

© © © ρ ρ ρ ρ ρ ρ ρ ρ
 MN MN MN MN MN MN MN MN

Fig. 6.

Combinations of uncial letters
 viz. os, os, oi, ap, av, ημ, ην,
 μν, νη, νπ, πη, πε, τη, μη.
 Cf. CL. 10, margin 10, 21; 11,
 10; 13 ii 13; 26, 30; 52, 4;
 Th. 51, 3; 64, 10; 81, 1;
 V. 6, 36.

αλ	αλ
αγ	αγ
γο	γο
ελ	ελ
επ	επ
εσ	εσ
ετ	ετ
ευ	ευ
εχ	εχ
ην	ην
θε	θε
κτ	κτ
ππ	ππ
σε	σε
σπ	σπ
σσ	σσ
στ	στ
σχ	σχ
ττ	ττ
υυ	υυ
υσ	υσ

Fig. 7.

Usual combinations of
 minuscule letters.

αθ	αθ
αν	αν
αρ	αρ
ασ	ασ
υρ	υρ
εγ	εγ
ελ	ελ
εκ	εκ
ελ	ελ
εν	εν
επ(ι)	επ(ι)
ερ	ερ
ετ	ετ
εχο	εχο
εψ	εψ
ην	ην
ησ	ησ
λλ	λλ
λο	λο
με	με
πο	πο
πτ	πτ
ρω	ρω
σα	σα
το	το
ττ	ττ
υρ	υρ
υρ	υρ

Fig. 8.

Combinations of let-
 ters used in later
 minuscule.

αρ	αρ
γγ	γγ
γα	γα
γο	γο
ετ	ετ
θα	θα
ον	ον
ος	ος
ου(ς)	ου(ς)
πα	πα
πε	πε
πο	πο
ρω	ρω
σα	σα
σω	σω
τα	τα
το	το
του	του
τε	τε
τω	τω
ων	ων

Fig. 9.

Combinations of letters by
 superposition.

Φ = ΡΩΤΙΟΣ

* = χορός

Fig. 10.

Two monograms.

A.D.) line 6 and 10, CL. 1 (Vaticanus of the Bible) i 30 etc. (cf. Th. 44 i 1), Th. 45 (Sinaiticus of the Bible) i 6 etc., Th. 46 (Alexandrinus of the Bible) 14 etc., Pl. III (Sarravianus of the Old Testament) i 9 etc., CL. 2 (Cassius Dio from the Vth cent.) ii 23 etc. Most common is the superposition of OY, see o.a. CL. 13 ii 1. Later on, all the characters may be written in this way. See e.g. many cases in Pl. VII-XI, then in Th. 81 (Odyssey from 1479), CL. 36 (Menaeum from 1260), with a repeated superposition in l. 1, CL. 37 (Hymn-book from 1282), CL. 43 (Aristotle from 1294), CL. 56 (Etymologicum from the XIth cent.), W. 31 (Oppian from 1287).

2. Combination of letters, or *ligature*, occurs in two different forms: a. the letters are written in or across each other; b. they have one or more strokes in common. The first type is specially found with the uncial. The old Greek cipher-system mentioned above (p. 19 n. 1) makes

ἄνθρωπος	ΑΝΘΣ
Δαυεὶδ	ΔΑΔ
θεός	ΘΣ
Ἰσραήλ	ΙΗΛ
Ἱερουσαλήμ	ΙΑΗΜ
Ἰησοῦς	ΙΣ
κύριος	ΚΣ
μήτηρ	ΜΗΡ
οὐρανός	ΟΥΝΟΣ
πατήρ	ΠΗΡ
πνεῦμα	ΠΝΑ
σωτήρ	ΣΗΡ
σταυρός	ΣΤΣ
υἱός	ΥΣ
Χριστός	ΧΣ

Fig. 12.

γράφεται	ΓΡ
ἐπὶ	ΕΠ
κέντρον	ΚΕ
λόγος	ΛΟ
--ος	ΟΣ
περὶ	ΠΕ
σημείωσαι	ΣΗ
σχόλιον	ΣΧ
Χριστός	ΧΡ
ῶρα	ΩΡ

Fig. 11.

Abbreviations through sus-
 pension together with super-
 position or combination. Cf.
 Pl. II. title, schol. 2. l. 6;
 CL. 9, margin 16; 10, margin
 15; 11, 1, 2; 52, 4; Th. 48,
 3; V. 18; W. 20, margin 28.

use of it. The second type which may already be seen on inscriptions from the VIth cent. B.C., occurs with the uncial, but afterwards regularly with the minuscule. For the uncial see fig. 6. The minuscule has a number of these combinations which belong to the normal type of writing and which have their own history (fig. 7). In § 18-19 we saw that they became more and more numerous. The deformation of the minuscule by the introduction of uncial and cursive forms at the same time implies the adoption of combinations of these forms (see fig. 8). The superposition also gave rise to new combinations (see fig. 9). In certain cases the combination may develop into real monograms (fig. 10).

3. *Suspension* means the omission of the end of a word. One may write either the initial only, e.g. the ϩ on coins and horses from Corinth (the so-called *κοππαίται*) and the Σ on the shields

letter is then generally written at a higher level than the penultimate one, but the sequence is now and again also the reverse. Already in the papyri and in the uncial codices we repeatedly see the N, as a rule deformed into

daemon, or a few letters from the beginning of the word, as **AOE** was written on the Athenian coins and **ΣΥ** on the coins of Sybaris. In manuscripts there is as a rule one additional feature: the last letter is written above the preceding one, and a short oblique stroke is added next to or through the last letter¹). Such a superposition in a word

γάρ	π
κατα	τ
--μενος	κ
μετά	ο
χορός	--μ
ὧ ἄνδρες	μ
Ἀθηναῖοι	* *
	θ
	∞

Fig. 13.

Abbreviations through contraction together with superposition, suspension or combination. Cf. Pl. V, schol. 2, 7; *CL.* 10, margin 14; 47, 3; 48, 7; *Th.* 66, margin 3 and 8; 70, 4; 72; 5, ii 6 and 14; *LC.* 6 margin 1.

ἀστήρ	✱
ἥλιος	☉
κόσμος	⊕
κύκλος	◯
ὀρθός	⊥
σελήνη	☾
τρίγωνον	▽

Fig. 14. Symbols.

Cf. CL. II inf. 5; LC.
3, 6 etc.; II, 31.

5	αλ	//	ἐπί
6 L L T T C S P	αυ	ο	εἶναι
→	ἀντί	S T T T T	ης
U	απα	SS Θ	καί
✓ T T T T	ας	→ T T T T	οις
γ δ	δε	\ T T T T	ον
5 // //	ΕΙV	δ	ὅτι
6 C T T T T P	εν	ζ S	πρός
7 ῑ T T T T S	ES (αίς)	~ ^ T T T T T	ων
γ γ	ἐοτί	~ S	ως

Fig. 15.

Various abbreviations.
N.B. $\iota\nu$ and $\eta\nu$ are written as $\epsilon\nu$,
 $\iota\varsigma$ and $\epsilon\iota\varsigma$ as $\eta\varsigma$.

10; 48, 2 and 9. Suspension combined with the two types of letter-combination is frequent (fig. 11 and Pl. VI, 1, 2 of the scholia the name *Θυμῆρος*). It should be noted that the different parts of compound words may each be abbreviated by suspension, whereas for the combination of suspension and superposition two successive words may be treated as one single word (e.g. *εἰς^τ = εἰς τόν*).

4. *Contraction* consists in omitting the central part of the word. First of all we must mention the so-called "*nomina sacra*" reproduced in fig. 12. The name has been given by L. Traube¹⁾, considering the fact that it is almost exclusively used for sacred terms; the origin, according to him, is to be found in the Greek translation of the Old Testament (the so-called Septuagint) made by the Jews in Alexandria. It is a fact that these abbreviations are regularly applied only in religious texts, but it seems to occur already in an Attic inscription from the IVth cent. B.C.²⁾, it was probably known in Plato's time³⁾ and recent, but not yet published investigations by Dr. A. H. R. E. Paap apparently ruin the theory. Derivations and compounds are treated exactly as the single words: e.g. $\phi\iota\lambda\acute{\alpha}\nu$ -($\theta\rho\omega\pi$)ος, $\sigma\tau(\alpha\nu)\rho\theta\ddot{\upsilon}\nu$, $\pi(\alpha\tau)\rhoικ\acute{\iota}\omega\nu$ (LC. 71, 21). The contraction is also combined with other ways of abbreviating: a suspension like $\pi\omicron^{\omega}/$, which may be used for many words, is often determined by a contraction, e.g. $\pi\omicron\lambda\tau/ = \pi\omicron\lambda\lambda\eta\varsigma$. For some other usual abbreviations consisting of contraction together with superposition, combination or suspension, see fig. 13.

5. *Symbols* are conventional signs comparable to the ideographic hieroglyphs, especially used for technical terms relating to mathematics and astronomy. A small selection is given in fig. 14. Letters used for ciphers are symbols too, though of a different kind.

6. The last type of abbreviations consists of various *signs*, mainly deformed letter-combinations or adopted from shorthand writing. They are practically countless and occur nearly in as many forms as there are handwritings. They are mainly, though not exclusively, used at the end of words. A thorough knowledge is only to be gained by long practice; a small number of the most frequent signs are reproduced in their usual form in fig. 15.

§ 22. Expansion of Greek Writing

The Phrygian, Lycian and Carian alphabets, at the same time also the Etruscan alphabet (with its derivatives, the Oscan, Umbrian, Faliscan and

¹⁾ L. Traube, *Nomina sacra*. Munich 1907.

²⁾ Sigalas, p. 297 mentions IG. II² 1400 EK KE(PAME)ΩN, but the fact that no other instance can be given, makes the case doubtful: it might be just a mistake.

⁸¹ See the very old corruption in *Hierides* I. 2. 200. 2. 1. (*ΛΗΡΩΝ* becomes *ΛΑΛΩΝ*)

1) Sometimes a horizontal stroke is drawn above the last letter.