§9. THE MATERIALS OF ANCIENT BOOKS

The materials most widely used for making books in Graeco-Roman antiquity were papyrus and parchment. Of the two, papyrus was by far the more highly regarded. 'Civilization—or at the very least, human history—depends on the use of papyrus,' remarked the Roman antiquarian Pliny the Elder describing the method of manufacture of this writing material.\(^2\) In his day no fewer than nine varieties in size and grade of papyrus sheets were available in the marketplace.

Papyrus is an aquatic plant of the sedge family that grew abundantly in the shallow waters of the Nile in the vicinity of the delta. When mature the plant, which resembles a stalk of corn (maize), was harvested and the stem cut into sections twelve to fifteen inches in length. Each of these was split open lengthwise and the core of pith removed. After the pith was sliced into thin strips, these tape-like pieces were placed side by side on a flat surface, and another layer placed crosswise on top. The two layers were then pressed firmly together until they formed one fabric—a fabric which, though sometimes so brittle now that it can be crumbled into powder, once had a strength equal to that of good, hand-made paper.\(^3\)

Somewhat more durable as writing material was parchment.\(^4\) This was made from the skins of sheep, calves, goats, antelopes, and other animals. The younger the animal, the finer was the quality of skin. Vellum was the finest quality of extra-thin parchment, sometimes obtained from animals not yet born. After the hair had been removed by scraping, the skins were washed, smoothed with pumice, and dressed with chalk. Before the parchment sheet was used for writing, the horizontal lines as well as the vertical margins were marked by scoring the surface


\(^4\) The word 'parchment' is derived from the name Pergamum, a city of Asia Minor (cf. Rev. 2:19). Pliny the Elder (Nat. Hist. XIII.xxi.68–xxvii.82) tells us that rivalry between King Ptolemy of Egypt and King Eumenes of Pergamum in enlarging their respective libraries prompted the former to put an embargo on the export of papyrus, whereupon the Pergamenes 'discovered' parchment. Actually, however, parchment had been used as writing material long before the altercation reported by Pliny. Cf. Karl Lüthi, Das Pergament. Seine Geschichte, seine Anwendung (Bern, 1938); R. R. Johnson, 'Ancient and Medieval Accounts of the "Invention" of Parchment,' California Studies in Classical Antiquity, iii (1970), pp. 115-25; Ronald Reed, Ancient Skins, Parchments, and Leathers (Studies in Archaeological Sciences; London and New York, 1972); and idem, The Nature and Making of Parchment (Leeds, 1975).
THE MAKING OF ANCIENT BOOKS

with a blunt-pointed instrument drawn along a rule. It was sufficient to draw the lines on one side of the sheet (usually the flesh-side), since they were visible also on the other side. In many manuscripts these guide lines can still be noticed, as also the pinpricks that the scribe made first in order to guide him in ruling the parchment. Different schools of scribes employed different procedures of ruling, and occasionally it is possible for the modern scholar to identify the place of origin of a given manuscript by comparing its ruling pattern (as it is called) with those in other manuscripts whose place of origin is known.25

Vellum intended for deluxe volumes, perhaps as presentation copies to royalty, would be dyed a deep purple and written with gold and/or silver ink (see Plate 20). Ordinary books were written with black or brown ink (§11) and sometimes had decorative headings and initial letters6 colored with blue or yellow or (most often) red ink—whence the word 'rubric,' from ruber, the Latin word for 'red.'

The advantages of parchment over papyrus for the making of books seem obvious to us today. It was somewhat tougher and more durable than papyrus, which deteriorates faster in a damp climate. Moreover, parchment leaves could receive writing without difficulty on both sides, whereas the vertical direction of the fibers on the verso side of a sheet of papyrus may have made that side less satisfactory than the recto as a writing surface. Finally, parchment had an advantage over papyrus in that it could be manufactured anywhere.

On the other hand, parchment also had its disadvantages. For one thing, the edges of parchment leaves are liable to become puckered and uneven. Furthermore, according to the observation of Galen,27 the famous Greek physician of the second century A.D., parchment, which is shiny, strains the eyes of the reader more than does papyrus, which does not reflect so much light.

During the Middle Ages the Arabs learned the technique of making paper from rags. Although less strong than parchment or vellum, paper was more supple and cheaper. By the twelfth and thirteenth centuries paper manuscripts became more and more numerous.

§10. THE FORMAT OF ANCIENT BOOKS

There were two main forms of books in antiquity. The older form was the roll. This was made by fastening sheets of parchment or papyrus together side by side, and then winding the long strip around a dowel of wood, bone, or metal, thus producing a volume (a word derived from the Latin volumen, meaning 'something

25 Kirpov and Silva Lake identify 175 ruling patterns in their Dated Greek Minuscule Manuscripts to the Year 1200 A.D. (Monumenta Palaeographica Vetera, First Series, Paris 1-3; Boston, 1934-1939), this number is increased to 800 patterns in J. Leroy, Les Types de réglage des manuscrits grecs (Paris, 1976). Cf. also Leroy, 'La description codicologique des manuscrits grecs de parchemin,' in La paléographie grecque et byzantine (Paris, 1977), pp. 27-44.


27 Opera, iii, p. 776, and xvii, p. 630 (ed. C. G. Kuhl).
rolled up'). The writing was placed in columns, each about 2½ to 3½ inches wide running at right angles to the length of the writing surface. Usually only one side of the writing surface was utilized.

The maximum average length of such a roll was about thirty-five feet; anything longer became excessively unwieldy to handle. Ancient authors therefore would divide a lengthy literary work into several 'books,' each of which could be accommodated in one roll.

The other common form of books in antiquity was the codex, or 'leaf-book.' This was made from either parchment or papyrus in a format resembling modern books. A certain number of sheets, double the width of the page desired, were stacked on top of one another and folded down the middle. It is obvious that a given number of sheets will produce twice the number of leaves and four times the number of pages. The system of four sheets/eight leaves/sixteen pages eventually became the standard format, and from the Latin word quaternio, meaning 'a set of four,' was derived the English word 'quire'—which has come to be used (against its etymology) for a gathering, whatever the number of sheets.

At first, most codices were made in single-quire format. The disadvantages of such a format are obvious. Besides being pudgy and somewhat clumsy to use, a single-quire codex tends to break at the spine. Furthermore, if the book is to have an even appearance when it is closed, it must be trimmed along the fore-edge, and this results in the pages at the middle of the book being narrower than those on the outside. For these reasons scribes eventually found it to be more advantageous to assemble a number of smaller quires and to stitch them together at the back.

There was an art connected with the manufacture of such codices. Since the hair-side of parchment is slightly yellower in color than the flesh-side, the aesthetically-minded scribe was careful to place the sheets in such a way that whenever the codex was opened the flesh-side of one sheet would face the flesh-side of another sheet, and the hair-side face hair-side. Similarly, in making a papyrus codex careful scribes would assemble sheets of papyrus in such a sequence that the direction of the fibers of any two pages facing each other would run either horizontally or vertically.

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19 The sheets for a papyrus codex were usually obtained by cutting them to a given size from a long roll of papyrus writing material, the roll having been previously manufactured by gluing together sheets of a standard size (kollemata). Today the joins (kollesis) from the roll of material are sometimes visible in the pages of a codex. See James M. Robinson's detailed discussion, 'On the Codicology of the Nag Hammadi Codices,' Les textes de Nag Hammadi . . . , ed. by Jacques-É. Ménard (Leiden, 1975), pp. 15-31; idem, 'The Manufacture of the Nag Hammadi Codices,' Essays on the Nag Hammadi Texts in Honour of Pahor Lobis, ed. by Martin Krause (Leiden, 1975), pp. 170-90; and idem, 'The Future of Papyrus Codicology,' The Future of Coptic Studies, ed. by Robert McL. Wilson (Leiden, 1979), pp. 23-70, esp. 23-47.


21 On recto and verso in manuscripts, see E. G. Turner, The Terms Recto and Verso; the Anatomy of the Papyrus Roll (Actes du XVe Congrès International de Papyrologie, Première Partie; Papyrologica Bruxellensia, 16; Brussels, 1978).
THE MAKING OF ANCIENT BOOKS

It is obvious that the advantages of the codex form of book greatly outweigh those of the scroll. The Church soon found that economy of production (since both sides of the page were used) as well as ease when consulting passages (no need to unroll the more cumbersome scroll) made it advantageous to adopt the codex rather than the scroll for its sacred books. It may be, also, that the desire to differentiate the external appearance of the Christian Bible from that of Jewish scrolls of the synagogue was a contributing factor in the adoption of the codex format.19

In the present volume Plates 1, 2, and 3 show fragments from rolls; the fragment in Plate 8 may be from a roll; all the other Plates reproduce pages, or portions of pages, from codices.

§II. PEN, INK, AND OTHER WRITING MATERIALS

From time immemorial the Greeks wrote on parchment and papyrus with a reed (κάλαμος or δόναξ), sometimes also with a tiny brush. When the stalk of the reed had been thoroughly dried, one end of it was sharpened to a point and slit into two equal parts. We first hear of the quill pen in the fifth or sixth century A.D., but no doubt it was in use before that.

The ink (μελαν) used by Greek scribes for writing on papyrus was a carbon-base ink, black in color, made from soot, gum, and water. Since this kind of ink did not stick well to parchment, another kind was devised. One recipe for this second kind used nut-galls (oak-galls). These were pulverized and then water was poured over the powder. Sulfate of iron was afterward added to it, as well as gum arabic. By the fourth century after Christ this type of ink tended to supersede carbon-based ink even for writing on papyrus. Nut-gall ink in the course of time takes on a rusty-brown color. The chemical changes it undergoes may, in fact, liberate minute quantities of sulphuric acid that can eat through the writing material (see Plate 20).

Other colors of ink were also used. Titles, first lines of chapters, and even whole manuscripts were sometimes written with red ink. This was made from minerals, either cinnabar (κυπαρισσί) or minium (μέλανος). Purple ink (σοφίρα) was made of a liquid secreted by two kinds of gastropods, the murex and the purpura.

The writing on some vellum manuscripts is in silver and/or gold letters. The vellum of these codices is often purple, but sometimes it is white. Such editions de luxe were costly and valuable, and they were usually intended for great dignitaries of church and state. Purple manuscripts that have survived include uncial copies of the Gospels dating from the sixth century (Gregory–Aland 0, N, Σ, Φ, and 080)

and the ninth century (596), and minuscule copies from the ninth and tenth centuries (565 and 1143 respectively). In a remarkable copy of the Gospels dating from the fourteenth century, which once belonged to the Medicis (Gregory–Aland 16), the general run of the narrative is written in vermillion; the words of Jesus and angels are crimson and occasionally in gold; the words quoted from the Old Testament and those spoken by the disciples are blue; and, finally, the words of the Pharisees, Judas Iscariot, and the devil are black.

Besides pen and ink, other implements used by ancient and mediaeval scribes included a ruler or straightedge (κανών) and a stylus (γραφός) or a thin lead disk (κυκλομαθίδιον) for drawing lines on the parchment; a pair of compasses (διαμετρίς, καρκίνοι) for keeping the lines equidistant from each other; a sponge (στούγγος) for making erasures and for wiping off the point of the pen; a piece of pumice stone (κλισίμη) for smoothing the nib of the pen as well as roughnesses on the papyrus or parchment; a penknife (γλύφανος or σμήλη) to sharpen the pen; and an inkstand (μελανοδόκων or μελανοδοχείον) to hold the ink.

§12. PALIMPSESTS

Sometimes the parchment of a manuscript was used a second (or even a third) time. Particularly during a period of economic recession, when the cost of writing materials increased, an older, worn-out volume would be used again. The original writing was scraped and washed off, the surface re-smoothed, and the new literary material written on the salvaged pages. Such a manuscript is called a palimpsest, which means 'rescraped' (from τάλων and ψάω). Several processes have been used in the attempt to read the almost totally obliterated underwriting. In the nineteenth century certain chemical reagents (such as ammonium hydrosulphide) were employed to bring out traces of the ink remaining in the parchment. The twentieth century has seen the use of the ultra-violet lamp and, still more recently, the vidicon camera, which acquires an image of very, very faint writing in digital form, records it on magnetic tape, and then reproduces it by an electro-optical process.\footnote{For a description of the last-mentioned process, see John F. Benton, Alan R. Gillett, and James M. Soha, 'Digital Image-Processing Applied to the Photography of Manuscripts, with Examples Drawn from the Pincus MS of Arnold of Villanova,' Scriptorium, xxxiii (1979), pp. 40–51.}

One of the half-dozen or so most important parchment manuscripts containing portions of the Old and New Testaments in Greek is such a palimpsest. Its name is codex Ephraemi rescriptus, dating from the fifth century.\footnote{The under-writing was deciphered and edited by Tischendorf (Leipzig, 1843) before the invention of the ultra-violet lamp. For a list of additions and corrections gained by the use of such a lamp, see Robert W. Lyon, 'A Re-Examination of Codex Ephraemi Rescriptus,' New Testament Studies, v (1958–59), pp. 260–72. J. Harold Greenlee has given attention to the under-writing of nine other fragmentary New Testament manuscripts (namely 0109, 0104, 0132, 0134, 0135, 0209, 0245, 0246, and 0247); see also Nine Unial Palimpsests of the Greek New Testament (Studies and Documents, vol. xxxix; Salt Lake City, 1968).} In the twelfth century it was erased and many of the sheets rewritten with the text of a Greek translation of thirty-eight treatises or sermons by St. Ephraem, a Syrian Church Father of the fourth century. (This is not the only instance when sermons have
covered over the Scripture text!) Sometimes the under-writing of palimpsests was not thoroughly expunged, and in these cases, particularly when it happens to stand between the columns of the upper writing, one can decipher it without undue difficulty (see Fig. 9 and Plate 30).

The palimpsesting of manuscripts came to be prohibited by the Church. Among the canons passed by the Trullan Synod (A.D. 592) for the Quinisext Ecumenical Council, the 68th canon forbids the sale of old manuscripts of the Scriptures to βιβλιοκάπηλοι ('book dealers'), or μυρεψοί ('perfumers'), or to any person whatever.
The Transcribing of Greek Manuscripts

§13. Scribes and Their Work

Prior to the invention of printing with movable type in the middle of the fifteenth century, each copy of every piece of literature was produced by hand—a long and painstaking task, fraught with possibilities of introducing accidental changes into the text. Books were expensive, for it would take many weeks or even months to finish a handwritten copy of a literary treatise of considerable length.

Something of the drudgery of copying can be appreciated from the colophons, or notes, that scribes not infrequently appended at the close of their handiwork. A typical example, found in many non-Biblical manuscripts, expresses relief: 'As travellers rejoice to see their home country, so also is the end of a book to those who toil [in writing].' Other manuscripts close with an expression of gratitude: 'The end of the book—thanks be to God!' A traditional colophon that occurs in more than one manuscript of the ancient classics describes the physiological effects of copying: 'Writing bows one's back, thrusts the ribs into one's stomach, and fosters a general debility of the body.' In an Armenian manuscript of the Gospels a scribal note complains that a heavy snow-storm was raging outside, and that the scribe's ink froze, his hand became numb, and the pen fell from his fingers.

Along with such colophons reflecting the difficulties and drudgery of copying manuscripts, there are others that express the scribe's feeling of satisfaction at having created an immortal work. A frequently occurring colophon is the couplet:

\[ \ddot{\text{h}} \text{ m\ae} \nu \chi\epsilon\rho \ddot{\text{h}} \text{ g\r\alpha\phi\alpha\ss a} \sigma\eta\pi\epsilon\alpha\iota \tau\acute{\alpha}\varphi \iota \]
\[ \gamma\rata\rho\acute{\iota} \delta \text{ m\e}\nu\epsilon\iota \chi\rho\nu\acute{\iota} \varsigma \pi\lambda\rnu\epsilon\sigma\tau\acute{\alpha}\tau\acute{\nu} \text{ous} \]

('The hand that wrote [this] moulders in a tomb, but what is written abides across the years [lit. to fullest times']).

Christian scribes, for the most part monks under the supervision of a prior (\(\gamma\gamma\omicron\omicron\mu\acute{\epsilon}\omicron\omicron\), often make reference to their unworthiness, describing themselves with such derogatory epithets as 'least,' 'the very least,' 'poor,' 'wretched,' 'thrice wretched,' 'unprofitable,' 'the most clumsy of all men,' 'a sinner,' 'a sinner of all sinners,' 'the greatest of sinners,' and the like.\(^3\) Not infrequently the scribe will add a prayer to God or Christ to have mercy upon him (see Plates 26, 32, 39, and 43).


THE TRANSCRIBING OF GREEK MANUSCRIPTS

Two modes of producing manuscripts were in common use in antiquity. According to one procedure, an individual would procure writing material and make a new copy, word by word and letter by letter, from an exemplar of the literary work desired. It was inevitable (as anyone can see who tries to copy by hand an extensive document) that accidental changes would be introduced into the text as it was transmitted by successive generations of copyists.

The accuracy of the new copy would, of course, depend upon the degree of the scribe's familiarity with the language and content of the manuscript being transcribed, as well as upon the care exercised in performing the task. In the early years of the Christian Church, marked by rapid expansion and consequent increased demand by individuals and by congregations for copies of the Scriptures, the speedy multiplication of copies, even by non-professional scribes, sometimes took precedence over strict accuracy of detail. But even for the best trained and most conscientious scribe, the likelihood of error was compounded by certain features of ancient writing. In uncial Greek script certain letters resemble other letters, and if the exemplar was worn and the condition of the ink poor, one can understand that a scribe might easily confuse the letters ε, θ, o, and c. Such confusion, in fact, accounts for the variant readings δε and θες (ος and ος; see §21) in 1 Tim. 3:16. In 2 Pet. 2:13 the variant readings απαταις and απαταις are palaeographically very similar. If λ is written too close to another λ, the two can be mistaken for μ—which accounts for the variant readings αμα and αλα in Rom. 6:5. The question whether Justus, mentioned in Acts 18:7, was surnamed Titius or Titus depends on whether one reads τιτιογιογντου or τιτιογιογντου. The collocation of letters is made still more confusing by the presence of ονοματι immediately preceding the name.

Another possible source of error would confront the scribe when two adjacent or nearly adjacent lines of writing in the exemplar happened to end with the same word or sequence of letters. In such circumstances the scribe, in looking back to the exemplar, might inadvertently omit the intervening line or lines. (In technical language, such an error arises from parablepsis, occasioned by homoeoteleuton, or the 'similar ending' of lines.) In 1 John 2:23 the Textus Receptus, following the later manuscripts, lacks the words δο δολογων τον υιον και τον πατερα εχει—an error that arose when the eye of the scribe mistakenly passed from the words τον πατερα εχει in the first half of the verse to the same three words at the close of the verse.

The other mode of producing books was that followed at a scriptorium. Here a lector (διαγωνιστης) would read aloud, slowly and distinctly, from the exemplar while several scribes seated about him would write, producing simultaneously as many new copies as there were scribes at work.37 Although it increased produc-


During the Middle Ages scribes would write while seated at a desk or table; in antiquity, on the other hand, it appears that they wrote either while seated and holding the writing material on their knee or lap or sometimes while standing and holding a writing tablet in their hand. For discussions see B. M. Metzger, 'When Did Scribes Begin to Use Writing Decks?' Historical and Literary Studies, Pagan, Jewish, and Christian (Leiden and Grand Rapids, 1968), pp. 123–37, and
tivity, dictation also multiplied the types of errors that could creep into a text. A particular source of trouble arose from the circumstance that certain vowels came to be pronounced alike. For example, as was mentioned earlier (§8), in the course of time the pronunciation of the Greek pronouns of the first and second persons plural became indistinguishable. Consequently, in the New Testament it is sometimes difficult or impossible to decide on the basis of divergent evidence in the manuscripts which form was originally intended by the author.

On the whole, however, many such errors in transcription would be caught by the διορθωτής (‘corrector’) of the scriptorium, who inspected for accuracy the finished work of individual scribes. The corrector’s work in a manuscript is usually revealed by different handwriting, different ink, and the ‘secondary’ placing of his work in relation to the principal handwriting. Deletions may be indicated by enclosing a passage in round brackets; by cancelling a letter or letters by means of a stroke drawn through them; by placing a dot (‘expunging dot’) above, or below, or to either side; or by a combination of these methods (see Plates 7, 33, and 37).

§14. STYLES OF GREEK HANDWRITING

Basically there were two kinds of Greek handwriting and several kinds of letters. The book-hand was the more elegant and formal script, customarily employed for literary works; the cursive-hand was the everyday script, ordinarily used for nonliterary documents such as letters, accounts, petitions, deeds, receipts, and the like. The variety of cursive hands was well-nigh infinite; the nonliterary papyri testify to this in a most eloquent way.18

According to the terminology used by many (though not all19) palaeographers, there were four kinds of Greek letters—capitals, uncials, cursive, and minuscules (see Fig. 2). Capitals, characterized by angularity and straight lines, are used in inscriptions, being cut or engraved on some hard substance, such as stone or metal. Each letter is made separate and distinct from every other letter. Uncials are a modification of capitals, in which curves are freely introduced as being more readily inscribed with a pen on parchment or papyrus. For example, ΣΣ in capitals is written СС in uncials. Both capitals and uncials are written as though bounded between two horizontal lines that determine the height and the size of the letters, with only one or two projecting above or below. This ‘bilinear’ quality is particularly noticeable in the calligraphic production of Bibles, in which scribes maintained an extraordinary evenness of script from the first page to the last.

G. M. Parámacoglou, Λέξεις και εικόνες. Some Thoughts on the Positions of the Ancient Greeks and Romans When Writing on Papyrus Rolls, Scrittura e civiltà, iii (1979), pp. 5-21.
18 Referring to Latin hands, E. A. Lowe aptly remarks, ‘Cursive script is to calligraphy what dialect is to literary diction’ (‘Handwriting,’ in The Legacy of the Middle Ages, ed. by C. G. Crump and E. F. Jacob [Oxford, 1938], p. 205).
19 Among present-day palaeographers who do not accept the traditional terminology are Guglielmo Cavallo, who uses ‘majuscule’ for the category usually called ‘uncials,’ and E. G. Turner, who restricts the use of ‘uncial’ to Latin palaeography (in accord with the explicit testimony of Jerome; cf. his Praef. in Lib. Iob, Migne, Patrologia Latina, xxviii, col. 1141) and uses the term ‘capital’ for all ancient Greek handwriting in which ‘each letter is made by itself, for itself, and stands alone, i.e. is unligatured’ (letter dated 21 November 1978).
### Figure 2. Development of the Greek alphabet

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**THE TRANSCIBING OF GREEK MANUSCRIPTS**  

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MANUSCRIPTS OF THE GREEK BIBLE

For daily use this way of writing took too much time, and at an early date cursive writing developed from the uncial and continued to be used concurrently with it. Besides being more convenient, cursive letters were often simplified as well as combined when the scribe would join two or more together without lifting the pen (ligature). At the beginning of the ninth century a special form of the cursive was developed which came almost immediately into widespread use for the production of books, supplanting uncial hands (see §16).

It must be borne in mind that most of the books of the New Testament were originally not intended for publication, and others were meant for only a limited circle of readers. It is understandable, therefore, that the original of, say, one of the New Testament Epistles would have been written in a cursive form of script, quite different in appearance from the earliest known copies of that Epistle which are extant today.

§15. UNCIAL HANDWRITING

From the fourth century B.C. till the eighth or ninth century A.D. the book-hand changed very slowly and often harked back to earlier styles. During a given period more than one style of book-hand was in use, and the transition from one style to a new one always lasted at least one generation (see p. 50).

What Schubart called *Zierstil*, or ‘decorated style’ with serifs and roundels, developed in the second and first centuries B.C. (see Plate 2); it continues to turn up in succeeding centuries at least as late as the third century A.D. The style of writing called Biblical Uncial or Biblical Majuscule—though its use is by no means confined to copies of the Bible—takes its name from its resemblance to the stately hands of the great Biblical codices, Vaticanus, Sinaiticus, and Alexandrinus (Plates 13, 14, and 18). Of all styles of ancient handwriting this one attained the greatest fixity of form. The *upsilon* regularly and the *rho* often extend below the line.

From about the fifth century A.D. the vertical strokes of writing became thicker and in *p*, *γ*, *φ*, and *ψ* longer, while the horizontal or sloping strokes of *γ*, *λ*, *ε*, *ζ*, *κ*, *π*, *ς*, and *τ* often acquired heavy dots or serifs at their ends. The mute *iota* is seldom written; when it does occur, it is, of course, written adscript.

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45 The extended currency of this style of handwriting for several centuries B.C. and A.D. casts doubt on O’Callaghan’s attempt to date certain Greek papyrus fragments from Qumran Cave VII to about A.D. 30. See José O’Callaghan’s ‘*Papiros neotestamentarios en la cueva 7 de Qumrán*’ *Biblica*, liii (1972), pp. 91–100 (English trans. by Wm. L. Holladay, Supplement to *Journal of Biblical Literature*, xcvii, no. 2 [June, 1978]), followed by several other articles and a book entitled *Los papiros griegos de la cueva 7 de Qumrán* (Madrid, 1974). Furthermore, O’Callaghan’s identification of the contents of the fragments as New Testament has found little or no support (see p. 62 below, note 1). His views have been carried to quite unjustifiable conclusions by David Estrada and William White, Jr., *The First New Testament* (Nashville, 1978).

The sixth and seventh centuries saw the development of a hand commonly called
the Coptic Uncial—though Gardthausen objected to the nomenclature. Characteristic of this hand are formal rounded letters of large size, and omega often has an elongated central shaft.

As time went on, the style of uncial writing began to deteriorate. It lost the grace of the earlier specimens; sometimes it was written with a marked slope to the right, and sometimes the strokes were heavy and cumbersome. The circular letters e, o, c became oval, and often were laterally compressed, thus appearing narrow in proportion to their height (see Plate 31). Breathing and accent marks, at first only sporadically employed, came to be used more regularly in the ninth century and thereafter (see §8).

In its final development in the tenth and eleventh centuries, uncial writing reverted from the slanting to the upright position but lost none of its exaggerated and pictorial quality. In this form it is known as Slavonic Uncial (since the Slavs took most of their alphabet from it) and was reserved chiefly for liturgical books.

§16. MINUSCULE HANDWRITING

The uncial hand had a long and distinguished history, which extended over a period of about 1500 years. It was superseded for the writing of books by a special form of cursive letters developed at the close of the eighth or beginning of the ninth century. This minuscule script was a small book-hand that could be written more rapidly as well as more compactly, thus saving both time and parchment. The credit for initiating this reform in Greek handwriting has been commonly attributed to the scholarly monks at the monastery of the Studion at Constantinople, but more recently it has been argued that the perfecting of the minuscule script for book production was the work of humanistic scholars who were involved in the revival of Greek culture at Constantinople during the second epoch of iconoclasm (A.D. 814–42).46

This modified form of the current cursive hand became popular among scribes throughout the Greek world almost at once, though some liturgical books continued for a few centuries to be written in the more stately uncial hand. Thus, Greek manuscripts generally fall into two rather well-defined groups, the earlier being written in uncials and the later in minuscules. The minuscule manuscripts

44 For a list of sixty-one examples (including twenty-nine Biblical texts) of manuscripts that are written in the Coptic uncial, see Jean Irigoin, ‘Onciale grecque de type copte,’ Jahrbuch der österreichischen byzantinischen Gesellschaft, viii (1959), pp. 29-51. For other examples of Coptic uncial, see Turner, Greek Manuscripts, p. 196, addenda to no. 47.

For the rules drawn up by the Abbot Theodore to guide monks at the Studion in Constantinople while they copied manuscripts, see Migne, Patrologia Graeca, ic, cols. 1733-1758, esp. 1739 f.; cf. also Eugene Marin, De Studio conobio Constantinopolitanae (Paris, 1897), and Alice Gardner, Theodore of Studium; His Life and Times (London, 1905).