# THE STORY OF THE CHRISTIANS

## Volume II:

## Jesus of Nazareth

### Chapter 10: The Transmission of Sacred Texts

by

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Public domain image of a palimpsest (page 72), courtesy of the Free Library of Philadelphia, John Frederick Lewis Collection of European Manuscripts

# CHAPTER 10: THE TRANSMISSION OF SACRED TEXTS

This chapter includes explications of two distinct but related topics. One, an investigation into the manner in which the Christians copied and published their texts. And two, an examination into the actual materials upon which the texts of the Christians were written.

We will try to explain the *modus operandi* of manuscript transmission without resorting to the jargon of the professional philologists, papyrologists, epigraphists, and textual critics. The most basic point from which we start is that, as far as we know, we do not have an autograph or a fragment of an autograph of any of the books of the New Testament, the autograph being the original manuscript of the book penned by the author (or his amanuensis). From that point we must acknowledge that what we have are copies of the autograph. However, we do not know how far removed, how many copies removed, from the autograph we are. For example, the Ryland Papyrus (Chapter 3) is dated to *ca.* 100-125 AD (110 AD) on epigraphical grounds, a dating which itself is open to dispute amongst epigraphists. If we accept the postulates that the Ryland Papyrus dates to roughly 110 AD and that John himself died during the reign of Trajan (*reg.* 98-117), that means that the Ryland Papyrus (which contains *John*, 18:37-38) could have been written while John was still alive. But that does not necessarily make the Ryland Papyrus a fragment of the autograph, nor does it mean that the Ryland Papyrus is even the first copy of *John*. In fact, we do not know how many copies removed from the autograph of *John* the Ryland Papyrus might be. That is the problem with all of the Biblical books and the writings of the Church Fathers: usually the surviving manuscripts are an unknown number of copies away from the autographs.

With each copy made of a manuscript the possibility of a change occurs. The change can be a deliberate interpolation; for instance, the copyist might add a word, a phrase, or a sentence to clarify something confusing in the original text or add some lines to drive home a particular point. Of course, the copyist could also delete a word, line, or entire episode that the copyist might think to be inappropriate, not germane, irrelevant, or bogus. We must remember that when the first copies were made of the writings which became the New Testament, there probably was not a belief amongst the first generation of Christians that the manuscripts which they were copying were the infallible words inspired by God himself. They were just accounts by men who knew Jesus or knew about Jesus or were parts of the correspondence amongst the believers in Jesus. Notions of infallibility and divine inspiration came later (Volume V, Chapter 7). Another less deliberate kind of change is the old-fashioned mistake. When transcribing a text, the copyist may skip a word or two or an entire line or two. That omission may then make its way into the copy made of the copy. The same can be said of an accidental misspelling that works its way into subsequent copies.

Thus far we have been speaking in theoretical terms. We have abundant evidence of the manner in which texts were copied and published in imperial Roman and early Christian times. There was, of course, always the instance of an individual copying a text borrowed from someone else. But book publication was a major industry in Rome. The larger booksellers of Rome, all thoroughly reviled by the great authors of antiquity, had cadres of employees called *librarii*, copyists. The *librarii* could be freemen or women, but most often they were slaves. A reader would read a text aloud and the *librarii* would write down what was read. This would allow multiple copies (and multiple possible mistakes) to be made at once. There is also evidence of proofreading to find possible mistakes, but emending mistakes was bothersome enough to preclude the tedium of proofreading.

To have a room full of *librarii* taking down dictation was fine for very popular works, but not every request for a book was for a popular book. Sometimes only a single copy might be called for. In such a case certain *librarii* were trained in what the Roman rhetor Quintillian (*Institutio Oratoria*, X:7.xi) called "an unscientific habit, which the Greeks call 'an irrational knack'" (*usus…inrationalis*, *quam Graeci* "*alogon triben*"

*vocant*). He described how these *librarii* could take in with their eyes whole lines at a time as their hands unthinkingly wrote across the page. He derisively likened it to the knack jugglers have when throwing about their cups and balls. We might liken it to the way typists work when transcribing from dictation, not looking at the keys as they type, or from a written source, keeping their eyes on the source.

It was in this fashion that the works of the well-known orators, generals, poets, and philosophers were published and disseminated. It is highly unlikely that the Gospels and Epistles were reproduced by the leading booksellers and their *librarii*, given that the interest in "Christian writings" was at first limited at best. We do have, however, enough anecdotal clues to piece together a scenario regarding the publication of early Christian texts.

Let us start piecing together the clues beginning with Paul. (The details of most of the information in this paragraph can be found in Volume III, Chapter 9.) Paul used amanuenses and Paul carried around with him *biblia* (probably meaning scrolls) and *membrana* (literally "parchments," probably meaning codices), according to *2Timothy*, 4:13. We do not know the contents of these *biblia* and *membrana*, but it would not be unreasonable to think that Paul may have kept copies of the letters sent to him by his followers and copies of the letters he sent to his followers, which would become the Pauline Epistles of the New Testament. That might account for the fact that we still have all but one (perhaps two) of the epistles we know Paul to have written. If Paul kept copies of his own correspondence, it would not be unreasonable to think that those congregations who received his letters might have kept copies as well.

In (Pope) Clement (I's) letter (*ca.* 96-97) to the Christian community in Corinth regarding their internal quarrels, there are numerous allusions to some of the Gospels and Epistles (Volume V, chart on page 70). Clement does not necessarily quote them verbatim, but his paraphrase of certain passages is so close that it presupposes an actual reading of the texts. How copies of these Gospels and Epistles came to Rome's Christian communities we can only guess, although after Paul's death in Rome his correspondence may have passed on to one of his disciples in that city.

We have an interesting anecdote about copying not Gospels and Epistles, but the writings of one of the Church Fathers, Ignatius of Antioch, who died between 110 and 115. On his journey from Antioch to Rome to face execution, Ignatius wrote letters *en route*. From Smyrna he wrote letters to the Christian churches at Ephesus, Magnesia-on-the-Meander, Tralles, and Rome. From Alexandria Troas he wrote to the congregations at Philadelphia and Smyrna; he added a personal letter to his friend Polycarp, who was bishop at Smyrna at that time. All of Ignatius' letters to the various Christian communities were collected by Polycarp, recopied, translated from Greek into Latin, and sent to various churches across the Empire over the years. Later they were translated into Syriac and Coptic. Here we have the collection, preservation, editing, translation, and copying all by individual initiative. This may well have been the *modus operandi* of the recopying of the Gospels and Epistles in the earliest days of the faith.

Regarding Polycarp's death we have yet another anecdote illuminating the transmission of Christian writings. Polycarp was put to death in Smyrna (İzmir, Turkey) sometime between 149 and 167; his martyrdom was recorded in a work known either as *The Letter of the Smyrnaeans to the Church of Philomelium* or simply *The Martyrdom of Polycarp*. The original letter was written by an anonymous eyewitness of the martyrdom of Polycarp. Irenaeus of Lyons, a disciple of Polycarp, received a copy of that original letter; Irenaeus was in Rome when Polycarp died. Then Irenaeus' copy of the copy of the letter, which was a part of a collection of texts which Irenaeus owned, was copied by a certain Gaius, who had seen Polycarp when he (Gaius) was a boy. Gaius was in Rome and lived with Irenaeus when he made his copy. Gaius' copy was copied by a certain Socrates (or Isocrates in one version), who lived in Corinth. How Gaius' copy made it to Corinth we do not know. Socrates' copy was copied by a certain Pionius. Pionius wrote that Polycarp revealed to him in a dream the location of the manuscript and that when Pionius found it, it was old and in bad condition. Pionius lived in the 4th century. It is from Pionius' copy that the surviving five copies of *The Letter of the Smyrnaeans to the Church of Philomelium* derive. The history of this transmission is explicitly laid out in *The Letter of the Smyrnaeans to the Church of Philomelium*, XXII:1-2.

Thus far in ante-Nicene (pre-325 AD) Christianity we have anecdotes of individuals collecting, preserving, and copying Christian literature. It would not be unreasonable to presume that, as the structure of the Christian church was coming to be modelled on that of the Roman Empire (Volume V, Chapter 2), the local bishops, like the Roman governors, kept official archives and records of their correspondence.

We know that when Hegesippus (*ca.* 110-180) drew up a list of the bishops of Rome from Peter up to the year 168 and of Jerusalem, from James to 160, he must have relied upon local records for his information (Eusebius, *Ecclesiastical History*, various passages *passim*).

The first narrative we have of a major, organized example of Christian publication concerns Origen (Volume VI, Chapter 9). As we shall discuss more fully in that chapter, Ambrosius, a wealthy disciple of Origen, put at Origen's disposal seven male and female amanuenses and seven *librarii*, who could take down his dictation and make copies of his prodigious literary output. Presumably his writings were made available to the students at the Didaskaleion (the Catechetical School of Alexandria) where he taught. When Origen left Alexandria in 231 for Caesarea Maritima (Caesarea, Israel), he apparently took his massive library with him, consisting of his own works and whatever other writings he possessed, of which there were many (Eusebius, *Ecclesiastical History*, VI:3.viii). Origen opened a school in Caesarea similar to the Didaskaleion of Alexandria and continued his writing and teaching there. Origen died probably in 253 as a result of the wounds he received during the persecutions of Trajan Decius (*reg.* 249-251). His library remained in Caesarea at the school he had founded.

In Caesarea Maritima Origen's library, or at least part of it, came into the hands of Pamphilus (*ca.* 250-309), a priest of that city. Pamphilus had studied in his youth in Beirut and then at the Didaskaleion in Alexandria, where he developed a passionate interest in the teachings of Origen, by then deceased. Pamphilus, "burned with such a love of divine literature" (*tanto bibliothecae divinae amore flagravit*, Jerome, *De Viris Illustribus*, LXXV) that he copied most of Origen's works by his own hand. Jerome boasted that he personally possessed 12 commentaries by Origen transcribed by Pamphilus himself; that bit of information must have been part of the transcription made by Pamphilus himself, because Jerome was born 30 years after Pamphilus died. Pamphilus opened a school similar to the one founded by Origen or perhaps Pamphilus simply re-founded or re-constituted Origen's school at Caesarea. The library at Pamphilus' school had as its core Origen's own library of original writings and collected manuscripts. The library contained the only known complete copy of Origen's *Hexapla* (Volume VI, Chapter 9), a copy of the Hebrew language *Gospel of St. Matthew*, and several copies of the Septuagint curated by Origen himself.

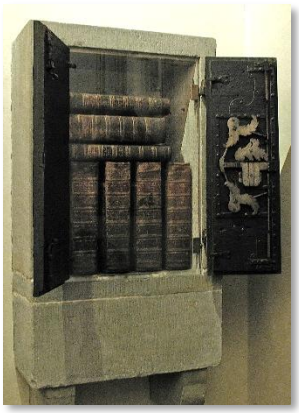
With regard to Pamphilus' school and library, we know that Pamphilus not only collected enthusiastically, but he also copied and edited prodigiously. Pamphilus collected copies of the Gospels and Epistles and edited and corrected them one against the other and then made copies of redacted versions, indicating that already a considerable number of changes (mistakes, deletions, interpolations, additions, etc.) were working their way into Scripture. These copies he gave away liberally to needy students, both male and female, from a cache of copies which he had in store (Jerome, *Against Rufinus*, I:9).

Eusebius of Caesarea, later the "court chronicler" of Constantine I (Volume VII, Chapter 3), came to study under Pamphilus soon after Pamphilus opened his school. Eusebius became so devoted to Pamphilus and his bibliophile projects that he named himself *Eusebius Pamphili*, Eusebius the son of Pamphilus, possibly meaning he was adopted by or became the heir of Pamphilus. Eusebius worked assiduously with Pamphilus in expanding the collection of the library and in reproducing and editing manuscripts. Pamphilus died in the persecutions of 307-309. Eusebius became bishop of Caesarea in 313 and went on to a distinguished career in the court of Constantine. The Library at Caesarea was badly damaged in the persecution in which Pamphilus died but was made good and enlarged later by Eusebius and the bishops who succeeded him. The library continued as one of the major educational centers of Christianity until 640, when the city was captured by Moslem armies and the library destroyed.

All anecdotal evidence about copying and publishing Christian writings up to the time of Pamphilus and Eusebius seems to indicate that it was largely a private enterprise, undertaken by an individual, perhaps an archivist associated with an episcopal chancery or a copyist-scholar associated with a library. The first instance where a major publication effort can be assumed was when Constantine I in the early 330s ordered fifty copies of the Bible to be published for use by the churches of Constantinople (Eusebius, *Life of Constantine*, IV:36). Constantine's order was quite specific: these Bibles were to be "written on prepared parchment (*en diphtherais*, literally "on skins") in a legible manner and in a convenient, portable form by professional transcribers thoroughly practiced in their art." Such a massive publication order could have been completed only by a major bookseller or perhaps the imperial chancery. In any case, the *modus operandi* would have been the same, a lector reading to *librarii*, who wrote down what was dictated to them.

As the Christian church was subsumed into the machinery of the Roman state in the 4th and 5th centuries, episcopal chanceries came more to resemble the imperial chancery and the publication of church council canons, governmental edicts regarding matters of the faith, and imperial correspondence with church hierarchs became an obligation of the state. But the collection, recopying, and publication of sacred writings seems to have remained a non-governmental endeavor, with the rare exception of a city or imperial edict creating a public library, in which case state funds went into the enterprise.

We know of schools maintained by eastern Christians: the Academy of Gondishapur, the School of Edessa, the School of Nisibis, the Monastery of Craterius and Diodorus, *et al.*; their reputations were also known in the Latinate west, where they may well have inspired Roman Christians to imitate them but to no avail. As the Christological controversies of the 4th-6th centuries raged in the east, many of these schools found themselves on the wrong side of the debates and the educators, monks, and clergy were persecuted or banished to the Sassanian Empire. The School of Nisibis (Nusaybin, Turkey) was so famous that Senator Cassiodorus (490 - *ca.* 580), the *Magister Officiorum* (Master of Offices, a high administrative official) under the Ostrogothic King Theodoric (*reg.* 471-526), tried to persuade Pope Agapitus I (*reg.* 535-536), himself an avid book collector, to open a similar institution in Rome. But the utter impoverishment of the Roman Papacy precluded such an undertaking.

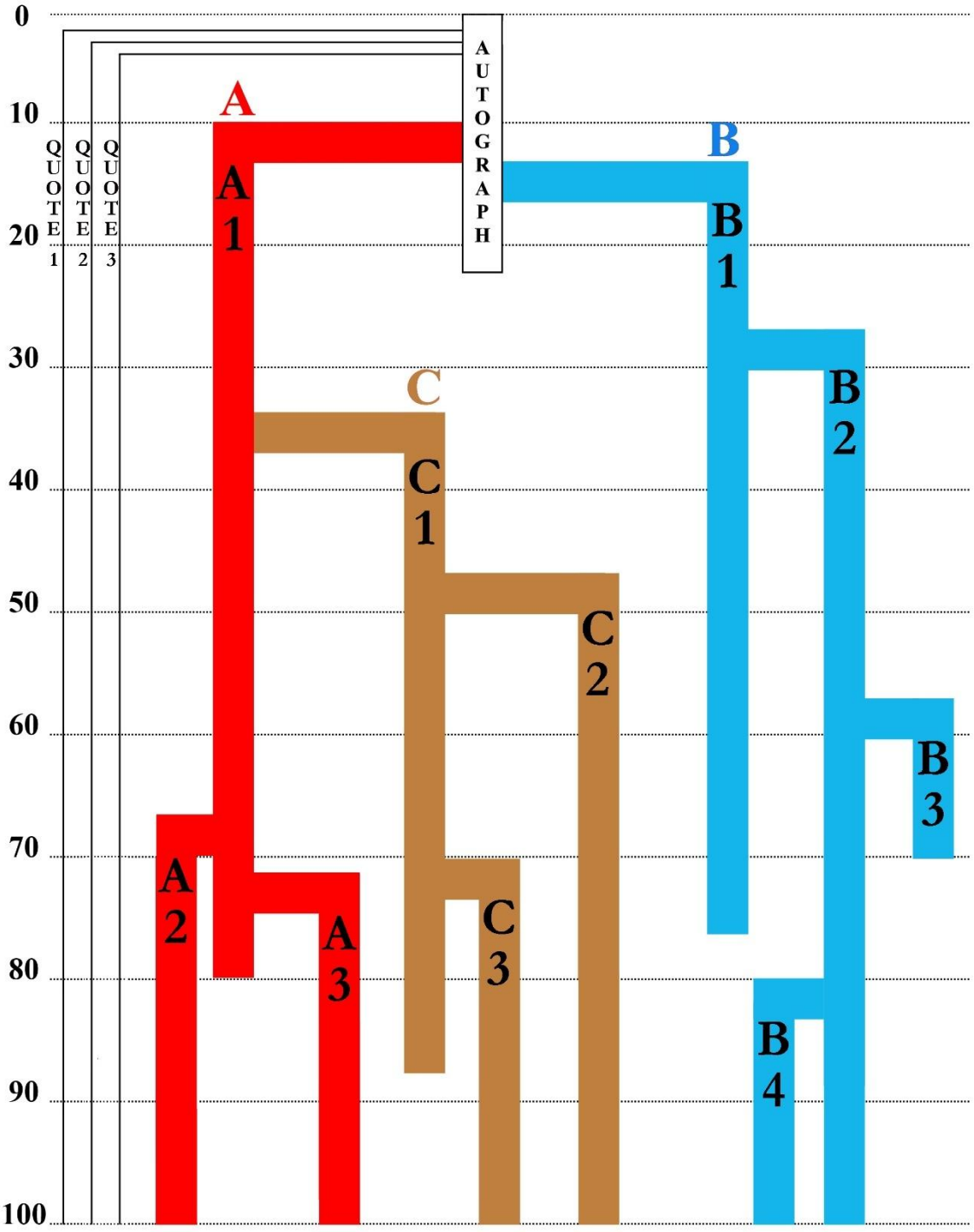


**A Renaissance *armarium* in the Museum of Bigallo, Florence, Italy.**

Magnus Aurelius Cassiodorus retired in the 540s from governmental affairs to his family estates in southern Italy. There he founded a monastery called the Vivarium. Cassiodorus brought his large personal library with him to the monastery. What concerns us most in this chapter about Cassiodorus' monastery was his devotion to book collecting, manuscript copying, and textual editing. Other monastic leaders before him (e.g., Pachomius, Martin, Jerome, *et al.*) made a place for manuscript copying and reproduction in the monks' routine, but Cassiodorus approached the activity with a new fervor. In his *Institutiones divinarum et saecularium literarum* (*Institutions of Divine and Human Letters*) Cassiodorus lays out in intricate detail not just the necessity of understanding sacred and profane fields of knowledge but also the intricate minutiae of manuscript reading, editing, recopying, spell-checking, translation, and book production and repair. The Vivarium boasted a magnificent library arranged by subject matter in *armaria* (book cupboards), of authors both pagan and Christian. From Cassiodorus' own writings we know that the Vivarium had on its shelves 231 codices by 92 Greek and Latin authors. As per his instructions, productions of the Bible were to be not just accurate but works of art and an act of prayer. Cassiodorus, though wealthy himself, did not ignore the necessity of filthy lucre in the monastery's exemplary passion for book collection and publication. The Vivarium operated a book shop, a place where visitors could purchase copies of books made at the Vivarium. Proceeds went to further the monks' bibliophile exertions.

Cassiodorus died sometime in the 580s; the library of the Vivarium was still intact in the 650s. After that time there are scattered notices of parts of its collection coming into the hands of various Popes, monarchs, and monasteries across Europe. When the Vivarium itself was destroyed is uncertain; its exact location is disputed.

It is difficult to gauge the impact Cassiodorus had on later monastic developments regarding book collection, reproduction of manuscripts, textual criticism, etc. While Cassiodorus' educational program regarding the seven liberal arts (Book II of *Institutiones divinarum et saecularium literarum*) may have been the foundation for later treatises on the subject, his advice on philology and manuscript reproduction does not seem as profound. The later Irish enthusiasm for book collecting, library building, and book reproduction in the *scriptoria* of later medieval monasteries (Volume X, Chapter 11 and Volume XII, Chapter 7) may have had an independent origin and development in the isles and on the continent. From all the extant evidence it seems that book copying in medieval monasteries was an individual affair, a solitary monk at his desk recopying a text onto virgin sheets. Proofreading and manuscript illumination varied from monastery to monastery. Recopying was onerous and tedious; mistakes abounded.


0
10
20
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40
50
60
70
80
90
100
QUOTE 1
QUOTE 2
QUOTE 3
AUTOGRAPH
A
A 1
A 2
A 3
B
B 1
B 2
B 3
B 4
C
C 1
C 2
C 3

The matter of mistakes and recopying now brings us to the matter of textual transmission. To illustrate the concept we are going to use a completely theoretical (made-up) example using the accompanying chart. In the autograph of our fictitious document there is the phrase "Jesus walked with his Apostles." The autograph is written in the year 0. Ten years after the autograph was written, copyist A recopied the autograph (A1) and fifteen years after the autograph was written, copyist B recopied the autograph (B1). Twenty-two years after it was written the autograph was destroyed. Copyists A and B have begun textual families A and B, respectively.

When copyist B recopied the autograph (B1), however, he incorrectly copied the phrase in question as "Jesus walked with *some of* his Apostles," while copyist A correctly copied the phrase in A1. The mistake in B1 is obviously not of great theological concern, but it is a mistake, nonetheless.

Lest the reader think we are making much ado about nothing, check out a copy of the Nestle-Aland *Novum Testamentum Graece*; it is a Greek language edition of the New Testament edited originally by Eberhard Nestle (1851-1913) and later by Kurt Aland (1915-1994), amongst others. The critical apparatus at the back of the book lists all the extant manuscripts and fragments of manuscripts of the New Testament in Greek and the innumerable textual variations these manuscripts contain. The numerous textual differences in the manuscripts lead one to the conclusion that there is no one Greek New Testament but dozens of textual families of the Greek New Testament. While we were writing the first volumes of *The Story of the Christians*, the discovery of a new variant of *Matthew*, 12:1 in Syriac was announced. *Matthew*, 12:1 reads "At that time Jesus went on the Sabbath through the grainfields and his disciples, being hungry, began to pluck the ears of grain and to eat." The new Syriac version reads, "At that time Jesus went on the Sabbath through the grainfields and his disciples, being hungry, began to pluck the ears of grain, *crush them in their hands*, and to eat." The phrase "*crush them in their hands*" is not known in any other textual tradition. But it is obvious that when one plucks an ear of wheat one must crush it to remove the husks before one can eat the seeds. Perhaps some unknown scribe wanted merely to state the obvious which had apparently been left out of the text he was copying. Back to our example.

In year 30 copyist B2 takes it upon himself to illuminate his readers who *some of* his Apostles were and he names them, but instead of writing Phillip (*Philippos*) he wrote Hippolytus (*Hippolytos*). That mistake is carried on by B3 and B4. B2 and B4 survive to 100 years after the autograph was written; let us say that we live in that year 100.

Meanwhile, A1 (which is a correct transcription of the autograph) is recopied in year 35 by copyist C, whose text (C1) adds a correct list of all of Jesus' Apostles. The list is correct, but it is an addition to the autograph, nonetheless. In later years C2 and C3 are made with the correct list but the Apostles are in different orders. Around the time of C3, A2 and A3 are made and both are correctly transcribed and truly reflect the autograph.

In our year of 100 we now examine the surviving manuscripts: A2, A3, C3, C4, B2, and B4. Here is where the detective work begins. B2 is clearly the oldest text, but it is also wrong. Whereas A2 and A3 are much newer texts than B2, but they are correct. It is the job of the investigator to determine which of the surviving manuscripts belong to the same textual families and how they are related and dated. This might be determined by epigraphical evidence (the dates of the styles of handwriting), papyrological evidence (the dates and methods of papyrus or parchment production), archaeological evidence (carbon dating or other methods of age verification), or cross-referencing. Cross-referencing refers to searching out independent sources that might have quoted or alluded to a work or phrase, like "Jesus walked with his Apostles." Suppose we have independent sources (QUOTE 1, QUOTE 2, QUOTE 3) which quote the autograph as "Jesus walked with his Apostles" and predate A1 and B1; since the three QUOTES all agree with A1, we can be fairly certain, then, that A1 is correct. It is an endeavor which, as you might suspect, usually leads to divergent conclusions and opinions. But it is always imperative to remember that the oldest copy is not always the correct version.

Our next topic of investigation concerns the actual materials upon which the Christians inscribed their sacred writings and the manner in which these materials were bundled together and transmitted to be read or copied again. When Christians first started committing their thoughts to writing there were two media for the portable written word, papyrus and parchment. We shall start with papyrus.

**Left, papyrus growing in a vacant lot in Giza, Egypt.**

The English words "paper" and "papyrus" come from the Latin *papyrus*, which comes from the Greek *papyros*. It is not known where the Greeks got that word, certainly not from the Egyptians who called papyrus (both the plant and the paper) *twfy*.

The writing material which we call papyrus comes from the plant *Cyperus papyrus*, a member of the sedge family (*Cyperaceae*). It was at one time common throughout the wetlands of Africa, especially along the Nile River and, in antiquity, particularly in the Nile Delta. In the Nile River basin there are two main species of papyrus, a dwarf papyrus and a giant papyrus, growing 2-3 meters (6.56-9.84 feet) and 4-5 meters (13.12-16.41 feet) respectively. For the ancient Egyptians papyrus was a factotum plant; from it they made boats, baskets, sandals, cloaks, huts, hats, ropes, and rugs; the root is edible. They used it as fuel, in medicine, mixed with incense, and as a writing medium. When ancient Egyptians communicated with the Hittites, Levantines, and Mesopotamians their scribes (specially trained no doubt) were adept at corresponding in foreign languages, using the cuneiform script, written on clay tablets, which were then baked. But writing on papyrus was easier.

The manufacture of papyrus as a writing medium was a long process which changed over the centuries, but generally speaking it went much as Pliny the Elder described it in *Natural History*, XIII:11 *seq*.

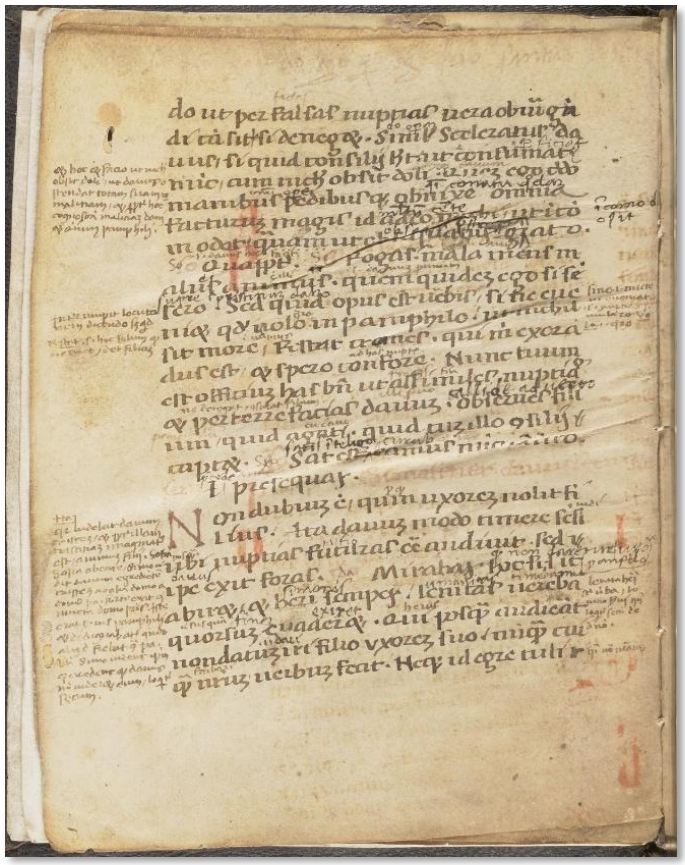
1. Harvest the plant while it was green, cutting it off above the rhizome and then cutting off the flowers.
2. Cut the stalks to roughly the height of the sheet one desires. These sheets were usually about 40 centimeters (15.74 inches) high.
3. Strip the outer rind from the stalk.
4. Cut the inner pith into long, narrow strips.
5. Pound the pith strips until they are flattened.
6. Take the flattened strips and place them vertically side-by-side with the edges slightly overlapping. This layer was about 40 centimeters long, making essentially a square sheet. This layer would become the back layer, the *verso*.
7. Place another layer of flattened strips horizontally side-by-side with the edges slightly overlapping across the *verso* layer at a right angle. This layer would become the front layer, the *recto*.
8. The *recto* and *verso* layers would be pressed together, even pounded if necessary. The juices within the strips would "glue" the *recto* and *verso* layers together. There is evidence that certain papyrus manufacturers used some sort of paste (gum Arabic or egg whites) to glue together the *recto* and *verso* layers.
9. Allow the sheet to dry; drying time varied and would affect the color of the papyrus. Some Egyptologists claim the longer the papyrus dried, the whiter the sheet; other Egyptologists claim just the opposite.
10. The dried product is burnished on the *recto* side with a smooth stone, a sanded piece of wood, or a polished piece of bone or ivory.

**Modern papyrus maker, arranging overlapping vertical and horizontal strips of papyrus. To the right is a press for pressing the layers together.**

11. The sheets are glued together, overlapping about 1-2 centimeters (.4-.8 inch) using a paste made from the Nile catfish (*Mochokus niloticus*). The standard length of a papyrus scroll was twenty sheets glued together, making it about 600-800 centimeters (236-315 inches) long. The height and length of scrolls varied widely according to the nature of the text to be written: business records, military lists of supplies or troops, tax records, religious texts, illustrated documents, *et al.*
12. The combined sheets, now a scroll, are trimmed uniformly at top and bottom along the entire length of the scroll.

Writing on the burnished *recto* side was preferred but there are quite a number of papyri with writing on both sides. The writing was usually done when the papyrus was in individual sheets, which were then later glued together (Step 11) and then trimmed (Step 12). The scribe generally placed the papyrus sheet upon a board while he wrote or sometimes on a board on his lap if he was sitting. Writing was from left to right in vertical columns, which also were read left to right. There were two main ink colors: black was made with carbon and gum sourced from plants, and red was made from the same mixture with red ochre or iron oxide added. Saharan sand rich in hematite was a good source of iron oxide. The ink could be easily washed away with water, so a scribe could correct his mistake immediately. Years (or centuries) later someone could rinse or scrape a papyrus scroll or sheet and re-use it. The faint stain of the original writing could still be retrieved by a keen eye or by modern imaging techniques. Such a rinsed or scraped and re-used page is called a palimpsest, from the Greek *palin* + *psen*, "to scrape again." Egyptian scribes wrote with a rush (*Juncus maritimus*) whose end was cut and chewed to form a kind of brush. The Greeks introduced a much sturdier reed (*Phragmites aegyptiaca*) in *ca.* 200 BC, which was quickly adopted by the Egyptian scribes. Its business end was cut at a slant and split, like later quills. The scrolls were rolled with the *recto* on the inside and the *verso* on the outside, rolling left to right. This was one reason why writing on the

**Tomb decoration showing scribes with their papyrus boards, rush pens, and ink palettes, Dynasty IV or early V, from the Mastaba of Ka-Ni-Nisut, Giza.**



**Page from a manuscript of the *Comedies* of Terence, late 12th – early 13th century, from Italy. The parchment of the book was previously used for another work (unidentified); it is a palimpsest. The remains of the obliterated writing can be seen most clearly in the red capital letters that show through under the later writing.**

*recto* side was preferred, as the *verso* side was open to wear and tear on tables, desks, or laps as it was rolled and unrolled. The Romans came to wind their papyrus scrolls around a wooden stick called the *umbilicus*, the navel, for easier handling.

The earliest surviving papyrus scroll comes from the Tomb of Hemaka at Saqqara, Egypt. It is a First Dynasty tomb and dates to *ca.* 3100 BC. The scroll was found in a box in the tomb; the scroll was blank. Several written papyrus scrolls dated to the Fourth and Fifth Dynasties (*ca.* 2600 - *ca.* 2300 BC) from Saqqara and Giza have been discovered. Papyrus was the preferred writing medium and the scroll the preferred format for millennia. That would change as parchment displaced papyrus as the preferred writing medium and the codex replaced the scroll as the preferred publication format. This displacement evolved gradually over about five centuries before and after Christ.

Let us define parchment generally as a cured animal skin; the species of animal and the various techniques of curing produced the different qualities of parchment and different types of vellum, vellum being considered a finer quality of cured animal skin. The English word "parchment" comes from the Latin *pergamenum*, a reference to the city and kingdom of Pergamon (Bergama, Turkey). It is an allusion to a story told by the ancient Roman scholar Varro (116-27 BC), repeated by Pliny in *Natural History*, XIII:2. Pliny wrote that there was a great competition among the Diadochoi rulers (Volume I, Chapter 2) to build the grandest library. Eumenes II (*reg.* 197-159 BC) of the Kingdom of Pergamon was giving "one of the Ptolemies" of Egypt (possibly any Ptolemy between V and VIII) stiff competition in library building. Since papyrus was the preferred writing medium in antiquity and since papyrus grew mainly in Egypt, this King Ptolemy decided to stifle Pergamon's library enthusiasm by forbidding the export of papyrus, bringing thereby Pergamon's book reproduction to a halt. To keep Pergamon's book collecting going, Eumenes ordered his scholars to devise an alternative writing medium. They came up with a cured animal skin which came to be called *pergamenon* (Greek) and *pergamenum* (Latin), honoring the city which came to be the chief production center of parchment.

That Pergamon became a major production center of parchment is true; the city's *pergamenarii* or *percamenarii*, parchment makers and sellers, were renowned throughout the Mediterranean. The story of the origin of parchment probably is not. There are animal skin scrolls found in Egypt that date to Dynasties IV (*ca.* 2600 – *ca.* 2500 BC), VI (*ca.* 2300 – *ca.* 2200 BC), XII (*ca.* 2000 – *ca.* 1800 BC), and XIX (*ca.* 1300 – *ca.* 1200 BC). Herodotus (V:58) said that "long ago," when the Greeks adopted their alphabet from the Phoenicians, the Greeks of Ionia (western coast of Anatolia) called "paper" (*byblous*) "skins" (*diphtheras*), because paper was scarce and people used the skins of goats and sheep to write on. Herodotus then wrote that many barbarians (non-Greeks) of his day (5th century BC) still used skins as writing material.

The word Herodotus and most Greeks used for "paper" was not a word derived from the word "papyrus" (*papyros*) but *byblos*; other Greeks used *biblos*. *Byblos* / *biblos* was a word denoting the papyrus plant, a papyrus page, a papyrus scroll, writings on papyrus, divisions of writings (chapters), or writings (books) in general. *Byblia* / *biblia*, the plural, came to mean pages or scrolls or "books," in the sense of individual treatises or compositions. It is the origin of the English word "Bible," meaning "The Books."

The Greek word *byblos* comes from the name of the ancient Phoenician city Gebel (Jebeil, Lebanon). Gebel was the main port city through which Egyptian papyrus was shipped to the Greeks in Ionia, the Aegean Islands, and mainland Greece. The ancient Greeks garbled the name of the city of Gebel into "Byblos," the name by which the city is still known today to most Europeans and English speakers.

**Relief of a tanner scraping an animal skin, from the Town Hall at Aachen, Germany.**

The Mediterranean world began making the transition from papyrus to parchment from about 200 BC to 300 AD; for example, the Dead Sea Scrolls (3rd century BC – 1st century AD) are written on both papyrus and parchment, and one on copper. As this transition was in progress, another change was taking place. The scroll was giving way to the codex. A codex is what we would recognize as a book, individual pages bound together at one end with a cover-spine-back casing protecting the pages. The word codex and the format come from the Romans and their *caudex*.

*Caudex* originally referred to the trunk of a tree. By extension its definition came to include planks and boards made from the trunk of a tree by a *caudicarius*, tree-feller. By further extension *caudex* came to include small boards, like writing tablets. The Romans smeared these tablets with wax and were able to write upon the wax with a hard stylus. These waxed tablets were used to take dictation. When the text was transcribed to a more permanent medium, like papyrus or parchment, the wax could be smeared and the tablet used again. When long dictation was called for, secretaries often came with their tablets, *caudices*, tied together on the left sides. Some tablets were slightly hollowed out in the center, having thin ridges around the edges so that a thicker layer of wax could be laid across the tablet.

It is not known from whom, where, or when the idea came about to stitch pages of either papyrus or parchment together at one end, like the *caudices* were strung together. The earliest known fragment of a papyrus codex (*codex* being an alternative and older form of *caudex*) is the *Graz Mummy Book*. The single

**Top, Roman wax writing tablets (*caudices*), with iron styluses (below, left), from Seville, Spain. Below, right: Roman wax tablet from Köln, Germany, with writing still inscribed. Note the holes in the tablets, made so the tablets could be strung together.**

papyrus page which came to be known as the *Graz Mummy Book* was discovered in 1902; it was re-used within and as part of the wrappings of a mummy. It was not until 2023, however, that the papyrus fragment was closely examined and a fold line, threads, and holes for stab-sewing were discovered; it was part of a codex. This 10 x 6 inch folded papyrus page is dated to *ca.* 260 BC; it is a Greek language document concerning a tax on beer.

The next evidence we have regarding the codex format comes from Suetonius (*Julius Caesar*, LVI:6), who wrote that Julius Caesar sent his letters back from Gaul to the Senate in Rome as pages (*paginas*) "converted into the form of a notebook" (*formam memorialis libelli convertisse*). It is a little unclear what a *memorialis libellus* might have been, but the reference to *paginas* clearly distinguishes the format of Caesar's correspondence from that of a scroll, as Suetonius further clarified later in that same passage. Other references to the codex format can be found in Martial (*Epigrams*, II:6) and Cicero (*Ad Familiares*, IX:26.i).

A fragment (8.5 x 5.0 cm.) of a parchment page of a codex was discovered at Oxyrhynchus, Egypt in 1897; it is from the *De Bellis Macedonicis* (*On the Macedonian Wars*), in Latin and written on both sides of the page. This fragment (P. Oxy. 30) is tentatively dated to *ca.* 100 AD, according to the style of the writing, a matter which is always open to debate. The prevailing theory is that it is from a codex made in Italy. In fact, the preponderance of extant evidence (literary and archaeological) seems to point to the fact that it was the Latinate authors of Rome and Italy who showed the earliest enthusiasm for the codex format. This seems logical since it probably evolved from the *caudices* used by the Romans. Martial (*Epigrams*, I:2), writing in about 85 AD, mentions "my little books" (*meos…libellos*) which "parchment confines within small pages" (*quos artat brevibus membrana tabellis*). *Membrana*, literally "membrane," is a word used for "parchment," an animal skin. It is the word Paul used in *2Timothy*, 4:13, when he asked Timothy to bring to him the *biblia* (probably meaning papyrus scrolls) and *membrana* ("parchments," probably meaning parchment codices). In the newly discovered (2005) copy of Galen's *Peri Alypias* (*On Consolation*), he mentions the many written works lost in the fire in Rome of 193 AD. There are mentions of parchment codices as well as scrolls in the text.

We close our examination with a final point. The transition from papyrus to parchment and from scroll to codex took place during the birth and rise of the Christian religion. It has always fascinated and perplexed scholars whether the triumph of the codex format was due to its popularity amongst Christians. It is routinely pointed out that all the writings (nearly 1,000 scrolls) from the Villa of Papyri in Herculaneum

**Left, statue of a philosopher, with a scroll in his right hand and a codex in his left; the head of the emperor Augustus was substituted for the original head in the 1st century AD. Right, relief from a 4th-5th century AD sarcophagus: Christian cross with two disciples, one holding a scroll and the other a codex.**

(1st century AD), are by pagan authors and written on papyrus scrolls, whereas all of the Nag Hammadi writings (52 treatises of the 3rd -4th century AD) are by Christian authors and are in codices. The codex is, in fact, the format for all but about a dozen fragments (out of 870+) of Christian texts of the 1st – 2nd century that are extant today. All 11 manuscripts of the Chester Beatty Papyri Collection (2nd-3rd century AD) are codices; they include portions of the Old and New Testaments, the Apocrypha, and fragments of writings of the Church Fathers. It is claimed that the Christians by choosing the codex were trying to distinguish themselves from the pagans. This may be putting the cart in front of the horse, for the pagans too were making this transition from papyrus to parchment and from scroll to codex. And the reasons for doing so were utterly practical, as Martial points out in his *Epigrams*. First, a scroll is extremely difficult to use, not just in the winding and unwinding while reading it, but also in the attempt to try to find again a reference somewhere in the text once one had read the scroll and wound it back up. With a codex one can easily just flip through the pages. And it will be in later codices that divisions like books and chapters are added to a codex. Second, although papyrus is cheaper than parchment, it is also less durable and more easily susceptible to damage by constant handling. Third, a scroll written one side consumes more space than a codex whose pages are written on both sides. For example, *The Gospel according to Luke* demands a scroll about a foot tall and 30 feet long; the *Codex Vaticanus*, which contains most of both testaments and other books, is 27 × 27 cm. (10.6 × 10.6 inches), originally 830 pages. There were, of course, some disadvantages to the codex: cost, length of time for parchment production, and binding problems. It is estimated that it could take between 350-500 animal skins to produce a codex of the Old and New Testaments. Such estimates, which should be considered with some skepticism, do indicate, however, a sizeable slaughter for parchment manufacture.

The codex did become the Christians' preferred format for publication. After Christian Europe was cut off from Egypt and its papyrus supplies by the Islamic conquest of Egypt in the 7th century, parchment became by default the material from which pages were made. But there may be one additional factor in the choice by Christians of the codex over the scroll: could it be that the Christians were trying to distinguish themselves from the *Jews*, whose Scriptures, the *Torah*, were written on great scrolls?

In one area the scroll did survive amongst the Christians, however, well into the Middle Ages and Renaissance – in art. Due to the sanctity conferred upon the scroll in such books as *Revelation*, 6:1-8:1, for example, the scroll, though no longer used in daily life, continued to live in the art of the Christians.

**Mosaic from the glorification gable of the Church of Saints Cosmas and Damian, Rome, 6th century. The *Agnus Dei* (Lamb of God) is shown on an altar; on the table before the Lamb is the scroll with seven seals of *Revelation*.**