystics. Finally, children learned reading and Latin with large textura, for their schoolbooks and copies of Donatus (in 49) were written in this script.

9. Gothic cursive and bastard

The second great period of bookhand in the gothic period is the bookhand (or minuscule), the name suggests a parallel with the earlier history of script, but this should not be understood too strictly in its technical sense. The opposition textura - cursive

56 See below p. 141 for this.
57 Examples: Codex. miss. datis 1, plate 174 (subscription by the self-confident English scribe). Manesian, s. XII ex. in charter script); ibid. 2, plate 311 (322, charter script); ibid. 3, plate 314 (322, almost bastard); Miss. datis, Belgique 7, plate 30 (1276, ornamental script); Katol. der Isis, Oesterreich 1 reprodu. 46 (1424, as previous); Mazal, Gotik, reprodu. 6 (c. 1300, as previous).
58 Cf. Brocker, Scriptores I, plate 380; Degering, Schrotf, plate 93; both with only 12 lines per page.
59 E.g., Arndt-Tangl, Schrifftafeln, 62 (Legenda aurea); Peter-Glauning, Deutsche Schrifftafeln, plate 55 (Legenda aurea in German); Arndt-Tangl, Schreibfetzen plate 64 (Gregory’s ‘Dialoge’).
60 Arndt-Tangl, Schriftzettel, plate 28 (‘Golden bull’); MSS of the Sachsenpfalz and of eastern German laws.
61 E.g. the Jena Songbook; the Manoeuse MS. Peter-Glauning, Deutsche Schrifftafeln, plate 39, 46, etc.
62 E.g. Peter-Glauning, plates 49, 50, Brocker, Scriptores I, plate 386; Deutsche Texte des Mittelalters 18 (Berlin 1910) plate. Miss. datis, Belgique 1, 1, Nr. 58.
63 Literature p. 105. Mazal, Gothic, 49 f.
earlier charter and glossing hands—the use of long-s and f extending below the line, and in part also the use of r and round s, and the bending of these and other descendents that occasionally leads to loops. In addition to these features there is the fact that word-ends, including those with m and n, are frequently closed with a downward rounding, and finally the fork on the ascenders are dropped—in sum, a simplification of the letter forms.

In these fundamental features scholarly hands, register hands, and the majority of letter hands are closely related to one another from the end of the twelfth century and in the thirteenth. Even the script of literary texts sporadically approaches this character. A further opportunity of forming loops was provided by the ascenders of h, round d, h, and f, which in charter hands open with a curve from the right; here the tendency was to start the pen further down for the upward swing that was necessary to reach the peak. In more cursively writing these curves could be closed. The possibilities of this kind of writing are, however, not always used in equal measure; frequently the same hand wrote some of the letters without lifting the pen, while it combined the others. Indeed, in one and the same document the same letters are written sometimes cursively and sometimes composed of separate strokes.

The continental charter script of the thirteenth century was for the most part dominated by European trends that partly imitate the stately and graciously script of the curia and partly are diffused from France. The explanation of the fact that in Hungary, Poland, and Sweden the same letter forms existed as in France is probably that notaries in the schools of the Ars dictandi, for example in Orleans or Bologna, were trained in these forms. Charters in the hands of the famous

9 Gothic cursive and bastard

thirteenth-century Bolognese teachers of the Ars notaria, Rolandinus and Salasiel, are also preserved. There are also charters that diverge from the majority in having strong scripts of the textura kind, though with elongated z and f and other characteristics of charter hands. These became more rare towards the early fourteenth century. In the same way charter hands, despite great differences in the local traditions of the numerous chanceries, various styles prevail at different times and it is the imperial chancery that, in part, sets the tone. In the second half of the thirteenth century the tendency towards a much lower model predominates: the delicate script is low and broad. Already at the end of the century this preference for the horizontal disappears and in the fourteenth century the thin descenders often dangle like threads. In the imperial chancery the development of the script proceeds towards the elaborate and artificial; it reaches a highpoint under Louis the Bavarian, whose court, the bows of the ascenders are fractured into pointed angles and are excessively heavily shaded. Under Charles IV the script becomes simpler and the model of the Avignon chancery gains in influence. In the fifteenth century the special character of the charter scripts becomes weaker, particularly as a consequence of the diffusion of models taught by masters for charter and book production. An extreme level of cursive writing is reached in the low, coiled draft script of the chanceries which makes its appearance already in Sigismund's time, and which spread rapidly in the second third of the fifteenth century. Here the forms of the later German (current) script make their appearance.
The last creation that comes from the cradle of the late-medieval imperial chancery is the fractura, an oblong chancery script with slightly flamed rectangles, spindle-shaped s and f, and majuscules that have the 'elephant trunk' as a special ornament. Display and text script in chancery from the chancery of Frederick III show elements of the later script, and in 'prefaction and textura the chancery scribe Wolfgang Spitzyarg wrote two schoolbooks for Prince Maximilian I, who subsequently showed a special preference for the perfected fractura. Such a script was already in use in his chancery around 1500 and through the bibliophile printings of the emperor, the prayerbook of 1513 and the 'Teuerdank' of 1517 — for whose font the imperial secretary Vincenz Rockner wrote the 'sample' — it rapidly attained popularity.

Already in the late thirteenth century the writing practice of the schools, the universities, and literature brought about a transition to smooth cursive that was fond of loops. This could be written rapidly and is similar to charter hand but has fewer extragavant ascenders and less pronounced curves, and is also often written on very crammed lines. Early examples in which the use of cursive characteristics is still in part inconsistent come from the years 1273 (Lorraine), 1277 (Germany: 'Werhenbuch scriptus'), before 1281 (Belval, in the Ardennes), 1282 (Oxford), and 1289 (Paris). The rapid influx of the simpler, more or less cursive scripts in the area of bookhand was facilitated by the changes in teaching methods brought about by the universities and city schools, by the intensification of pastoral care through the new orders and the secular clergy, and by the growth of vernacular literatures, which found their public also among the laity.

With the fourteenth century, writing practice for books shifts on a wide front to cursive; paper and cursive go together in this period. The writing of loops becomes general also in book cursive, the changes in the letter forms are the same as in charter hand, but the script is more modest than that of the chanceries and the differences in style are less pronounced. Around the turn of the fourteenth century to the fifteenth the book cursive in Germany collapse, and round loops are now written. A result is the possibility of confusing f and c, lb and w. Most bookhands persist also in the fifteenth century, and are used, when they needed them, by scribes who learned a bastard. The script of the city administration and of urban book-keeping is a simple cursive.

With the widespread use of this script, with the steady increase of written communication and the growth of registers, with the immense scribal activity in the universities and in the religious orders, it was inevitable that changes should come about also in the manner of fashioning the letters, whereby either the quill remained on the paper, or simpler constructions were tried. Besides the loops-and-slings-formation some others should be mentioned. Some have influence on the textura, like the two-compartment c created by the formation and closing of an upper bow common in the more fluent cursive of the thirteenth century, and which frequently survives in the fourteenth. It is then gradually replaced by an enclosed and bluntly closed due to a break of the right shaft. Various changes in direction are to be observed in the case of q; the movement of abbot Johannes von Vikering's draft right upper and left lower halves are joined in one movement; in the fifteenth century the descender is frequently drawn up again with a swing so that it closes the letter flat on top and at the same time adds a tail. Other changes in direction follow in the fifteenth century with round s: it consists in a shaft or bow on the left side and a flat on the right (reverse s) or it is written from below upwards. A new ligature comes into being with xe. The large letters (initials), which are variants of old majuscule and minuscule forms, have changed drastically since the thirteenth century.
century through sinew-like ornamental strokes, doubling of strokes, and loopformation, occasionally even to the point of illegibility. From the late fourteenth century there appear fashionable approach-strokes in the form of a horn or the 'elephant trunk'.

In England, with the transition of cursive to book script, the r which is long and attenuated and whose right stroke usually touches the following letter without any intermediate element is taken over as a traditional element of the English chancery script. To the 'anglicana' belongs the two-compartment a; a favoured form of the e is a circle in which a little tail hangs down. In the early period of this script the ascents of h, k, l, and t that are provided on the right with loops frequently occur a forking through adding of a horn towards the left. In calligraphic execution ('anglicana formata') it can approach a bastarda in appearance. In the fifteenth century, under continental influence, a simpler austere cursive with a single-compartment a appears that is joined at an acute angle, the 'secretary hand', which likewise allows a higher stylisation.

In Spain a stylised charter hand, 'letra de privilegios', developed in the thirteenth century, is taken over towards the end of that century almost unchanged as a bookhand, 'redonda de libros'. It is an upright script written with broad quill which allows the doubled ascenders and the long leftward-inclined stem of the regularly-used uical d to appear club-shaped, and which emphasizes the extremely long abbreviation strokes.

The gap between cursive and textura was bridged mainly by means of the bastarda scripts, whose name—despite the variety in their actual appearance—allows one to say that they combine peculiarities of two genres of script. The use of this historical name should respect this definition.


112 Examples in Kirschen, Script. Gotic. lat., plate 53; Millares Carlo, Tractatus, illus. 273; E. Mommsen, Facsimile di antichi manoscritti, plates b, 97. Lieflinck now calls these 'litera 'Hybrida' for his elder usage of (Ms. dvis, Paris-Bas 1, texta, x, ff.), (Monumentae, 32). Here too the three levels 'H formata', 'H librariae' 'H curvata are possible (Eumert, Kisteler Kisteler, 204 ff.). In Germany the name is used notably for a chancery script, not a bookscript.

113 The above mentioned forceful charter hands (see note 58) developed according to the 'bastarda' principle in the thirteenth century. For one of this sort of titular scripts s. XIII A, bookscript: Bruckner, Scripturae 2, plate 41 b (Einweisung 355; Martinus Polus).


115 Various trends led to a bridging of the gap between textura and the cursive—originally the expression of a contrast—that came about in the fourteenth and fifteenth centuries in multifarious ways. In Italy a stylistic notarial script found approval as the script for literary works, this is evidenced by the codices of Dante's 'Divina commedia' belonging to the group of 'Dante del centro'. Nor are examples completely lacking in Germany in the fourteenth century: those that can be mentioned are the fair copy of Johannes of Viktring (c. 1342), Rudolf of Ems in Pal. Germ. 146, the Berlin Pariszial fragment, and the miscellany in Munich, Bay. Staatsbib., Cgm 717. The cursive themselves tended towards the textura when they were consciously written with the purpose of making a stately impressiveness. This could be achieved through solidification of the stroke and a stretching of the medium lengths. In the two highest grades of the above-mentioned English scripts even the shads could be fractured. Most bastarda scripts use the simple a of the cursive.

The best known bastarda is that affected fifteenth-century script styled from the French chancery cursive, mostly inclined slightly towards the right with or without loops, which is written with bold contrasting or hair— and broad-strokes and separately appended shads of n and m, the last ones, within the word, being mostly fractured and arched slightly inwards. It acquires an elegant prickly character ('Bourgoignon') through its pointed descenders, through its forms of and st, and through small points of e, g, and s. Used mainly for French texts, it becomes the court hand par excellence under Philip the Good and Charles the Bold, but was also much used in France into the sixteenth century. It affects the scripts of England and the Low Countries. Of the two English bastarda, 'the bastarda anglicana', which appears already in the mid-fourteenth century, still retains the two-tiered a up to 1500, while the later 'bastard secretary' comes more under the influence of the French 'lettre bâtarde'.

A Dutch and Lower German bastarda that was also written by the monks of Windsheim and the Brethren of the Common Life, and which was so designated by them, dispensed with the loops and is mostly heavier and blunter like...
the scripts there on the whole; it was created around 1425.\textsuperscript{125} The numerous scripts from other regions of Germany that are designated as bastard are in the literature\textsuperscript{29} are very diverse, some with, others without loops, some with regular approach-strokes on the shafts, others written to a large extent without lifting the pen. Nonetheless the early printing press, when it chose bastard for German texts, was able to base its samples on some regional scripts.

The Czech bastardas, which have their roots in the fourteenth century\textsuperscript{127} and with which the somewhat later Polish types can be compared, have a relatively narrow area of variation, upright or almost upright, with somewhat broad stroke, written mostly with slings. In strict calligraphic forms with stressed fracturing, this script, which the printers took over as a model, was used until well into the sixteenth century in liturgical manuscripts. Through Jan Huš’s Orthographia Bohemica the path was indicated towards a unified and simplified spelling of the Czech sounds by means of diacritics.\textsuperscript{28}

In German writing practice, forms of the gotico-antiqua make their entry around the mid-fifteenth century.\textsuperscript{129} Half a century later printing undermined the living tradition of medieval bookhands.\textsuperscript{130}

In contrast with the writing practice of the fourteenth century, that of the fifteenth presents a bewildering wealth of forms and types. Textura script is graded in accordance with the degree of fracturing of the shaft, and lower scripts are varied by stretching and enlargeing, through suppression of the loops, through fractured or rounded stylisation, and in many other ways. This multiplicity of types, if not produced by the professional writing-masters was at least increased by them and they devised a nomenclature for it. One of their number, Wolfgang Fugger, in the sixteenth century remarked that ‘they make the script bend, curve, mangle, hang, behead, and walk on stilts’.\textsuperscript{131} Advertisement sheets from writing-masters and teachers, with samples of types and their names, are

\[\text{\textsuperscript{125} Lietifconv, Nommel und, repord. 26; Gamburt, Ueberste Kartäner, 204 and reprods 142–50; Cross-Kircher, Schribristen, 45 f., 48 (written in Vadensa), 49–51; 39, Kircher, Scripts. Got. Art., plates 69a, 6b.}
\][\textsuperscript{126} J. Kircher, in Cross-Kircher, Schribristen, 19 ff and reprods 31–44; Mazal, Česk, 42 f., and reprods 24–32.\textsuperscript{\textsuperscript{\textsuperscript{\textsuperscript{\textsuperscript{127} P. Spurne, ‘Genese české bastardy a její vztah k českým previšnikum’, Česky filologický 3 (1928), 45 (1925) 44–51 with reprods; idem, ‘L’évolution et la fonction de la bâtonne en Bohême et en Pologne’, Studia et studio omnium 6 (1961) 1–10 with reprods; P. Prášek, ‘Povod české bastardy’, Studie a rukopisy 20 (1960) 93–118; Fr. Mazák, Die schöne Schrift in der Entwicklung des lateinischen Alphabets 1 (Hana 1965) plates 104–10; A. Gyertyan, Zcerés drógaír pomás Láziókép (Veszprém 1970) plates 27 and 29; Wf. Semkovics, Palaeographia Laciática (Kecskemét 1923); reproductions 123, 134–135; Katal. des. His. Österreich 4, reproductions 620, 297, 128; J. Schöpfel, Homer Traktat ‘Orthographia Bohemica’ (Wiesen 1968).\textsuperscript{\textsuperscript{\textsuperscript{\textsuperscript{\textsuperscript{128} See below p. 148.\textsuperscript{\textsuperscript{\textsuperscript{\textsuperscript{\textsuperscript{129} See the remarkable artificial bastard used by a nun at Ulm in 1496; Cross-Kircher, Schribristen, repord. 36.\textsuperscript{\textsuperscript{\textsuperscript{\textsuperscript{\textsuperscript{130} Ein mittelalterliche Formular (Nürnberg 1553), repr. Munich-Pulchach 1967) 131 IV.\textsuperscript{\textsuperscript{\textsuperscript{\textsuperscript{\textsuperscript{131} 10 Humanistic script preserved from roughly 1400 on from Germany and France;\textsuperscript{132} for example, that of Johannes Hagen from Lower Saxony contains, besides four kinds of textura, ‘notula simplex’, ‘notula acuta’, ‘notula fracturaturum’, ‘notula conclavata’, another kind of notula, ‘separatus’, ‘bastardus’, and a transitional script.\textsuperscript{133} The Augsburg Benedictine Leonhard Wagner, who dedicated to Maximilian a collection of one-hundred old, contemporary, and fantastically varied script samples with in part equally fanciful names, surpassed all the writing-masters of his time.\textsuperscript{134}

10. Humanistic script

When, at the very end of the fourteenth century, Coluccio Salutati and, with a wider audience, Poggio Bracciolini inaugurated a new era in the history of writing with the imitation of early medieval minuscule, a stimulus that went back to Petrarch brought forth its first fruits.\textsuperscript{135} Petrarch’s numerous autographs, which show sometimes a chancery script and sometimes a business hand, partly a gothic bookhand, and especially frequently its lower grade, a glossing script, display a striving after loosening and naturalness in the script that frees it from the bold gothic.\textsuperscript{136} He himself expressed his displeasure with the "litterar"
10 Humanistic script

modified by individual scribes with regard to special types that stood somewhat outside the run of early medieval minuscule. Hence the script of Grijaco of Ancona, meritorious as a collector of inscriptions, is overloaded with forms that were based on early medieval ligatures and abbreviations, on the majuscule of inscriptions, and even on Greek; and Giovanni Pontano — scribe of the Wolkenburg Tiberius and of the Leyden Tacitus — following a benedensian model, occasionally used in his easy, elegant script high, tightly-belted c, f, r, passing under the line, and several ligatures. Other scribes who held fast to rotunda forms partially adopted humanistic habits, so that mixtures of all levels came into existence (gotico-antiqua). In the end the humanistic antiqua, perfected by important calligraphers like Giovanni Aretino, who was active already before 1410, together with the humanistic cursive conquered practically the whole of Italian book production, with the exception of the liturgical and legal domains.

The humanistic cursive is the personal contribution with which Niccolo Niccoli (1437), Poggio’s friend and a participant in his discoveries, enriched the reform of script. Just a few years after Poggio’s decision to make the switch, Niccoli too was in possession of a humanistic script. But by 1423 at the latest (when almost sixty years old) he went over to writing the humanistic reformed alphabet in a fashion of his slanted Italian cursive, with a thin cursive ductus in paper manuscripts. This script too found favour in humanistic circles and was preferred by some, such as Pomponio Leto. The slanted script was written as a finely tuned series of elegant individual letters by the Paduan native Bartolomeo Sanvito, a member of Leto’s Roman circle, and in this form it became available for book printing. The Venetian printer Aldus Manutius introduced it in 1501, decades after the humanistic had become the model for the antiqua letters.


8 M. Ilhm, Palaeographia Latina 1, repro. 20; Ulmann, Pontano’s handwriting and the Italian manuscript of Tacitus and Statius, J. d. d. B. u. d. b. 2 (1939) 328 ff. with repro.


11 J. Wardrop, The Script of Humanism, 12 ff. and plate 15; Ehrle-Liebaut, Specimen, plate 50.

12 Wardrop, 19-33 and plates 10-38.

13 Through the introduction of humanistic cursive more gothic cursive scripts were transformed in a process which was slow, and not exempt from setbacks. Florence led the way, and after the Council of Florence the script of the papal secretariat fell under humanistic influence, as evidenced by the briefs written in the new script. Cf. P. Herde, Die Schriften der Florentiner Behörden in der Frührenaissance (ca. 1420-1460), Archiv f. Dipl. 17 (1973) 302-35; Th. Frenz, ‘Das Eindringen humanistischer Schriftformen’, ibid. 16 (1973) 267-418 and 20 (1976) 384-400.

8.11 Latin handwriting in the Middle Ages

scholasticus, just as on the other hand he expressed in programmatic words his hopes for worther, simpler, more acceptable and clearer script. Features of his personal script reappear in the hands of Boccaccio and Salutati. Salutati (1406) was used to chancery script and a ‘half-gothic’ bookhand, some of whose forms he changed somewhat in the course of the years. He was familiar with their script from early medieval codices, of which he possessed a large number, and it was probably shortly after 1400, while completing an older manuscript of Pliny’s letters, that he reintroduced the long final z and the lost ligatures æ and æ, as well as æ, and with this experiment the history of humanistic script begins.

Somewhere between 1400 and 1402 Salutati’s pupil Poggio Bracciolini copied the first manuscript modelled on a script from roughly the tenth or eleventh century, somewhat stiff, but with a homogeneous ductus. The bits are abandoned, round a and round s (which the last within the line) are banished, the ligature æ is taken up anew, and the æ ligature is partially restored. Poggio was secretary in various posts, longest of all in the service of the papal curia, and as such he wrote a more formal or cursive traditional chancery script; in this script he also produced the first transcripts of antique texts newly discovered by him. But alongside this his humanistic script achieved greater freedom and harmony, and in his Roman period he himself instructed assistants in this new style of script. Among the Italian circles that were open to the humanistic ideal this script became an expression of the new intellectual tendency.

For display script with the humanistica the capitals was mostly used, modelled on antique inscriptions, and this acquired its final form c. 1454 through Mantegna. But in some humanistic circles, in crude contradiction of the classical ideal, a majuscule much given to variation found favour which in part followed Greek examples and had adopted double-bellied E, H with a drooping middle stroke, and M in the form of a broad H with a T-shaped crossbar. As a result of early humanistic currents this script also won great favour in Germany amongst scribes, painters, and stonemasons.

Though devised as an imitation of earlier hands, the humanistic script was
Latin handwriting in the Middle Ages

At different dates in different regions, the new scripts became known and were copied outside Italy, the antiqua first of all. At the councils of Constance and Basle, which brought the non-Italian participants into contact with humanists like Poggio, it appears that only isolated humanistic initiatives were adopted.18 Greater perhaps was the influence exercised by Leone Sylvis, one of the apostles of humanism at the court of Vienna. However, Petrus of Rosenheim, later prior of Melk, who went to Subiaco in order to familiarise himself with the religious reforms there, returned with the new script as early as 1418,19 and this was even more the case with the numerous German students who were fascinated by classical studies in Italy and who assimilated their script more or less to the antiqua, for example, the great book collector Hartmann Schedel,20 and Hieronymus Rotenpeck.21 Others remained in Italy and earned their living as scribes of the antiqua.22 In the imperial chancery the humanistic script came into occasional use under Frederick III and Maximilian.23 Gothic-humanistic mixed scripts also penetrated into Germany and took the place of the bastarda. In the case of the German professional scribe Molitor one can observe how the humanistic taste shows increasingly in his script.24

Poggio spent the years 1419–22 in England, though the script initiated by him seems to have attracted attention there for the first time probably somewhat later, thanks to the humanistic inclinations of Duke Humphrey of Gloucester (1390–1447), the ‘protector’ of Oxford University. Books were written for him in this script in Italy and England. Then members of the Oxford and Cambridge universities brought back the humanistic script and manuscripts after their years of study in Italy.25

In France one of the earliest possessors of humanistic manuscripts was Zanone da Castiglione, bishop of Liesieux (1422–32) and of Bayeux (1432–39).

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17 Chronos, Monumenta I 14, plate 1.
18 Ibid., plate 10. 8. Ce auroba Latin and German scripts of the Zürich doctor Konrad Tursi, in Bischoff, Paläographia, col. 440 f., repro. q/10 (appendix, col. 71 f).
20 There are imperial charters in reproductions 22, 26, 28, 30, cf. also Chronos, Monumenta I 12, plates 8 and 13, plate 1.
1. **Abbreviations (Forms and methods of abbreviation in the high and later middle ages)**

Latin scribal practice employed abbreviations extensively. Amongst the Romans already in pre-Christian times first names, diurnal signs in calendars, and numerous formulae from official business and especially legal language were abbreviated in inscriptions and otherwise by 'litterae singulares', as well as the syllables -bus and -que; the grammarian M. Valerius Probus (first century AD) collected and explained these symbols. In the period after Probus, at any rate when Roman tachygraphy was already in use, new abbreviations were fashioned for use in normal script: above all for particles, relative and demonstrative pronouns which could be used for general requirements, and in addition to that very many abbreviations of legal terms. Late antique legal manuscripts of the fourth and fifth centuries such as the Verona Gaius, the fragment of the Formula Fabiana, and the Fragmenta Vaticana show their use.

In these manuscripts the abbreviations consist either of groups of several (usually two) elements — in general the first letters of syllables — or words after which the others are left out (by 'suspension'). In contrast, short or frequent words, final syllables, and also some legal terms are abbreviated by means of various signs or suprascription letters. In a few technical terms the final syllables too could be attached. Abbreviation was indicated mostly by a stroke above, in part also by a crossbar. Examples of simple suspensions are: m', p', t' (=miss, pot or post, -tur); examples of 'yllabic' suspensions: ἵ, ἵ (hered, heredum); examples of superscription: ἰ, ἴ (modus, pri-,

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1 For what follows see Cenclitti, Lineamenti, 353 ff; idem, Compendio, 89 ff.
4 CLA, V. 480 VIII 1940: 145, 4, a collection in Stellem, Latiniische Palaeographie, xxxiv. CLG also shows.

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7 Lists in W. M. Lindsay in Zentralbl. f. Bühnebibliographien 29 (1913) 57, and idem, Notae Latinae, viii.

8 On these abbreviations cf. Cenclitti, Lineamenta, 357 ff; Wenger, Quellen des römischen Rechts, 114 ff. 9 Cl.A 111: 224; Erf. lit., plate 36.
10 Lewis, Palaeographical Papers I, 100 and 266 ff in Tralles, Nomina Sacra, 241 asserts that they were adopted at the same time as the Nomina Sacra. The mark of abbreviation for M or N was later often differentiated in various ways by the addition of a dot above or below the stroke (or two dots below).
A second tradition of Latin abbreviation technique takes its origin from Christian 'nomina sacra', the abbreviations of terms central to Christian worship: deus, Jesus, Christus, spiritus, dominus (noster), sanctus. With the beginning of the transmission of Latin manuscripts of Christian texts, above all the bible, there appear in the fourth century abbreviations by means of 'contraction' that comprise in each case the beginning and end of words for deus, Jesus, Christus, spiritus – the first and last with their Christian significance: DS, IHS, XPS, SPS; by changing in each case the last letter the casus obliqui could be expressed: DI, XPO, SPM, etc. Almost simultaneously DMS and DNS (dominus for Christus) appear. IHS and XPS are half-Greek, and in his last work, Nomina Sacra, Ludwig Traube showed that all five words were abbreviated on the model of Greek contractions; these belong to the group of fifteen bibilical or theological concepts and names (Dios, Israil, Jerusalem) which in Greek book practice were contracted (where otherwise the 'suspension' is used). Traube sought the origin of this majority of these abbreviations in the writing practice of helenistic Jews who at first, in order to express the inexpressible tetragram, had created the symbols SC and KC for their Greek versions of the Old Testament, and then added further ones. This theory cannot, however, be sustained after examination of much more extensive material than was available to Traube; nevertheless an initial motivation by means of the tetragram in Jewish-Christian circles (such as in Alexandria) does seem possible. In Latin there was a further step by which the formal connection with SPS called forth the important abbreviation SCS (instead of the 'syllabic suspension' SC) and Traube demonstrated how suspended N (noster) in connection with DMS, DMI or DNS, DNP (or Christus) could take on the forms NR, NT and NR, NRI. It was inevitable that, the more one receded from the period of pagan-Christian conflict, the more their originally sacral character should fade, so that the abbreviations that had become routine were occasionally used almost unthinkingly for profane things, and dts (for dominus or dominus) finally became general. From the fifth/sixth century at the latest new contractions came into being.

From state and ecclesiastical chancellies the necessity arose of coining abbreviations which would allow the names of benefactors, beneficaries, ecclisiastical officials (episcopus, presbyter, etc.) to be used in the manuscripts of conciliar decrees and councils. But omnopotens also (which stands close to the nomina sacra in concept) was already written in abbreviated form in the seventh century; like the hierarchical terms, it had taken on contracted forms already admitted, amongst them those that were eventually to become the final ones.

The Irish especially (and their pupils the Anglo-Saxons), who took over a selection of notae antiquae and who used several tachygraphic symbols, considerably extended the number of words which could be abbreviated by contraction long before the Carolingian period, in part already certainly in the seventh century, for forms of dico, habeo, nomen, omnis, amongst others, and for sacrum and populum. Arying from these beginnings, and under the influence of the Insular element, a broader development of the medieval contractive system came about; this does not begin on the continent, however, before the eighth century. While now glorios, gratia, misericordia and many other words had abbreviations created for them, they were contractions only, just as old suspensions like f (fratres) were replaced by contractions (Frs.). The obviousness of their resolution, which was the characteristic of the ubiquitous model of the nomina sacra, led to this result.

In their use of the abbreviations the great script regions, the Insular, Visigothic, and Italo-Frankish, developed differing traditions in the early middle ages, and within these again smaller units and even some individual sciptoria clung to peculiarities. The full Irish system, particularly consistent and effective. The Anglo-Saxon is distinguished from it by the use of a smaller number of abbreviations and several peculiar forms (such as t with cross-stroke through the bar for -tar, alongside -v). It is characteristic of Visigothic abbreviations that these consonants are more regularly, even exclusively 'retained' ("bebraising writing"). A few examples of the variety of the systems are: autem: 'at' or at (Ins.), atim (Span.), at or ait (the rest); nomen: nis (Ir., genitive ninesis), etc.


nmm (Span.), nnn (the rest); propte: pro and per combined (I.), pptr (Span.), pp and others (the rest).

Thus the abbreviations, like the orthography, complete the distinctiveness of the manuscripts, and where they appear outside of their normal areas of use they can be eloquent symptoms of preceding phases in the transmission. 24

The Carolingian reform had a unifying effect here also; wherever the Carolingian minuscule extended there were hardly any differences. Around the new abbreviation = ur was created, which then quickly spread. It now depended on the dignity of the manuscript to what extent abbreviation could be used. It is found most thoroughly in the school manuscripts where, in the age of flourishing dialectic and intensive grammatical studies (ninths to twelfth centuries) a supply of abbreviations and their usage was established. 23 In contrast with this, however, they are often entirely absent in ostentatious manuscripts, with the exception of nomina sacra. Under learned influence probably propagated by the Irish a ‘Greek’ writing of nomina sacra gained ground. It was not restricted to HIC, XPC and the short form k, but passed over as well (without any justification) to ssp = spiritus, ssp = tempus, ssp = epicopous (instead of epis), ompp = omnipotens. There are also gradually developed the s for er, rc, and r and from the various forms of the abbreviation stroke.

The rapid expansion of the specialist disciplines, whose teaching methods were newly organised in the universities around 1200, in a very short time changed the writing of scientific books through the creation of new abbreviations and symbols for words and terms of frequent occurrence, through greater utilisation of the grammatical structure and of Latin word formation, and through frequent use of superscript final syllables. 24 The versatility of the abbreviation system was increased; if earlier the scribe had, on the whole, a set, easily learnable supply, now he was given the means of forming abbreviations for himself. 22 The acoustic element stands out more clearly, especially in the abbreviation of m, n, and r, and in the words with a.

Among the possibilities available in the late-medieval cursive was that the abbreviation sign already in the thirteenth century was written with a joining stroke starting from the respective letter, and likewise the general abbreviation

28 Chouot, Monum., 1, p. 32 (the register of Albert Heulan 1246/7).
30 Only in the Abruzzi from St Gall, one of the earliest texts, are the German words copied with a larger range, using nda, nder, -nder, -nder, -nnder, -nder.
31 Cf. e.g. ‘Plou und Illancodid’ (Koenenich, Billerdaenus, 10).
32 Pofen-Glauning, Deutsche Schriften, plates 37 and 46.
34 Dekking, Schrif, plate 84 (similier amongst others).
35 E.g. Chouot, Monum., 1, p. 32 from 1435.
Forms and methods of abbreviation s. XII-XV

Central- and late-medieval abbreviations too can be divided into syllabic abbreviations (formed by dropping or doing away with letters), suspensions, contractions, and abbreviations using special signs. In legal and canonistic manuscripts the names of glossators or commentators (bul.: Bulgarus; pi. or py.: Pillius; y.: Irrerius, to list just a few) are given usually in the form of suspensions.

Names ending in -en(sis) and -an(us) are suspended in the same way in all cases, for example Frisingent. Contractions whose endings stand on the line and which are mostly indicated by strokes above (superscript) can, through inflexion of the ending, follow the declensions and comparative cases. The number of more frequently used forms for these contractions is relatively limited, but they can occur nevertheless in various different forms (which are separated in the following table section V by |), for example: ecclesia, elmosina. The same abbreviations can have different meanings, depending on the context and the subject matter; for example: declinatio, or declaratio. Much freer and more arbitrary are the possibilities provided by superscription of the endings; cp. section VI. If an abbreviated word contains the symbols for more than one abbreviate separately, in accordance with the

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1 Abbreviations

appropriate methods; for example ivittht.: i(n)(com)-v(er)th(i)(iter), Æno[6], c(quin)nox(a)bis(bis), rocin[6]: r(ac)ocina(c)i(nc)i(ne)em.

The accompanying survey, which attempts to bring together and to order the most important examples, is divided in the following way: section I, frequently used letter metamorphoses; section II, abbreviations of syllables and letters on the line: (a) general, (b) longer endings, (c) other abbreviations within words; section III, abbreviation of syllables by superscription of letters; section IV, common abbreviations of particles, pronouns, conjunctions, prepositions; section V, a selection of contractions on the line; section VI, abbreviation by superscription of endings; section VII, sigla and appendix.

I. In abbreviations, -en is often indicated by a sign in the form of a three, and superscript open-a by a broad horizontal stroke peaking in two places.

- m: -en, -enr (animal)m, -cione(m); cf. IV a) b)
- a: -enl, -enl (marca; cf. also V end

II. Abbreviations of syllables and letters indicated by a tilde or a straight horizontal line (abbreviations not expanded)

(a) General

- e(-): ë, ëræht, ëræhf, mëa, mëo (cf. Na), -ë, (-ëo), (-ëo)
- em(-): eon, gënt, ënt
- en(-): ënt, ënt
- er, -er: -er, -er
- et, -ent: dehi, dehi, madë (cf. Na)
- is(-): Ënt, Ënt, Ënt, Ënt, Ënt
- ïer, -er(-), (-er), (-er), (-er): mënt, Ënt, Ënt, Ënt, Ënt, Ënt, Ënt
- ënt, ënt, ënt, ënt, ënt, ënt, ënt, ënt
- m(-): mënt, -ë, -ë
- n(-): Ë, Ënt, Ënt, Ënt, Ënt, Ënt, Ënt, Ënt
- ënt, ënt, ënt, ënt, ënt, Ënt, Ënt, Ënt
- ënt, ënt, Ënt, Ënt, Ënt, Ënt, Ënt, Ënt
- ënt, Ënt, Ënt, Ënt, Ënt, Ënt, Ënt, Ënt
- ënt, Ënt, Ënt, Ënt, Ënt, Ënt, Ënt, Ënt

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- un: Œ
- ur: Æ
- us: ò, ß

(-) con-, (-) com-, (co-, -cun-, cum): Ædō, Ædul,

gmunīn, Ægumnī, Ægudul, Æ

(b) Longer endings

- iter, - biliter: untrī, notabtr (cf. sttr)
- iter: legō, liberōbā, coltr (cf. V dēr, Ær)
- Æio (-cio): Ætā, Æo (om-Æois, (Acc)-Æoem/-Æom/-Æō

- Ævus, - Æv: relatīs, - Æav, - Æm

(c) Other abbreviations within words

Vowels next to 1 (-œ, -uo, -avo):

flagōtī, duptrī; Ætpa, mtrā/mtrā(!); octī

Two adjoining syllables with -i-

-[mi] prosī, stīr, [-ni] remīścūmī, Æī, [-min-] hōūs,

lūi, Æi, [-ni] Æidūmus, Æinīrū

Two adjoining syllables with -o-

-[no-] Ħōrem (cf. IV mó, V nó)

- e- (before n): unēnūtī (cf. V ōnūs, dōndēf)

A second stroke usually adds an -m (and therefore indicates the accusative)

ēa (causā), ēa; Óc (matronē), Òcē; Òq (quaē), Òq (quādēm)

Compare however section V under 'verbium'

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1 Abbreviations

III. Syllabic abbreviations by means of suprascript letters (abbreviations not expanded)

(e): ņ, p'catum, afp'tuō
(i): f'y (cf. Mī), amīnīō
(u): Æ etc. (cf. Mī Ædō), c'i, alitē
(n): cōngtuō, cōngīō
(r): [r-ri-] membō, Ænīf, suptō (cf. IV c'tī)

[ri-] demōtuō, paō, Ægudūs, [r-ri-] ŕuv, Ætvō, Æculūs, Æmūrus, [r-ri-] cōngtūm

(uv): Ætr (equaliter), Ætv (=equoave)

(c, g, m, n, r, t, w, Í) Æs (probatūm); Æνtī,

nērūs, Ægo, stōcī; Ætūs; hōr, Ætīf, m̥rī

IV. Abbreviations of pronouns and particles in constant use

(a) ă/âē autem  ĕ/ě ē ĭtrū

ā, āē aliud, alio ĕ (cf. VI) ergō

ād aliquid ĥ hēc

ān ante ĥ hēc

āpō apud ĥē hāc

āÆ/âū aut ĥē/hē hēc

bē bene ĥē hēc

ē/(g) cum ĥē huiusmodi

ē circa ˇ ītá, infra

ē contra tē ˇ ibi

ē est (cf. VII) īn inde

ēē/ēē/ēē esse (cf. VII) īō ıdeo

cē cnim (cf. IVb) īpe, īpūf īpē, īrūs

exē extra ē iem
B.III. Supplement

1 Abbreviations

- vel
- magis
- quam
- quasi
- qualiter
- quid
- quoniam
- quantum
- quomodo
- quoque
- quot
- quatenus
- respectu
- secundum
- sed (cf. 1Vb)
- supra
- satis
- sub
- sibi
- sive
- tibi
- tantum
- tamen
- unde
- utrum
- oportet
- patet
- videntur
- valet
- quodlibet
- quasi, qu. dicat
- scilicet
- hoc modo
- illo modo
- ut patet
- factus, satisfaciō, affectus
- lectus, deflectibilis, intellectus
- recta
- relieta
- dictus
- accidens
- accusativus
- anima
### Abbreviations

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<thead>
<tr>
<th>Abbreviation</th>
<th>Meaning</th>
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<td>materia</td>
<td>(cf. IIa)</td>
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<tr>
<td>magister</td>
<td></td>
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<tr>
<td>misericordia</td>
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<tr>
<td>minima</td>
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<tr>
<td>matrimonium</td>
<td></td>
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<tr>
<td>mater, marry</td>
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<td>necessitas 1</td>
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<td>necessaria 1</td>
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<td>ostensorum</td>
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<td>oratio</td>
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<td>patientia</td>
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<td>peccatum</td>
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<td>plures</td>
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<td>positio</td>
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<td>pater</td>
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<td>praestare</td>
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<td>privatio</td>
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<td>potestate</td>
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<tr>
<td>quaestio, -nem, quae</td>
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<tr>
<td>ratio, -nis, -nem (cf. VI)</td>
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<tr>
<td>respondere, respondens</td>
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<td>substantia (cf. VI)</td>
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<tr>
<td>species, specialiter</td>
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<td>spiritus, spiritualiter</td>
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<td>sensus</td>
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<td>suggestiones</td>
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<tr>
<td>verbum, -a</td>
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<td>universalis</td>
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### Supplement

<table>
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<tr>
<th>Syllable</th>
<th>Meaning</th>
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<tbody>
<tr>
<td>ðōs</td>
<td>antecedens</td>
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<td>ðō</td>
<td>actio</td>
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<td>ðōī/ ðū</td>
<td>beati</td>
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<tr>
<td>ðō, ðōtus</td>
<td>causa, causatus</td>
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<tr>
<td>ðōalis</td>
<td>casualis</td>
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<tr>
<td>ðōis</td>
<td>communis</td>
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<tr>
<td>ðōmptō</td>
<td>complexio</td>
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<tr>
<td>ðōcupitā</td>
<td>concupiscientia</td>
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<tr>
<td>ðōnentia</td>
<td>convenientia</td>
</tr>
<tr>
<td>ðōlūd, ðōnūs</td>
<td>differentia (cf. VI), differens</td>
</tr>
<tr>
<td>ðōlo</td>
<td>diffinitio</td>
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<tr>
<td>ðōdescendens</td>
<td>descendens</td>
</tr>
<tr>
<td>ðōictūr, ðōicendum</td>
<td>diversus</td>
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<td>ðōeccele, ðōécce</td>
<td>ecclesie</td>
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<td>ðōta</td>
<td>elementa</td>
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<td>ðōta, ðōta</td>
<td>elmosina</td>
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<td>ðōctum</td>
<td>electuarium</td>
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<tr>
<td>ðōnxns</td>
<td>existens</td>
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<tr>
<td>ðōea</td>
<td>feminah</td>
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<td>ðōs</td>
<td>falsa, fallacia, fleuma</td>
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<tr>
<td>ðōr</td>
<td>frater, feria</td>
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<tr>
<td>ðōs</td>
<td>gloria</td>
</tr>
<tr>
<td>ðōs</td>
<td>gratia</td>
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<td>ðōo</td>
<td>homo</td>
</tr>
<tr>
<td>ðōrdes</td>
<td>heredes</td>
</tr>
<tr>
<td>ðōt, ðōns, ðōt, ðōfe, ðōfe</td>
<td>habitat, habundat, inhibicio</td>
</tr>
</tbody>
</table>
Further contractions with special signs

\( \text{(*)} \) \( \bar{\text{g}}\tilde{\text{n}} \) generatio

\( \text{m} \tilde{\text{r}} \text{e} \text{t} \), \( \text{d} \tilde{\text{e}} \text{r} \) monestrare, demonstrari

\( \text{n} \tilde{\text{i}} \text{i} \) numeri

\( \text{(*)}* \) \( \tilde{\text{f}} \) fieri

\( \text{g} \tilde{\text{i}} \) \( \text{a} \) genera

\( \text{i} \text{t} \text{m} \) iterum

\( \text{n} \tilde{\text{u}} \text{f} \) numerus

\( \text{\text{c}d} \text{u} \text{f} \), \( \text{t} \text{m} \), \( \text{d} \text{e} \text{t} \text{i} \text{a} \text{r} \) terminus, - um, determinare

\( \text{(*)}\) \( \text{n} \tilde{\text{a}} \) natura (cf. VI)

\( \text{n} \tilde{\text{a}} \), \( \text{n} \tilde{\text{u}} \) numerus, -i

\( \text{\&} \) videtur

VI. Contractions with superscript endings

The principal, already applied in the early middle ages, of omitting the middle of the word before the superscript ending, as in mili, quae etc. (this includes the signs for -us and -ur), acquired great practical significance in the scholastic period. Almost all the typical word-endings for nouns, adjectives and verbs, as well as those formed by inflection or derivation could be written superscript. The preceding part of the word was often, (though by no means always) shortened in such a way that one precise expansion is possible:

expertissimae - expertissimae, ignotissimae - ignotissimae (expertissimus, ignotissimus would be impossible). The expansion of these abbreviations was facilitated by the fact that some ways of abbreviating words according to this method were preferred over others, especially for words in frequent use. It is according to this preferred practice that the following list has been compiled. It is set out in the following manner: the superscript endings (the basic forms and where necessary the oblique cases); examples of these; the preferred abbreviated endings according to this method; expansion of the examples.

Nouns

\( (-\tilde{\text{f}} / -\text{m}, -\tilde{\text{m}} / -\text{m}, -\tilde{\text{m}} / -\text{m}, -\tilde{\text{m}} / -\text{s}, -\tilde{\text{m}} / -\text{m}) \):

(1) \( \tilde{\text{a}} \text{i} \), \( \tilde{\text{a}} \text{i} \text{m} \) (cf. IV); \( \tilde{\text{v}} \), \( \tilde{\text{v}} \text{m} \) (cf. IV); \( \tilde{\text{v}} \text{t} \);

(2) \( \text{\&} \text{a} \text{\&} \text{\&} \), \( \text{\&} \text{\&} \), \( \text{\&} / -\text{\&} \), \( \text{\&} \text{\&} \), \( \text{\&} \text{\&} \), \( \text{\&} \text{\&} \), \( \text{\&} \text{\&} \), \( \text{\&} \text{\&} \)
B.III. Supplement

-iae: supersee

Adjectives

-⁹, -⁴, -⁴m: bo⁹; merito⁹; ma⁹⁹
-us, -a, -am: bonus; meritória; manifestum (also: maximum)
-⁶⁹, -⁶⁹, -⁶⁹um: be⁶⁹t/i⁶⁹t, ca⁶⁹t; dy⁶⁹t; gra⁶⁹t
-icus, -icis, -vocis: beatifica; canonica (also: categorica);
dyabolicus (also: dyavolicus); grammatici

-⁶⁹⁹/-⁹, -⁶⁹⁹/-⁹, -⁶⁹⁹m: sen⁶⁹⁹t
-civus, -civus: sensitiva

-⁵⁹/-⁴, -⁵⁹/-⁴ (-⁵⁹): art⁵⁹t; ca⁵⁹t; capitolus; p⁵⁹t
-lias, -alis, -abilis, -ibilis: artificialibus; carnale; corporalis; possible

-⁶t: præt
-ris: particularis

-⁶⁶⁶/-⁶⁶⁶, -⁶⁶⁶: ce⁶⁶⁶t
-tis, -te: celeste

-⁵: s⁵⁵
-x: simplex

Adverbs

-⁷: dum⁷⁷⁷⁷⁷
-e: contradictorie

-⁸⁷: é⁸⁷
-ice, -icie, -vocie: equivocé

-⁸⁸: ime⁸⁸t
-ate: immediate

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Symbols

\[=, =?-\]
\[\div/3/\]
\[\text{esse (cf. IVa), esset, essentia}
\[\text{est (cf. IVa)}
\[\text{instans, instantaia}
\[\text{maior, minor}
\[\text{digesta}
\]

Appendix

Aristoteles
Boethius
Crisostomus (Chrysost.)
Gregorius
Iohannes
Ieronimus (Hieronymus)
Lucas
Libro
Marcus
Matthaeus
pecia 4
philosophus
Perihermenias
papa, pape
psalm
rubrica, responsorium
sanctus
Sortes
Iopcrias (Hippocrates)
yconomice (oecon.)
Christus, -i, Christiane

2 Punctuation and related matters

The linguistic organisation of a text in Roman antiquity basically followed the requirements of something that was to be read aloud.\(^40\) As a result, punctuation was expressed in rhetorical units and pauses much more than today, where syntactic division of the sentences is the rule. The means of indicating the rhetorical units varied. The continuous text could be interrupted by spaces of anything from one-half to five letters in length. A second method, writing per cola et commata,\(^41\) each unit being written on a new line (which is perhaps still preserved in some Carolingian Cicero manuscripts), acquired great importance from the fact that Jerome divided up the text of his Vulgate Bible in that way, to facilitate reading in divine service. Many of the oldest manuscripts have retained this division.

Finally the ancient grammarians up to Isidore of Seville – whom numerous medieval authors follow – have left clear and simple instructions for the use of the actual marks: low point (comma) for the short pause; medial point (colon) for the middle pause; high point (periodus) for the end of the sentence.\(^42\) Instead of the clear ancient triad, however, in the early middle ages a large number of combinations of points and virgulas were created and used in bewildering multiplicity. In Carolingian times, and, were preferred for the short pause, and, or, for the long one. A number of schools (for example Regensburg, Freising, and western ones like St Amund) pass over to a simplified Isidorian system in the tenth century: lower point for the short pause, high point for the long one; and this is also the prevailing usage in sumptuous liturgical manuscripts of the tenth and eleventh centuries.

The system was extended by the addition of the question mark. Since its first appearance, seemingly in manuscripts in Maurdrumius minuscule and of the Carolingian palace school, this had the clear form of a curving or broken zig-zag sign with musical value. The shapes that it takes are very different from the ninth to the twelfth century; often, however, they agree overall with the contemporary form of the neum Quisima, which medieval music theoreticians describe as a

40 R.W. Müller, Rhetorische und syntaktische Interpretation (Diss. Tübingen 1964); numerous examples are here given from the oldest MSS (for which see J. Moreau-Marchal in Scripturum 22 (1968) 56 ff.); E. Otto Wünsch, Latin punctuations in the Classical Age (The Hague 1972). A scribal habit (found also in inscriptions) in the first and second centuries AD in literary texts is the placing of a point after every word, but this is not punctuation in the strict sense.

41 Müller, 48 ff., 70 ff., 181. For the correction of texts written per cola et commata see R. Weber in Scripturum 6 (1955) 57-60.

Supplement

'quavering and rising tone connective', which emphasizes its function as a musical sign.

A distinctive usage developed in the area of the Beneventan script in which a question mark is at first absent at the end of a sentence: the interrogatory character is indicated by a sign similar to a 2 that stands above the interrogative word, in predicate clauses over the words that are decisive for the accent of the sentence. A differentiation according to the category of the interrogatory sentence is also observed by Visigothic writers: they use a circumflex above the last word in a nominal question to contrast with the general question mark. Both Beneventan and Visigothic book production were familiar also with a sign for an assertion: it was similar to a spiritus asper or a circle with a point within it; both are placed above the word in question.

\[
\begin{array}{cccccccccc}
1 & 2 & 3 & 4 & 5 & 6 & 7 & 8 & 9 & 10 \\
\end{array}
\]

31. Forms of the question mark.


From the eleventh century to the end of the middle ages there is an important innovation that can be observed at the latest by the end of the eleventh century in western France (Angers): a weak or middle punctuation consisting of a circumflex or a elvis (later a small suprascript ' or similar) – these are the punctus elevatus, or the punctus circumflexus/flexa. Rapidly diffused, the expanded system (arranged in ascending order . . . or . . . . . ) was taken over by the Cistercian order for books that were read in the refectory; it is an important aid in identifying Cistercian manuscripts of the twelfth and thirteenth centuries. The Dominicans too adopted it for the liturgy. In the later middle ages the system is encountered also (with the partial addition of; or) among the Carthusians, from whom the Devotia mediae took it over. Hence it is used, for example, by


44 Loewe, ibid., 270 ff. ('assertion sign?'). Milaños Carlos, Tratado 2, 284 ('signo de admiración').

45 J. Veïn, Les signes d'interrogation au XIe siècle (Paris 1973) 51 ff.; Ker, English MSS, 49 ff. In England there is also a sign of the same value placed on the line.

46 Cf. the texts printed by Ker, English MSS, 58 f.; Gumbert, Utrechter Kavâsâr, 106 ff.; Hubert, 'Corpus stigmaticum', 191 f.

Punctuation and related matters

Thomas a Kempis, who, however, in Dutch texts used only the point. With the rise of humanism new rules of punctuation appear in Italy which the humanistically influenced translators Nicolaus of Wyle and Steinhövel, amongst others, tried to adapt to German in the same way. The exclamation mark appears first in the sixteenth century. In antique manuscripts accents stand over long syllables. In the middle ages accents sometimes indicate stressed, sometimes long syllables, and in addition to the acute accent the circumflex appears (chiefly above long syllables), in accordance with ancient teaching. The placing of the acute accent over monosyllables was introduced by the Insular scribes, isolating those syllables as a result, and this became the practice also on the continent. An insular usage also is the writing of the dat./abl. ending -is (and -is), which was apparently pronounced as a monosyllable as -is. At the latest in the early ninth century lie the beginnings of the OHG accent system. Developed by Notker, it became widely disseminated. Its purpose was twofold: partly to regulate stress, partly to preserve the vowel quantities.

Syllable separation by means of a single stroke at the end of a line first comes into use in the eleventh century, by means of a double stroke more generally from the fourteenth. The peculiar usage of Italian and French scribes of the late thirteenth to the fifteenth century, whereby they '[justified] the margins of a column by filling up, where necessary, empty spaces at line-ends with either an expaned or crossed stroke, goes back ultimately to a Hebrew scribal custom. Likewise the group ιc (= cetera) at the end of a text in the later middle ages is generally a mere meaningless closing sign, not an indication that a continuation has been dropped.

To indicate cancellation the underlining or marking by means of suprascript groups of points was more frequent in the case of words than crossing out, and suprascript or subscript points (or both) for individual letters. Otfrid made use of the latter kind in order to indicate graphically the elision of vowels in hiatus in
his verses.68 If in the later middle ages a longer passage had to be cancelled or no longer copied, the syllable ‘vex’ was written beside the beginning and ‘cat’ beside the end (i.e. ‘vacat’).

In order to supply omissions, symbols (†) or certain letters were inserted that originally had local meaning, and these lead from the position of the error in the text to its correction.67 These letters are partially characteristic of some schools (for example hl for Lorsch and Weißenburg). For the purpose of referring to other things, whether glosses or scholia, the Latin and Greek alphabets, runes (as in the Codex Bonifatianus)68 and tachygraphic signs were used, and new arbitrary ones created.69 Inversion is marked, for example, by letters (a c b) or strokes (\` – =) above the words, most frequently, however (and not always clearly), by prefixing signs (= \` amongst others). Of the various methods for indicating citations which connect antiquity and early medieval Latin book production with Greek book practice, a frequently occurring one is the indentation of text (in the oldest manuscripts by one to four letter spaces), without any sign. This usage, however, was abandoned in favour of marking in the margin with signs, first with the classical diple, later with other signs. Writing of the citations in red or in another kind of script can be added.60 Irish words in a Latin context are occasionally emphasised by distributing accents over them.61

Already in antiquity the division of a text into sections could be made clear by use of a horizontal stroke or right angle (\'). The chapter sign ¶ and the § are medieval transformations of the latter sign.62 For the syntactic understanding of school texts the Irish and Anglo-Saxons developed systems in which unobtrusive groups of points and strokes, above and below the line, were used.63 References to the text were, from the early middle ages, often given in the

3 Musical notation

margin by means of ‘nota’, from which many permutations of monograms were constructed,64 some of which can have the value of local symptoms;65 less frequent is ‘D.M.’ (‘dignum memoria’).

The principle of word-division was slowly recognised. In the first century, and also still in the second, points are placed after every word in Roman texts. Later the writing practice switches over to scriptura continua. The need to make the word units recognisable was probably first felt among the Celts and Germans, and the Insular scribes seem to have been the first to aim at that. In Carolingian times it is still generally the practice to draw prepositions and other short words towards the following word. From the twelfth century on the division is mostly quite clear.

Various regional types of neumes were formed in the early middle ages on the basic system, through varying expressions of form and ways of writing the elements and ligatures.64 The oldest are the palaeofrankish, attested only in a few monuments (‘Notation’ 1 and 3). The most important are the German (‘Not.’ 2).


67 Cf. the section on punctuation.

68 Reprod. Blaschke, Schroedelkunde 1, plate 6d; idem, Kataloggruppe Nr. 3; Musik in Geschichte und Gegenwart 9 (1961) 1525 f.

69 Petzet-Glauning, Deutsche Schriftzüge, plate 9.

70 To understand the varieties see the series of facsimiles edited by the Benedictines of Solothurn from 1968, Palaeographie musicale; comparative tables are in vol. 2 and 3 (19691); in addition see (J. Hourlier), La notation musicale des chantiers liturgiques latins (1963) cited above under ‘Notation’; P. Wagner, Numeinkbud 7 (Leipzig 1923). W. Wolfrom, Handbuch der Noteneinheit (Leipzig 1932); G. M. Smirsk, Introduction à la paléographie musicale grégoire (Turnhout 1935); earlier Català ed., Momentos 1925; Barbiellii, loc. cit., 215 f.; idem, Musik in Geschichte und Gegenwart 2 (1968) 1611–28; B. Stabilit, ‘Schriftform der einstimmigen Musik’, Musikgeschichte in Bildern 3 (Leipzig 1975); Solange Corbin, Die Neumen (vol. 1 f.f. in W. Arlt (ed.), Palaeographie der Musik (Cologne 1977).
within which the more differentiated St Gall type excels by virtue of the richness of its transmission from the tenth and eleventh centuries ("Not.‘4") and the Metz style, which spread from this old centre of ecclesiastical music and culture to Luxembourg, Belgium, northern France, and also south Germany ("Not.‘16, 17"); this shows a noteworthy disintegration into short corrugated separate strokes. In addition there is the Aquitanian style ("Not.‘9, 10") with its centre at St Martial, Limoges. The two latter styles are recognisable by the vertically superimposed writing of falling tone sequences. Other forms belong to Brittany, England, and northern France, Spain, and various parts of Italy.

The most serious disadvantage of the original neumes was that, though they roughly conveyed the movements of the melody, they did not preserve the exact intervals. Numerous ways were suggested for overcoming this difficulty. Hence various sequences of letters were used to indicate the tones, especially in theoretical literature, but also to write down the melodies, for example in the Lieder appended to the 'Minne Regel' of Eberhard Cersne. In a different way, the connection between melody and rhythm was conveyed with letters, which were written along with neumes; Notker the Stammerer informs us of these 'letterae Romanae' in one of his letters. A solution to the problem of establishing the intervals clearly in the neumes was first found by Guido of Arezzo (eleventh century, first half), after earlier unsuccessful attempts. He transposed the neumes on to a four-line system and also emphasised the c- and f-lines with different colours; through shifting these lines the range of the notes could be varied. The original flexible character of the neumes facilitated their adaptation to the line system. This practical discovery, which in principle still determines present-day musical notation, was taken over already in the twelfth century by German schools such as Reichenau. It was not until the fifteenth century, however, that it was established everywhere. St Gall clung particularly long to the lineless system which long since had declined into coarseness.

Palaeographically viewed, the chordal notation on lines developed in the later middle ages in two typical forms: the gothic, which prevailed in the greater part of Germany and in its eastern area of influence, and the romanesque 'roman' square note script. The former is a stylisation of neumes in the sense of gothic texture. The virga, the normal note for the single tone, was written bold and vertical and acquired a little flag; the bows are broken. A late phase is the 'hobnaill' script of the fifteenth and sixteenth centuries in which the virgae

proceeding to a point are provided with a small rhomboid head. The more complicated ligatures are often avoided entirely.

The square music script has its origins in the later twelfth century in northern France; its form is likewise determined by a gothic stylisation of the stroke-neumes: the emphasis is on the contrast between vertical hair-stroke and squarish block or emphatic point. Already in the thirteenth century this block or point is carefully drawn square with a broad quill. Thus the script arrived at that shape in which it became the dominant romanesque musical script of the late middle ages, extending also to England and the Scandinavian lands. It extended to Germany above all through the liturgical books of the Cistercians, Dominicans, and Franciscans. It is used there also on occasions for notation of secular melodies, for example in the sumptuous Jena song book.

The second deficiency of the neumes, which was shared by the chordal notation, was the insufficient expression of the rhythmical or metrical values that it allowed. It was only in connection with the theoretical clarification of the relationship between melody and rhythm in Latin and Romance poetry that Franco of Cologne, a music theoretician, c. 1260 developed, after earlier unsystematic attempts, a strictly regulated scale of note values from the duplex to the semi-brevis, as well as the pause symbols. However, ligatures and conjunctions, the imitations of the more complicated neume forms, were not at all excluded as a result. From around 1300 red music script is used alongside black for contrast in various situations, for example with a change of rhythm or to indicate the smaller values. For simplicity's sake 'white' symbols (i.e. with blank left inside) were later used for that purpose. Around the middle of the fifteenth century an exchange of 'black' and 'white', and vice versa, takes place, i.e. the larger (hitherto black) notes — bars, squares, lozenges — were now only written in their outlines, while the smallest (hitherto empty) lozenges were now filled in. The Lochner music book is one of the earliest examples of this kind.

The gradual perfection of the medieval chordal notation had a peculiar reflex on book production. With the clear indication of the intervals a reading of the melody was possible, instead of learning it by heart. This was the presupposition behind the tendency to enlarge church songbooks and their notation so that as
many as possible could use the one book. Thus the books from the thirteenth century on grow in size, and at the end of the middle ages we meet in large numbers the huge antiphonaries that suffice for a whole choir.

4. Numerals

The Roman number symbols do not differ from the corresponding letters in the older script, and they often retain these forms also within the later cursive (esp. D.I.V.). The same applies to the connection of VI similar to an uncial G and which originated as a ligature in the older cursive and survived until into the eighth century. Visigothic special forms are, for 40: X with a bow open upwards, or an angle on the right upper bough; for 1000: a large T in which the left half of the crossbar is drawn down towards the shaft. In early medieval manuscripts the numbers are set between points in order to stand out; in rare cases superscript strokes are added (without change of meaning). M is regularly written in majuscule (after the disappearance of the cursive form IO), and this is true also for the rest of the numerals in increasing measure. However, V in Caroline script is frequently written U; with ordinals (rarer with cardinals) the endings are very frequently written above. In the later middle ages XX and C are also set high (\(9\times 120\); \(1\times 300\), and so on), the former, however, probably only in Romance-speaking areas. Ancient fraction symbols are more studied than used in the middle ages. In the late-medieval period the cross-stroke of the last shaft, or even of V or X, indicates that the last unit is halved.

The Indian-Arabic signs that appear in the tenth century in west-Arabic shape in Latin manuscripts in Spain were used by Gerbert of Rheims for writing on cutting tokens, without the zero and without knowledge of its positional value. The West was made familiar with this first in the twelfth century through the translation of arabic manuals of arithmetic (‘Algorismus’, named after the mathematician Mohammed ibn Musa al-Khwarizmi). The oldest German examples are a Salzburg computus of 1143 and a Regensburg manuscript of 1163.

5. Ciphers

The middle ages had a peculiar, playful relationship with ciphers. They were used in many cases in which actual concealment was neither called for nor earnestly intended. German writing practice is especially rich in these. According to the short tract De inventione linigramarum (instead of litterarum), published by Melchior Goldast under the name of Habans Maurus, Boniface transmitted two systems of cipher in which the vowels a e i o u were expressed by points or by the immediately following consonants b f k p x; the latter system goes back to antiquity. English examples of the use of this cipher make the tradition plausible. In Germany from the ninth century on countless OHG glosses were written using both systems. Other ciphers use the numerals for the vowels or for the letters, depending on their position in the alphabet. A further source of secret scripts was foreign alphabets, as they occur in the above mentioned tract and, not infrequently, in other manuscript collections: runes (in later manuscripts often designated ‘Syrian’, ‘Arabic’, or ‘Saracen’), Greek, Hebrew, and the alphabet of the so-called Aethicus Ister. In addition there are freely

81 For what follows cf. W. Wattenbach, Anleitung zur lateinischen Paläographie (Leipzig 1886) 77-103; Steffleul, Lateinische Paläographie, xxxv f., xlv; Battelli, Lexicon, 218 f.; Fieseler, Arch. 242 ff.
82 Such forms in inscriptions imply that the masses had a draft (ordinario) written in later Roman cursive; cf. Mallin, Palaeographie romanica, 134 ff.
83 This survived into the twelfth century, Buckner, Scriptores 8, 32. For a possible misunderstanding cf. W. Levison, ‘Das Werden der Ursula-Legende’, Roman Jahrbücher 13 (1928) 39-42.
84 G.F. Hill, The Development of Arabic Numerals in Europe Exhibited in 64 Tables (Oxford 1923) 11.
86 Amudi-Tangl, Schriften, plate 26; Masse, Romance, Illust. 19.
87 Ibid., plate 23b. Cf. also Clm 23, 512 (Ecclesi, x, xii, from Wessobrunn).
composed symbol alphabets which may have served for personal use or as
ciphers. A favourite method, finally, is the inversion of the word or syllable.
The amalgamation of several methods is also found. Ciphers are employed in the
later middle ages above all in scribal subscriptions, receipts, and charms,
especially of a superstitious nature.

Additional note on abbreviations

The abbreviations ā and ē

Shortly before AD 800, alongside the ancient abbreviation ā (Æ agriculta), there appears a
variant form, ē between mid-raised points (ē), which is not mentioned by W.M.
Lindsay, Notae Latinae, 69 ff. or 405 ff.
The earliest example (Paris, BN, Lat. 1572, s. VIII; CLA V 530) comes from
Tours, where this abbreviation was already firmly established in Alcuin’s time. It
was disseminated from Tours to early St Denis, Cologne, Metz, St Amand, and
Fulda, but seems to be particularly closely linked in places of strong Alcuinian
tradition, whereas it was not adopted by such centres as Lorsch, Reichenau, or St
Gall. Its appearance in codices of s.IX can, therefore, be decisive as a criterion for
localising manuscripts in specific scriptoria.