Abbreviation argues Traube is the earliest method

CHAPTER VII.

ABBREVIATIONS AND CONTRACTIONS.

Greek.

ABBREVIATIONS and contractions[1] play an important part in Palæography. Two reasons in particular dispose men to curtail written words: (1) the desire to avoid the labour of writing over and over again words of frequent recurrence, which can as easily be understood in an abbreviated as in an extended form; and (2) the necessity of saving space.

From the earliest times there must have been a constant striving among individuals to relieve the toil of writing by shortening words. The author would soon construct a system of contraction of his own, and, especially if he were writing on a subject into which technical words would largely enter, his system would be adopted by other writers in the same field. In law deeds, in public and private accounts, in the various memoranda of the transactions of daily life, common and oft-repeated words must have been always subject to curtailment—at first at the caprice of individuals, but gradually on recognized systems intelligible to all.

The simplest form of abbreviation is that in which a single letter (or at most, two or three letters) represents a word. Thus, there is the ancient Greek system of indicating numerals by the first letter, as Π = *πέντε*, Δ = *δέκα*, H (aspirate) = *ἑκατόν*, and so on. On ancient coins, where available space was limited, we find the names of Greek cities indicated by the first two or three

[1] I use the word "abbreviation" for the shortening of a word by suppressing its termination; "contraction" for the shortening of a word by omitting letters from the body.

letters. Certain ordinary words also occur in inscriptions in shortened forms. The Roman usage of employing single letters to represent titles of rank is familiar to us from inscriptions, and has been handed down in the works of classical authors; the S.P.Q.R. of the great Republic will occur to the recollection of everyone. Such abbreviations by constant usage became a part of the written language.

The fullest development to which a system of abbreviation can attain is, of course, a perfected shorthand; but this is far too artificial for the ordinary business of life. Something between simple single-letter signs and complex tachygraphical symbols is required, and hence we find in the middle ages a good working system developed by Greek and Latin writers, which combined the advantages of both kinds of abbreviation. The letter system was extended, and certain tachygraphical symbols were taken over as representatives of entire words in common use or as convenient signs for prefixes and terminations.[2]

In tracing, then, the history of Greek and Latin abbreviations and contractions, as far as it can be ascertained from existing documents, we must be prepared to find in the systems of each certain elements which are of great antiquity. When we see in the case of mediæval minuscule Greek MSS. considerable differences in the system there in use from that which appears in uncial

[2] The art of reading contracted writing can necessarily only be acquired by those who have a knowledge of the languages in which the MSS. are written, and who will patiently persevere in their study. The beginner will find the first difficulty of mastering the elementary forms of contraction of the middle ages most easily overcome by transcribing passages *in extenso*. For Greek, MSS. in minuscule writing of the tenth, eleventh, and twelfth centuries; for Latin, charters of the thirteenth and fourteenth centuries, are the best subjects to begin with. As regards the latter, they are generally short, the contractions are numerous; but at the same time particular phrases and contractions continually recur. The student has thus the advantage of passing under his eye a great variety of handwriting and of comparing the forms which individual letters and contractions take in the several documents; while the recurrence of legal terms and phrases, which soon become familiar, gives him the key to correct reading.

MSS., we might be led to infer that it was a new invention; but a closer examination will prove that in its elements it is the same as that which was practised hundreds of years before, in the third century B.C. We may even carry our view still farther back. For, if in some of the earliest documents which have survived abbreviated forms are in existence, not made at random but following certain laws in their formation, we have sufficient ground for assuming that the practice of abbreviation was, even at that remote time, one of some antiquity, and that a long period must have passed for the development of a system intelligible to all readers. A still further, and even stronger, proof of the very ancient origin of this practice is afforded by the numerous symbols for particular words which are found in the earliest papyri.

There does not exist, however, sufficient material for the construction of a continuous history of Greek abbreviation between the two periods noted above, viz., the third century B.C. and the ninth century of our era, when the minuscule came into use as the literary hand. It will be therefore convenient, first of all, to consider the forms of abbreviation and contraction which are found in the uncial MSS. of the Scriptures and liturgies, which partially fill the gap of the vacant centuries. The earliest dates from the fourth century. In such MSS., which were, more than others, required for public reading, the rules followed are very simple, nor are the examples of abbreviation numerous. The omission of N at the end of a line is marked by a horizontal stroke, as ΟΙΚΟ⁻; a form common to all MSS. The middle of a word was omitted, the first and last letter (or at most one or two more) being given and surmounted by a horizontal stroke, as $\overline{\Theta C}$ = Θεός. Words so contracted were confined generally to sacred names and titles and words of frequent occurrence, and their inflections. They are (besides $\overline{\Theta C}$): $\overline{IC}$='Ιησοῦς, $\overline{XC}$=Χριστός, $\overline{YC}$=υἱός, $\overline{KC}$=κύριος, $\overline{\Pi\Pi}$ and $\overline{\Pi AP}$=πάτηρ, $\overline{MP}$=μήτηρ, $\overline{ANOC}$=ἄνθρωπος, $\overline{OYNOC}$=οὐρανός, $\overline{\Theta KOC}$=θεοτόκος, $\overline{\Pi NA}$

πνεῦμα, $\overline{\text{CHP}}$=σωτήρ, $\overline{\text{CTPOC}}$ and $\overline{\text{CPOC}}$=σταυρός, $\overline{\Delta\text{A}\Delta}$=Δαυίδ, $\overline{\text{IHA}}$ and $\overline{\text{ICA}}$='Ισραήλ, $\overline{\text{IHAM}}$='Ιηρουσαλήμ. There are also a few other words contracted, as $\text{K}_{\text{ς}}$=καί, $\overset{\circ}{\text{M}}$ = μοῦ, M =μοι; and the verbal termination $\text{T}^{\text{ι}}$ =ται. Occasionally a proper name appears abbreviated on a different system, as $\overline{\text{IW}}$='Ιωάννης.

Leaving these sacred and liturgical contractions for the present, we turn to the papyri of the third and second centuries B.C., which have been recovered from the tombs of Egypt, and see that here the system of simple abbreviation, or curtailment at the end of a word, was followed. Either the word was indicated by its initial letter alone with an abbreviating dash, as ὑ = υἱοί; or the letter which immediately preceded the omitted portion was written above the line, as a key to the reading, thus : τελ=τέλος; or two letters were so written, as τεκ=τέκνα, ομοι=ὁμοίως. It is true that examples of such abbreviation are comparatively rare, but there are quite enough to prove that the system was recognized.[3] Certain of these over-written letters, even at this early period, betray a tendency to degenerate into dashes,[4] and this natural degeneration becomes more intensified in course of time. Thus, in the second and third centuries after Christ, this dash system is found to be developed to a considerable degree.

The same method of curtailing the endings of words may be traced in the Herculanean rolls, which must be at least as early as the first century of our era, together with certain monogrammatic forms, as $\overset{\text{P}}{\text{TT}}$ =πρός, X= χρόνος; and the scribes of the recently discovered papyrus of Aristotle's work on the Constitution of Athens, of

[3] See *Flinders Petrie Papyri*, ed. Mahaffy (Royal Irish Academy, *Cunningham Memoirs*), 1891; particularly No. xxiii.

[4] Dr. U. Wilcken, *Observationes ad hist. Ægypti prov. Rom.* p. 40), selects from the Paris Papyrus No. 5 (*Notices et Extraits des MSS.*, pl. xvi.), of the year 114 B.C., the following, among other, contractions, τρ< = τρά[πεζαν], πτολε⁀ = πτολεμ[αίου], ασκλη⁾= ἀσκλητ[ιάδης]. In these we have the cursive form of *a* (<), of μ (⁀), and of π (^), which we find in the most cursively written documents of the third century B.C.

about A.D. 100, employed a regular system of abbreviation for prepositions and other words.[5] In the papyri of succeeding centuries the same system is found at work. To descend to a later period, the palimpsest fragments of the Iliad in uncial writing of the sixth century, in the British Museum, have several words curtailed, an s-shaped mark indicating the omitted endings. More numerous are the examples in the fragment, preserved at Milan, of a mathematical treatise of the seventh century, also written in uncials. In this MS., dealing with a subject in which technical expressions constantly occur, an opportunity for the full employment of abbreviations presented itself, and, accordingly, not only the ordinary abbreviated endings, but still more tachygraphical signs are used. From the analogy of later MSS. it may be taken for certain that all technical works, intended as they were rather for the student than for public reading, were subject to unrestrained contraction from very early times. In the few remaining Greek documents on papyrus of the seventh and eighth centuries, the same system is employed. Thus, when the flood of the literary minuscule writing of the ninth century suddenly rises and sweeps over the uncial, it naturally brings with it the old system of abbreviation which was still existent in the cursive hand from which that writing sprang. The history of that system, as we have seen, can be traced only imperfectly, from lack of material, and is, as it were, screened by the intervening system of the uncial biblical and liturgical MSS., which, by the fact of their surviving in fair numbers, have thrust themselves into more general notice.

With the disuse of uncial writing, however, as the

[5] They are: ⸗ = termination *αι*, *ἀ* = *ἀνά*, *γ'* = *γάρ*, *δ'* = *δε*, *δ'* = *διά*, ⸌ = *εἶναι*, ⸍ = *ἐστί*, ⸎ = *εἰσί*, *θ'* = *θαι*, *κ'* = *καί*, *κ̀* = *κατά*, *μ'* = *μέν*, *μ̀* = *μετά*, *ο'* = *οὖν*, *π̀* = *παρά*, *π'* = *περί* or *περ*, *σ'* = *σύν*, *τ̀* = *τήν*, *τ̀* = *τῆς*, *τ'* = *τῶν*, *ὑ* = *ὑπέρ*, *ὺ* = *ὑπό*; and also ⁜ = *χρόνος*, and the unusual ⸢ = *αὐτήν*. Many of these abbreviations are used for syllables as well as for independent words. In addition, terminations are occasionally abbreviated with the over-written letter as *μαˣ* = *μίχην*

ordinary literary hand, the biblical system of contraction did not perish. The same scribes who had copied out the majuscule texts were now employed upon the new minuscule, and naturally introduced into the latter the contractions which they had been accustomed to write in the former. In minuscule writing, therefore, from the ninth century onwards, any form of contraction or abbreviation may be looked for. At first, however, they were, in general, very sparingly used in the calligraphic MSS. of the period, although, when necessary, the apparatus was ready at hand to be applied, as in the case of marginal and interlinear scholia, where contractions were always more freely used than in the text of a MS. The horizontal stroke which marked contracted words in the biblical uncial texts served the same purpose in minuscules; it also distinguished letters which were used as numerals or special signs. But the ordinary terminal abbreviations were marked by an oblique stroke drawn under the line, as in $\alpha\delta^{\epsilon}/=\grave{\alpha}\delta\epsilon\lambda\phi\acute{o}\varsigma$, $\pi o\lambda^{\varepsilon}/=\pi\acute{o}\lambda\epsilon\mu o\varsigma$, although this stroke was also often dispensed with, and a mere flourish added to the over-written letter. This over-written letter was also subject to modifications. It was doubled occasionally to indicate a plural, as, $\pi\alpha\iota^{\delta\delta}/=\pi\alpha\acute{\iota}\delta\omega\nu$, $\sigma\tau\overset{\chi\chi}{\iota}=\sigma\tau\acute{\iota}\chi o\iota$. It was also in some instances the emphatic letter of the omitted portion of the word, as $\lambda^{\acute{\gamma}}/=\lambda\acute{\epsilon}\gamma\epsilon\iota\nu$, $\kappa^{\tau}/=\kappa\alpha\tau\grave{\alpha}$. And the arrangement of letters was sometimes inverted, as $\lambda_{\acute{o}}=\lambda\acute{o}\gamma o\varsigma$, $o_{\varsigma}=\acute{o}\sigma\iota o\varsigma$.

But with the new minuscule writing also appears a further development of contraction in the use of certain signs, mostly tachygraphical, which are employed either as component parts of words, or as entire, independent words. They are employed to some extent also in late uncial MSS. They generally are found as terminations, but in MSS of the early minuscule period they are also used in the middle or at the beginning of words. For the most part, they are placed above the level of the words to which they belong; in a few instances they are pendent or in the line of writing. At the later period, when the writing became more cursive, these tachygraphical signs were linked with the letters below them

in a flourish. They also, even at an early date, show a disposition to combine with the accents, as in ϚΖ which is the sign ϛ (*ης*) combined with a circumflex. This combination begins in the twelfth century.

We will now proceed to give these signs in the alphabetical order of their meanings, beginning with the vowels. But it will assist the memory materially if it is borne in mind that, as in Greek tachygraphic writing one sign represented several syllables, different in spelling but phonetically the same, so the signs which we are now considering may be phonetically grouped. For example, in the two groups :—

ην. *ειν.* *ιν.*

ης. *εις.* *ις.*

we see a sign representing a particular syllable differentiated by being doubled or marked to represent its homophones. The same system will be observed in other instances.

α is early represented by the tachygraphical sign, a horizontal stroke —.[6] It was written either above or in line with the preceding letter, as $\bar{\tau}$ or τ^{-}, but in the latter position, to aid the eye, it received the addition of two dots, as $\tau\div$, or, coalescing, $\dot{\tau}$. But this sign ÷ thus dotted also indicated *τα*, as the two dots (:) were also the tachygraphical sign for *τ*. In course of time the construction was forgotten, and ÷ was taken to mean simply *α*, and, last of all, the — dropped out, and the two dots remained to represent the letter.

ε is frequently represented by a short waved stroke, as in the word $\mu\tilde{\xi}$ = *μεγα*, and in participial terminations, as $\lambda\epsilon\gamma\acute{o}\mu\tilde{\varsigma}$ = *λεγόμενος*. This sign resembling that for the diphthong *αι*, the two may be identical, *ε* and *αι* being homophones.

η is also occasionally found in a similarly waved-stroke form, nearly always written in the line, as *ἐπειδὴ*, *τὴν*.

ι is very rarely represented by two dots (a late usage), as $\pi^{\epsilon\grave{\iota}} = \pi\epsilon\rho\grave{\iota}$.

[6] This mark for *α* appears in abbreviations in papyri of the beginning of the third century. Wilcken, *op. cit.*

ω appears in the tachygraphical form of a kind of circumflex, as *ἄν̃γε*=*ἄνωγε*.

αι. The abbreviated sign of this termination is, in its earliest forms, an oblique or angular or s-shaped stroke, as *κ, κ, κ*; later, ordinarily a waved stroke, as *κ* (which was afterwards exaggerated into a flourish); sometimes ∨, as *ἡμέρ*=*ἡμέραι*.

αις. The earlier sign was *ι*, as *στήλ*=*στήλαις*; later ››, as *ταύτ*=*ταύταις*. This second form appears to be a doubling of the sign for *ες*, a phonetic equivalent.

αν. An angular *ʃ* and rounded *ɾ* are found in early MSS. Then a further development in the curve took place, and a 6-shaped sign comes into use. *ὅτ*=*ὅταν*, *πάσ*=*πάσαν*, *π̂*=*πᾶν*, *γεννάδ*=*γεννάδαν*.

αρ. The horizontal stroke —, for *α*, and a ring representing *ρ*, were combined as the sign ⁻ₒ, as *μ̄τυρεῖ*=*μαρτυρεῖ*. Or it was turned upwards, *ἀμ̄τιάν*=*ἁμαρτίαν*; or written in the line, as *μ÷ₒτυς*=*μαρτυς*, with dots representing *α*.

ας. The constant sign was *ν*, as *στίχ*=*στίχας*; *χρήσ'θαι*=*χρήσασθαι*.

αυ. From a combination of —, for *α*, and the upsilon, comes the sign ⁻ᵕ, as *θ̄μάζει*=*θαυμάζει*. A rare sign is *ɦ*, as *τοιήτη*=*τοιαύτη*.

ειν. At first was used a single sign ^ (*i.e.* also the sign for *ην*, a phonetic equivalent), as *ἐπιμέν*=*ἐπιμένειν*. Then this was doubled for distinction's sake ^^; afterwards one or both of the hooks are thrown off //, //; and finally the strokes are reduced in length //. *εἰπ*=*εἰπεῖν*, *λείπ*=*λείπειν*.

εις. The sign ς, which represents *ης*, was sometimes also used for *εις*; more generally it was doubled, as *τιθ̈*=*τιθεὶς*. Another rare form is ⁰⁄₀ which appears to be the ordinary ligature of *ε* and *ι* with a cross stroke.

εν. An angle ∠, as *μ̓*=*μὲν*, which afterwards took a more rounded form, as *γέγον̓*=*γέγονεν*, degenerating at a later period into ∠, or even into a looped flourish like a wide *α*. The tachygraphic sign ⅂ is also occasionally found in use,

ερ. The oblique stroke, the tachygraphic sign for *ε*, combines with a loop, for *ρ*, and makes the sign *b*, as ὥσπ^{b} = ὥσπερ, εἴπ$_{b}$ = εἴπερ. More rarely a bar is used as ὑπ$^{\backprime}$ = ὕπερ, ὥσπ$^{\backprime}$ = ὥσπερ.

ες. The early sign was *ȝ*, as φάγοντ^{ȝ} = φάγοντες. But two dots, representing tachigraphically the letter *τ*, being frequently added in the common termination *τες*, *ȷ̈*, a confusion between *ȷ̈* and *ȝ* was the result, and at last *ȷ̈* came to be used for *ες*, as λύοντ$^{ȷ̈}$ = λύοντες, and superseded the simple *ȝ*. The sign, thus changed, varies occasionally in form as, ȷ̈ ȷ̈ ⓒ.

ην. The angular form ∧, as τ$^{\wedge}$ ἀρχ$^{\wedge}$ = τὴν ἀρχὴν, was sometimes curved, as τοιαυτ$^{\frown}$ = τοιαύτην. Later it degenerated into ⅄, ⅄, as ἀρετ$^{\lambda}$ = ἀρετὴν.

ηρ. A not common sign is ⌢, as ἀν$^{\frown}$ = ἀνὴρ.

ης. A sign resembling ς, as τ$^{\varsigma}$ = τῆς. This sign early combined with the circumflex as ⓒ. It is sometimes doubled.

ιν. The sign for *ην* was often used also for this termination. It was also differentiated by two dots, thus, τάξ$^{\tilde{\cdot}}$ = τάξιν. It passed through the same stages of degeneration as its prototype.

ις. The sign for *ης* was also used for *ις*. It was also differentiated by two dots, thus, αὖτ$^{\varsigma}$ = αὖτις. The signs for *ις* and *ης* are sometimes confused.

οις. A horizontal stroke terminating in an angular or round hook, ⌐ ⊐; λόγ$^{\sqsupset}$ = λόγοις. In later MSS. the sign is subject to flourishing. In some instances the position is oblique, as τ$^{\supset}$ = τοῖς.

ον. The oblique stroke \, as λόγ$^{\backprime}$ = λόγον. The danger of confusion with the grave accent led to its being lengthened; but this eventually resulted in the lengthening of the accent also, as τ$^{\backprime\backprime}$ = τὸν. In late MSS. the sign degenerates into a flourish, or waved line.

ος. The tachygraphical sign for *ος* is sometimes used, as λογ$^{\breve{}}$ = λόγος; sometimes the uncial **c**, as ἕκαστ^{c} = ἕκαστος.

ου. An early form ✓ appears in a few places, as τ$^{\surd\surd}$ =

τούτου; this is afterwards curved, as τ̓=τοῦ. The form ϒ, which is not uncommon, is a monogram of the two letters.

ουν. The *o* with a waved stroke beneath, as ποι$_{\sim}$ô= ποιοῦντος, ἤγ$_{\sim}$=ἤγουν.

ους. The sign ꝶ, which is formed by combination of *υ*=*ου* and ς; as λόγꝶ=λόγους, ἵππ ꝶ = ἵππους. The double waved stroke ^{ss} (as in εις) is also used: as χρον^{ss}= χρόνους; also single, as αὐτ^{s}=αὐτοὺς.

ων. A sign resembling a circumflex; in early MSS., of small size, as τούτ̂=τούτων; afterwards, a sweeping flourish, as διαφόρ̃=διαφορῶ.

ωρ. A not common sign ⸗ or ⸗, as ὕδ⸗=ὕδωρ, ῥήτ⸗= ῥήτωρ.

ως. A curving line ⸗, ⸗, as οὕτ⸗=οὕτως, ⸗περ= ὥσπερ. Later, the sign turns downwards, as καλ⸗=καλῶς.

Certain prepositions and particles are represented by special signs, as—

ἀντί: ⊃, a very rare sign.

ἀπο: ⸗ and ⸗; a rare sign is ⸗.

ἀρα: ⸗.

διά: ⸗, or Δ with a waved pendant.

ἐπί: ⸗, the ⸗ being the cursive form of *π*.

ἵνα: ⸗.

κατά: ⸗, ⸗, ⸗.

πρός: ⸗, ⸗.

ὑπέρ: ⸗, or ⸗.

ὑπό: ⸗, ⸗.

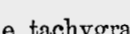
παρά: ⸗, also ⸗.

γάρ: ⸗, or ⸗, ⸗, ⸗; that is, *gamma* crossed with an inverted *ρ*, or with a bar or flourish.

μέν: ⸗.

δέ: ⸗, which becomes round ⸗. In course of time it was confused with the sign for ες (⸗); hence the scribes came to add dots.

ἤγουν: ⸗,

καί. From the tachygraphical form ϟ (*κε*) came the sign ϗ, which went through various changes: .

ὁμοῦ: ⁜, very rare.

ὅτι: . (the dots indicating the *τ*); also .

ὥσπερ: .

The auxiliary *ἐστί* or *ἐστίν* was represented by the tachygraphic  (*ἐστί*) or (*ἐστίν*); but this distinction was not kept up. Later, from confusion with the sign for *ιν* (), the position of the dots was altered, and the sign became , which afterwards passed into the flourished style, on the pattern of the signs for *ην* and *ιν*. A double *ἐστί*, , was used for *εἰσί*; and in the same manner or = *εἰσίν*. And, perhaps on the same analogy, = *εἶναι*.[7] The future *ἐσται* is found in the forms , .

Certain signs were also used for technical words, as  = *ἀριθμός*, = *ἀριθμοί*; , = *ἴσος*, *ἴσοι*;  = *ἐλάσσων*. And, finally, there were certain symbols for certain words, as ⊙ = *κύκλος*,  = *ἡμέρα*, = *νύξ*,  = *ἔτος*, = *ἄρουρα*, , , = *δραχμή*, and others.

Latin.

Of Latin abbreviations the most ancient forms, as already stated, are those which consist of a single letter (nearly always the initial letter), representing the whole word. The most ordinary instances of such single-letter abbreviations, or *sigla*, are those which indicate proper names, or titles, or words of common occurrence, and which are familiar to us, not only in the inscriptions on coins and monuments, but also in the texts of classical writers; being generally distinguished from other letters or words by the full point which is placed after them. The same system was followed in the middle ages and survives at the present day.

But the representation of words by single letters could only be carried out to a certain limited extent. Obviously the same letter must do duty for many words

[7] In Pap. cxxxvii., in the British Museum, probably of the 2nd century, these forms are used: / = *ἐστί*, \ = *εἶναι*, \\ = *εἰσί*; and *ῠ* for the feminine cases of the participle, *οὖσα*, *οὔσης*, etc.

and confusion be the consequence. Hence arises a farther extension of the system: the use of special marks, or of two or more letters. The Romans wrote M'.=Manius, to distinguish that name from M.=Marcus; Cn.=Gnæus, to prevent confusion with C.=Gaius. These simple methods of abbreviation led on to others, the development of which can be traced in the early legal MSS., such as the Gaius of Verona, or the waxen tablets, and particularly in the "Notarum Laterculi" or "Notæ Juris"—the lists of abbreviations used in the Roman law-books.[8] In these documents, as regards single-letter abbreviations, we find not only such forms as A.=*aut*, C.=*causa*, D.=*divus*, E.=*est*, and so on, any of which might occur independently in a sentence, but also whole phrases, as, C. D. E. R. N. E.=*cujus de ea re notio est*, or A. T. M. D. O.=*aio te mihi dare oportere*, showing to what an extent this elementary system could be employed in books of a technical nature. Indeed, in technical works, single-letter phrases continued to be used in MSS. down to the invention of printing. But the inconvenience of such abbreviations is seen in such double meanings as A.=*aut* or *annus*, C.=*causa* or *circa*, D.=*divus* or *dedit*, F.=*fecit* or *familia* or *fides*. Yet the sense of the context might be depended upon for giving the correct interpretation, and confusion was also, in some instances, obviated by the addition of a distinguishing mark, such as a horizontal stroke placed above the letter or an apostrophe or similar sign placed after it, as $\overline{\text{N}}$=*non*, N'=*nec*. The representation of words by two or more of their letters is seen in such abbreviations as I$\overline{\text{T}}$=*item*, ACT.=*actum*, A$\overline{\text{N}}$=*ante*, ED.=*edictum*, IM$\overline{\text{P}}$=*imperator*, COM.=*comes*, E$\overline{\text{O}}$=*eorum*, CU$\overline{\text{I}}$=*cujus*, F$\overline{\text{U}}$=*fuit*, in which the first letters of each word are written; or in such contractions as E$\overline{\text{XP}}$=*exemplum*, O$\overline{\text{MB}}$=*omnibus*, MM$\overline{\text{T}}$=*momentum*, B$\overline{\text{R}}$=*bonorum*, H$\overline{\text{D}}$=*heredem*, where the salient letters are expressed, in some instances with a

[8] See in Keil, *Grammatici Latini*, iv. 265, the *Notarum Laterculi*, ed. Mommsen.

view to indicating the inflections. From this latter method was developed the more systematic syllabic system, in which the leading letters of the syllables were expressed, as EG=*ergo*, HR=*heres*, QD=*quidem*, Q$\overline{\text{B}}$=*quibus*, Q$\overline{\text{R}}$=*quare*, S$\overline{\text{T}}$=*satis*, M$\overline{\text{T}}$=*mentem*, T$\overline{\text{M}}$=*tamen*, S$\overline{\text{N}}$=*sine*, B$\overline{\text{N}}$=*bene*, D$\overline{\text{D}}$=*deinde*, and the like.

But still there remained the need of indicating inflections and terminations more exactly than by this simple process. This want was supplied in the first place by the adoption of certain of the Tironian symbols —others of those shorthand signs being at the same time used for certain prepositions or prefixes—and also by smaller over-written letters, as Q$^{\text{o}}$=*quo*, V$^{\text{m}}$=*verum*, H$^{\text{c}}$=*hunc*, T$^{\text{c}}$=*tunc*. This over-writing was not, however, confined to the indication of terminations: it was also adopted for general use to mark leading letters, as in S$^{\text{i}}$=*sint*, N$^{\text{o}}$=*noster*, S$^{\text{o}}$=*sors*, and others. As will presently be seen, it holds an important place in the scheme of later mediæval contraction.

The principles of the different methods sketched out above held good also throughout the later middle ages; but of the simple letter-forms only a certain number survived. They were too arbitrary to be continued in general use, and more exact and convenient combinations and signs took their place. Even where they still survived in form their original meaning was sometimes superseded; *e.g.* the early syllabic contraction T$\overline{\text{M}}$=*tamen* under the later system becomes *tantum*. The period of transition from the old to the new system lies in the course of the eighth and ninth centuries, at the time when the Carlovingian schools were effecting their great reform in the handwriting of Europe, and had the authority to enforce the adoption of settled forms. By the eleventh century the later system had grown to full development. It reached its culminating point in the thirteenth century, the period when contraction was more excessively used than at any other; but after that

date marks and symbols are less rigidly formed and gradually degenerate into hasty dashes and flourishes.

Having thus traced the general construction of Latin abbreviation and contraction, we may now briefly notice the various signs and marks which are employed for this purpose in the MSS. of the middle ages.

Abbreviated Latin words may be ranged in two classes: (1) Those in which the ending is suppressed, as fec̄=*fecit*; (2) Those in which letters are omitted from the middle, or from the middle and end, of the word, as cā̄=*causa*, oīo=*omnino*, prb̄=*presbyter*. To the first class the French have given the title "abbréviations par suspension"; we call them simply "abbreviations," and include among them those early forms, noticed above, which are composed of one, two, or more of the first letters of a word, and the numerous examples, particularly verbs, which, more especially in the ninth and tenth centuries, simply threw away the last syllable. The words in the second class are "contractions," being contracted by the omission of medial, or medial and final, letters.

Marks or signs of abbreviation or contraction are either general or special. General signs are those which indicate the suppression of one or more letters without giving a direct clue to what such letters may be. Special signs indicate the suppression of particular letters. Among the latter must be also included over-written letters which, in some instances, have in course of time changed their forms and have worn down into mere symbols.

The earliest and simplest mark of abbreviation is the full point, usually placed on a level with the middle of the letter or letters of the abbreviated word as A·=*aut*, FF·=*fratres*, or—to give the commonest, and often the only, abbreviations in early majuscule MSS.—B·=(termination) *bus*, Q·=*que*. In place of the full point, a colon or semicolon was next employed, as in B: B; Q: Q;, and the latter, becoming the favourite form, grew, by rapid writing, into a 3-shaped sign, which appears from the eleventh century onwards as b3=*bus*, q3=*que*.

From its frequent recurrence in the latter common word it even came to represent the *q* as well as *ue*, in composition, as atȝ=*atque*, neȝ=*neque*. But it was not confined to the representation of terminal *us* and *ue*; it also appears for termination *et*, as in debȝ=*debet*, płȝ=*placet*, sȝ=*set* (*i.e. sed*): a survival of which is seen in the z in our common abbreviation viz.=*videlicet*. At a later period it also represented final m, as in naȝ=*nam*, iteȝ=*item*, ideȝ=*idem*.

The same ȝ-shaped sign likewise is found sometimes as the sign for *est* in composition, as in interȝ=*interest*. But here it has a different derivation, being a cursive rendering of the symbol ÷=*est*.

The horizontal stroke is the most general mark both of abbreviation and contraction, and in both uses it may indicate the omission of many letters. We have seen it in use in the "Notæ Juris." It is usually either a straight or a waved line. In early carefully-written MSS. it is ornamentally formed with hooks at the ends ⌐¬. In the case of charters, it is sometimes fancifully shaped, as an oblique crotchet, or as a loop or knot. In its simplest use as a mark of abbreviation it is found in majuscule MSS. at the end (rarely in the body) of a line to indicate omission of final M or N. It was placed above the line, at first to the right, as AUTE$^{\frown}$=*autem*; and in some instances a point was added to distinguish omission of M from omission of N, as ENI$^{\cdot\frown}$=*enim*, NO$^{\frown}$=*non*. Afterwards the simple stroke was placed above the last letter, as ENĪ, NŌ.

Analogous to the horizontal stroke is the oblique stroke, which takes the place of the horizontal chiefly in words in which the tall minuscule letters b and l occur, as apłi=*apostoli*, młto=*multo*, liƀe=*libere*, procł=*procul*.

Of the same class is the waved vertical stroke (sometimes in the form of a curve rising from the preceding letter), often used to signify the omission of *er* or *re*; as bᵛuiter=*breviter*, cᵛtus=*certus*.

Less frequent, because it dropped out of general use, is the final oblique stroke, also found in the earlier abbreviations, usually for terminations *us*, *ur*, *um*

(after *r*), as an$_{\mathcal{r}}$ = *anus*, amam$_{\mathcal{r}}$ = *amamus*, amat$_{\mathcal{r}}$ = *amatur*, re$_{\mathcal{r}}$ = *rerum*. Of these, the last termination *rum* continued to be represented in this way, especially in words in the genitive plural.[9]

Another general sign of early use was the round curve or comma above the line, which, as late as the ninth century, continued to represent the terminations *ur, os, us*. In later MSS. the curve alone was retained to indicate the termination *us* (sometimes *os*), and so became a special sign (see below).

A long drooping stroke attached to the end of a word is often found as a general sign to indicate the omission of any termination. It is, however, specially used for termination *is*. In the fourteenth century it develops into a loop, as dict$\mathfrak{e}$ = *dictis*.

A sign nearly resembling an inverted *c* or the numeral 9, Tironian in its origin, usually signifies the syllable *con* or *com*, also more rarely *cun* or *cum*, as 9do = *condo*, 9munis = *communis*, cir9scriptus = *circumscriptus*, 9cti = *cuncti*.[10] It always stands in the line of writing. A similar sign (to which reference has already been made), above the line, represents the termination *us*, as bon^{9} = *bonus;* also more rarely *os*, as n = *nos*, p^{9}t = *post*. In the last word it is sometimes used for the whole termination *ost*, as p^{9}.

A sign somewhat resembling the numeral 2 placed obliquely $\mathfrak{2}$, also derived from a Tironian note, is written for the termination *ur*, as amat$^{\mathfrak{2}}$ = *amatur*. It is also placed horizontally, as fert^{2} = *fertur*. Being commonly employed in the case of verbs, it also sometimes stands for the whole termination *tur*, as ama^{2}.

The letter p having a curve drawn through the down stroke, ꝑ, is to be read *pro*. In Visigothic MSS., however, it signifies *per*, very rarely *pro*, which is usually in such MSS. written in full. P crossed with a horizontal bar,

A curious result of the use of this sign is seen in the second name for Salisbury, "Sarum." The Latin Sarisburia in abbreviated form was written Sa$_{\mathcal{r}}$, and came to be read *Sarum*.

[10] The letter c surmounted by a horizontal line also represents *con*.

p, is *per*, also *par*, *por*, as ptem=*partem*, optet,=*oportet*. The same letter with a horizontal or waved oblique stroke or curve placed above it (when not at the end of a word) becomes *pre*, as p̄sertim=*presertim*, p'bet=*prebet*.

The following conventional signs, mostly derived from Tironian notes, are also used with more or less frequency:—

ꝁ=*autem*, ⅁=*ejus*, ═ = *esse*, ⸗=*est* (which degenerates into a ȝ-shaped sign: see above), p̂=*per*, 7=*et* 7̄=*etiam*, ℕ (later ⊣⊢ and ·⊣⊢· and thence ·n·)=*enim*, ·i·=*id est*, ŧ=*vel*, ⊖=*obiit*, *obitus*, v̇ and u̇=*ut*.

In this place may also be noticed the Latin contracted form of our Lord's name. The name of Jesus Christ was always written in Greek letters by mediæval scribes, and in contracted form it appeared in majuscule MSS. thus: ΙH̄C ΧP̄C, in Greek uncials. When these words had to be written in minuscule letters, the scribes treated them as purely Latin words written in Latin letters, and transcribed them ihc (or ihs) xp̄c. Hence arose the idea that the form Ihesus was the correct one, and by false analogy the letter h was introduced into other proper names, as Iherusalem, Iheronimus. Similarly the terminating letter c, for s, was carried over by scribes to other words, as ep̄c=*episcopus*, sp̄c=*spiritus*, tp̄c=*tempus*.

Most ordinarily, over-written letters are vowels, to which the letter r has to be supplied to solve the reading, as g^{a}tia=*gratia*, c^{a}ta=*carta*, t^{e}s=*tres*, u^{e}ba=*verba*, p^{i}or=*prior*, u^{i}tus=*virtus*, ag^{o}s=*agros*, c^{o}pus=*corpus*, p^{u}dens=*prudens*, t^{u}ris=*turris*. The more usual contractions of this character are those in which the r precedes the vowel. Other letters may also be understood, as in q^{a}=*qua*, bo^{a}=*bona*, q^{i}bus=*quibus*, m^{i}=*mihi*, m^{o}=*modo*. The letter a when over-written frequently takes the open form (ω) which degenerates into a mere zigzag horizontal line or flattened u (ᵕ̃).

When consonants are over-written the number of letters to be supplied is quite uncertain: a single vowel is omitted in such words as n^{c}=*nec*, h^{c}=*hic*; several

letters are understood in such a contraction as p^{t}=*potest*. The over-written consonant is usually the last letter of the word.[1]

In some instances two or more letters are over-written as hu$^{\text{'oi}}$=*hujusmodi*, incorp$^{\text{les}}$=*incorporales;* but such full forms are seldom wanted.

By metathesis, the contractions of certain common words, in which the letter g is prominent, take a special form, as g^{i} and g^{r}=*igitur*, g^{a}=*erga*, g^{o}=*ergo*.

The amount of contraction in a MS. depended to a considerable extent upon the character of the text. As has been already observed, technical books were more contracted than works of general literature. In MSS. written in majuscule letters, and particularly in biblical and liturgical codices, which were specially required for public reading, the contractions are very few: the omission of final M or N, Q·=*que*, B·=*bus*, Q$\overline{\text{M}}$ or Q$\overline{\text{N}}$M=*quoniam*, D$\overline{\text{S}}$=*Deus* and its inflections, D$\overline{\text{M}}$S or D$\overline{\text{N}}$S=*Dominus* and its inflections, the name of our Lord (see above), S$\overline{\text{C}}$S=*sanctus*, S$\overline{\text{P}}$S=*spiritus*, and a few other common words. With the introduction of minuscule writing for the book-hand, and when MSS. were employed for private use, there was more scope for this convenient system of saving labour and space; but in works intended for popular use there was seldom an excess of contraction or the employment of arbitrary forms such as to render the reading of the text difficult. When once the elements and principles of the system are understood, and the eye has been fairly practised, no ordinary MS. will present difficulties to the reader. As regards texts written in the vernacular languages of those countries of Europe which have adopted the Roman alphabet, it will be found that contractions are more rarely used in them than in MSS. written in Latin. A system suited to the inflections and

[1] With regard to over-written s, it may be noted that in Visigothic writing a sign resembling that letter is used in the word q^{s} *que*, which however is derived from the cursive form of over-written u.

terminations of this language could not be well adapted to other languages so different in their structure.

Numerals.

In Greek MSS. we find two systems of expressing numbers by signs, both being taken from the alphabet. It appears to have been the older practice to use the initial letter of the name of the number for its symbol, as Π for 5, Δ for 10, Η (aspirate) for 100, Χ for 1000, Μ for 10,000. This has been called the Herodian system, after the name of the grammarian who described it. It is found in use in the papyri, especially in the stychometrical memoranda of the numbers of the lines contained in them; and such notes are also found transmitted to vellum MSS. of the middle ages.

The other system was to take the first nine letters of the alphabet for the units, and the rest for the tens and hundreds, disused letters being still retained for numeration, viz., *ϝ, digamma,* for 6, which in its early form appears as ϛ or ϵ, and afterwards, in the middle ages, becomes ϛ, like the combined σ and τ or *stigma*; ϙ, *koppa,* for 90; and a symbol derived from the old letter *san,* which appears in papyri[2] as Τ or Ϯ, and at later periods as ϡ which, from its partial resemblance to *pi,* was called *sampi* (=*san*+*pi*), for 900. This system was in full use in the third century B.C.

The practice of numbering the successive books of a work, as *e.g.* the twenty-four books of the Iliad, by the successive letters of the alphabet, is hardly a system of numeration in the proper sense of the word. In certain cases, we find it convenient to make use of our alphabet in a somewhat similar way, to mark a series.

The numerals were usually distinguished from the letters of the text by a horizontal stroke: thus $\bar{a}$. To

[2] See *e.g. Cat. of Greek Papyri in the Brit. Mus.*, pp. 47, 55.

indicate thousands a stroke was added to the left of the numeral: thus ,T=3000; which at a later period was detached, thus /T. Dots were sometimes added to indicate tens of thousands, as $\ddot{a}$, ·$\dot{A}$·, ·$\dot{B}$··. Special symbols were sometimes used for fractions, sometimes an accent or a line above the numeral indicated the fraction: as υ or ʟ=$\frac{1}{2}$, γ'=$\frac{1}{3}$, υγ'=$\frac{1}{2}+\frac{1}{3}=\frac{5}{6}$, γ^{o}=$\frac{2}{3}$, δ'=$\frac{1}{4}$, etc. The *o* which appears for the numerator in $\frac{2}{3}$ is derived from the cursive form of β, and is found in other combinations in papyri. The δ for $\frac{1}{4}$ also appears in form of a Roman d; and $\frac{3}{4}$ is represented by a variant of it, ϥ. The symbols —, =, ⌐, ⌐, ⌐, stand for obols, from one to five.

The Roman system of numerals was used throughout the middle ages (and, indeed, it lasts to our own day), and was not displaced by the introduction of the Arabic system, although the latter, from its convenience, was widely adopted. The Roman system was continued as the more official, and money accounts were calculated in its numerals.

This is not the place to discuss the origin of the Roman numerals; it is sufficient to say that the system was not an alphabetical one, for, although C (100) has been said to be the first letter of *centum* and M (1000) the first letter of *mille*, both these signs had a different derivation, and by a natural process only took the forms of the letters which they resembled most nearly.[3]

To distinguish the numerals from the letters of the text they were placed between points: thus ·XL·. Besides the ordinary method of indicating thousands by repetitions of M, units with horizontal strokes above were also employed for the purpose: thus, ·$\overline{\text{I}}$·, ·$\overline{\text{II}}$·, ·$\overline{\text{III}}$·, etc. Certain special signs occur in some MSS.: as the Visigothic ϒ=1000, and ϰ=40, and the not very uncommon sign ϛ=6 which has been derived from the Greek symbol, but which may be only a combination of

[3] See Zangemeister, *Entstehung der römischen Zahlzeichen*, in the *Sitzb. der k. Preussischen Akademie*, 1887.

U (V) and I. A cross stroke traversing a numeral sometimes indicates reduction by half a unit, as ii$\dagger$= $2\frac{1}{2}$, $\times_{\times}=9\frac{1}{2}$, $x\times_{\times}=19\frac{1}{2}$.

Arabic numerals first appear in European MSS. in the twelfth century, their early use being general in mathematical works; by the fourteenth century they had become universal. They have not much changed in form since their first introduction, the greatest difference from the modern shapes being seen in ϱ=4, and ५=5.