

## Adoption of the Codex Book: Parable of a New Reading Mode†

“The only change comparable to what is occurring now is perhaps the invention of the codex, which took place in the second or third century after Christ. ...In both cases you have a transformation of the structure of the support of the text and a transformation of the gesture, technologies, categories required by this structure, given to the text in the reader’s mind.” Roger Chartier<sup>1</sup>

The codex, our familiar form of book with folded leaves and cover bound together, became prevalent in various cultures during a period from the third to the eighth century AD. Sectarians in north and eastern Africa adopted the codex book as a medium for their literature as is exemplified by the fourth century Gnostic books found at Nag Hammadi. The codex tradition was well established when the early Christian church spread to Byzantine centers in the Balkan peninsula and Asia minor at the beginning of the sixth century. The African book model was also adopted by the Arabs who spread codex book arts with the Islamic conquest beginning in the mid-seventh century. Achievements of the Chinese civilization were a world apart from these developments in late antiquity. Though Gnostic sects had contact with India, there are sufficient developments within the Greek, Roman and Egyptian world to account for the independent adoption of the codex book in those regions.

Let’s consider this beginning of the preference for the codex as a literary format. Indirect evidence leads us to investigate book production among sectarians such as the first followers of Jesus of Galilee.<sup>2</sup> This takes us back to the first, second and third centuries AD. Archeological and literary evidence leads us to consider a north and eastern African model of the codex book that these sectarians adopted. The archeological and literary record spans the same period although finds of intact codices begin from the fourth century.

What were the elements of this choice between the scroll and codex?<sup>3</sup> Recently a few scientists connected their computers initiating the momentum toward the internet

and a new, worldwide reading mode. In retrospect this decision was both imposed and inadvertent, tangled in a web of technological, social and literary characteristics of our own era. The earlier choices in the selection of the codex format must also be hidden in a complex of characteristics of that time.

### THE AFRICAN CODEX MODEL

Some evidence indicates that the codex format as used for literary works was distributed from African models. This codex model is related to the papyrus industry of Egypt<sup>4</sup> and to sectarian book production in north and eastern Africa extending uninterrupted from late antiquity to the present.

The African papyrus codex was produced from papyrus rolls. This production feature alone almost explains the transition from scroll to book. Sheets of papyrus were systematically lapped and pasted together to form rolls approximately three meters in length. These rolls were then systematically cut into squares, based on the roll height, to provide the sheets that were folded and interleaved to create the rectangular codex textblock. Both papyrus letters and papyrus codices share this rectangular format. The road map like folding patterns, intended to compact the letters for travel, could also suggest a codex format among groups frequently exchanging papyrus letters.<sup>5</sup> Likewise, assembled letters and other expositions could be distributed as sewn codices.<sup>6</sup>

The model takes two construction types with regard to assembly. The first type is a single quire papyrus codex which can be compared with the single quire parchment notebook from Roman examples. The single quire papyrus codex is associated with a portfolio or wallet like cover made of leather. The text was restitched directly through the cover with interior leather stays positioned in the inner fold to cushion the papyrus from the cinch of the sewing. The cover was

frequently reinforced inside with a cartonnage of papyrus. Then, with its protective cover flaps closed and tied with thong, the text was well protected for travel.

The second type was used for binding multiple quires. Each quire was stitched from quire to quire forming chains of stitches across the back of the text. A stitch passing through the inner fold of the gathering would pass to the outer fold connecting the separate folios together. The stitch would then drop down to pick up a previous exterior stitch and climb to enter the next gathering. Quire by quire the book would be constructed. Cover boards, of wood or skin, were also sewn to the text. This "sewn board" book would then be covered with pasted leather and perhaps provided with a second, outer leather case for travel. The result was a secure text block with a docile, flat opening provided by the pliant stitch chains<sup>7</sup>.

For the following discussion the African bookbinding model combines together the single and multiple quire type. This obscures the possibility that the sewn single gathering codex may be more associated with the genre of letters folded for travel. The sewn multiple gathering would then be used to accommodate assemblies of letters or larger compilations or, eventually whole Gospels.

The idea of a single African codex model also lumps together Christianized Egyptian and non-Egyptian book making, in spite of the fact that these traditions are as distinct as they are related.<sup>8</sup> Religious texts of the Coptic Church are in the Egyptian language of the first centuries AD, written in the alphabet derived from the Greeks. Religious texts of the Ethiopian or Abyssinian Church are in Ge'ez a liturgical language using an extremely ancient syllabic alphabet derived from southern Arabian origins. The contemporary language of the Egyptian Copts is Arabic while a main contemporary language of Ethiopian Christians is Amharic. Coptic Egyptian bookbinding is known from archeological materials which feature papyrus texts and covers and a bridled, encircling stitch to connect the boards. Ethiopian bookbinding is known from ethnographically collected vellum manuscripts with an internal, tunnel lacing stitch to connect the boards.

In spite of diversity a single African codex model still serves for the present discussion. The model was available, the north and eastern African centers played early and major roles in the emergence of sectarian Christianity, and the Christian codex was produced in Africa as an evangelistic medium for service throughout the Roman Empire. That the papyrus codex is better suited for travel and open country reading while the scroll is more easily read in interior library settings may speak volumes in explanation of the emergence of the codex among early Christians.

#### TECHNICAL INFLUENCES ON THE ADOPTION OF THE CODEX

The seemingly simple exchange of the scroll format for the codex was influenced by the changing technological, social and literary environment across the whole expanse of a millennium of history. Even within the confines of the north and eastern African region, the widest range of cultures interacted generating momentous achievements in a near chaos of historical events. Yet, one of the consistent transitions of the whole period was the gradual adoption and prevalence of the codex format book.

The resources of many crafts must have been assimilated into early codex bookbinding. The most apparent parallel to the sewn boards binding technique is found in boat building of antiquity where the shell-first construction method created a hull from sewn boards. The V tunnel lacings connecting the planks and seam battens evoke the whole range of early wooden board book cover attachments. A boat craft connection is also suggested by the role of sea faring trade in materials such as papyrus and by the role of Mediterranean seaports in the production and distribution of manuscripts. Crafts of sewing leather tents and containers would also be relevant. The fourth century Gnostic texts found at Nag Hammadi were generally stitched with leather thongs into leather portfolios.

From the perspective of technology, many comparisons of the scroll and codex format focus on text management features of the two formats. However, during this early period all books, both scroll and codex, lacked text management devices such as word spacing, pagination or punctuation. Only the punctuation of the codex page itself<sup>9</sup> could have played a part in the first century selection of the format. The influence of page format on illustration, as opposed to text, would recommend the codex since iconography could be set off into distinct fields. The African model is relevant here since the tradition of illuminating Christian books was advanced, not by Greek convention, but by the heritage of Coptic art. In pharonic times prayers and liturgies were illustrated with figures of deities and protective symbols in bright colors with boarder designs at the top and bottom. The texts were traced in black outline with catchwords written in red.

Economy would favor the two sided codex page. However improved accessibility to intermittent passages, sometimes considered a codex attribute, might not be apparent if we could observe a skilled reader consulting scrolls. Another information management issue is adaptability to works of various lengths. Using the same approach as increasing scroll length, the single gathering codex was expanded to an extreme degree, but physical limits were reached as the area of pages of outer folios of the single gathering were consumed in wrapping of the bulk of the inner folios. Dividing the work into sequential

gatherings overcame this limitation. The advent of multiple gathering structures begins the history of the distinct craft of codex bookbinding<sup>10</sup>.

A technical factor favoring the adoption of the codex is that this format is suggested by the parchment notebook carried by authors and used as exemplars to produce copies.<sup>11</sup> Such an influence points to the “publishing” process and to the interaction of exemplars and their copies. At the time, it was easy for “a parchment notebook to acquire, almost imperceptibly, the status of a book.”<sup>12</sup> Such confusion between an author’s working notebooks and more formal circulating copies could be compounded in a social setting of Roman suppression as well as in a context of pressure for the duplication of texts within a growing church.

Sectarian tradespeople would appreciate the production potential of the small codex format as distributed to family or community workshops.<sup>13</sup> A crucial challenge for the early Christian sects was the production of their new Gospels.<sup>14</sup> Such production is known to have been concentrated in Alexandria but the suppression of such works would also encourage widely distributed workshops. There was no accumulated stock of these texts.<sup>15</sup> Within the production environment of a manuscript technology early Christians were forced into the book business. Any congregants with skills of an adequate documentary hand would be called on to make copies of circulating texts. Prior to the fourth century no Christian manuscripts display a formal book hand.

The extensive *noms sacra* abbreviation system unique to early Christian manuscripts may echo workshop conventions that were transmitted quickly in the immense distribution of copy production. These abbreviations “seem to indicate a degree of organization, of conscious planning, and uniformity of practice among Christian communities which we have hitherto had little reason to suspect, and which throws a new light on the early history of the Church.”<sup>16</sup> An abbreviation system may be only one component of a copying process adapted to dispersed production. With *scriptura continua*, text without any word space or punctuation, as exemplified in Coptic manuscript, the scribes worked from dictation, not from visual models.<sup>17</sup> Proceeding by syllables multiple scribes could follow a single reader. The history of early Christian texts suggests a production network that grew simultaneously with its proliferating text exemplars; an ancient metaphor for digital publication!

From the beginning great editorial efforts were needed to cross reference duplication in the Gospels and harmonize the variety of other contents into a single, New Testament, work. Construction of tables and canons became a side industry not unlike the present production of interpretive guides to computer manuals. Control of copyists’ errors and other mutations was a constant and

impossible task.<sup>18</sup> Translations from Greek to Coptic, Syriac, Latin, Armenian and other languages only compounded the influences of other cultures and opportunities for corruption of the text.<sup>19</sup> Across all these obstacles and disturbances the constancy of the codex format provided a single, stable manufacturing and copy distribution process.

Finally, it is interesting to consider how technical the act of reading and writing was at that time. Efficient relations between the codex format, word spacing and silent reading were not apparent and would only be developed in the second half of the first millennium.<sup>20</sup> Reading required two separate scans; an oral sounding out of the continuous string of syllables that revealed words which, in turn, enabled an oral recitation of the text. In writing formal works an author’s oral dictation was “...transcribed by trained stenographers; their shorthand transcripts were then converted into full-text exemplars by copyists who could decipher stenographic notes; and from these exemplars female scribes produced fair copies...”<sup>21</sup> A similar cooperative group was needed for letter writing and this group frequently worked in the company of spectators gathered to see the transition of speech to symbol.<sup>22</sup> Each letter required a courier.

The image of reading and writing in late antiquity evokes a group engrossed in the demonstration of software on a computer. In both instances, the gathering is absorbed in complexities of systems integration for useful work. The ten percent estimate of literacy in late antiquity perhaps reflects the contemporary minority of computer users and still smaller group of computer specialists. In both environments of early Christian codex production and current digital communication a technical minority assists the interaction of a larger, dispersed majority.

#### SOCIAL INFLUENCES ON THE ADOPTION OF THE CODEX

The adoption of the codex among early Christians is as explainable as the attraction of modern sectarians to cyberspace. With both groups there has been a need for a reading and communication mode suited to construct a society of odd, dispersed and beleaguered individuals.

The surviving early codex books contain literary works; sayings, gospels, prayers, letters and works of instruction, almost exclusively Christian related. From this perspective the codex format could have been used as a deliberate device for distinguishing this genre from governmental publications and more orthodox literature. But instead of actively announcing their works with a distinctive format, the sectarians may have been more interested in concealing them. A darker social environment associated with the codex book is revealed by the archeological record itself. At times of community danger collections of codices were

carefully buried in sealed ceramic jars. These deliberate and effective acts of library preservation evoke a threatened, yet independent, social organization of early Christian sects and monastic communities.<sup>23</sup>

Traders and crafts people, both slave and free, were attracted to these early Christian sects. Such a working class would be familiar with, and perhaps carry with them, utilitarian notebooks or account books.<sup>24</sup> Most likely, the vellum notebook was simply a familiar and ordinary object. Gnostic teachings encourage students to write their personal experiences in such a journal. Another thread here is the preference for the notebook format as erasable workbooks for initial drafts. To some extent the Christian codex may have established itself inadvertently as writers distributed notebooks which were copied and bound in the same format.<sup>25</sup>

Communal solidarity and a code that validated the help of others was a sectarian Christian response to the chaos of the late Roman empire.<sup>26</sup> Urban environments could anticipate disastrous fires and plagues or siege destruction every generation. It is not surprising that the codices of this period do not survive. Yet the sectarian social setting established the personal book of instruction and the educational and liturgical role of the codex book as a mechanism of social solidarity.

It was another quality of the social environment of late antiquity that written works competed directly with spoken presentation of the oral tradition. The credibility of speech vs. text actually provided the intellectual friction for theological debate and accusations of heresy in late antiquity.<sup>27</sup> The ultimate success and prosperity of the marginal sectarian groups that gave rise to the Christian church can be viewed as a result of their choice of a new social organization linked with a new tool of communication.

#### LITERARY AND LITURGICAL INFLUENCES ON THE ADOPTION OF THE CODEX

The popularity of the codex among early Christians may have something to do with their innovation of a literary genre based on letters.<sup>28</sup> The drafting, copying, transmitting, reading and eventual formal publication of letters involves techniques associated with the codex. The codex bridges the transformation between initial correspondence and its eventual formalization as scripture as is exemplified by the literary history of letters of the apostle Paul to the early churches. The vellum notebook used for letter drafts was the same medium as the papyrus codex used for formal distribution of a canonized literature of letters.<sup>29</sup> The intermediate forms of this transition were also accommodated by this single medium.

Literary influences mix with liturgical influences on the adoption of the codex. In many ways the emerging congregations of early Christians were sects of Judaism.<sup>30</sup> In

Jewish observance the reserve of the scroll for the Torah was absolute. This sacred format could not be used for later rabbinic sayings. In this way Jewish law imposed the use of the codex for the Christian scriptures.<sup>31</sup> Writings of the early Christians involved just such a genre of rabbinic commentary in the form of the sayings of Jesus. Such early works, collecting the sayings and teachings of Jesus, have been reconstructed through the study of recurrent material inserted the Gospels of the New Testament. A hypothetical Gospel "Q1" is now considered the initial Gospel of the followers of Jesus as compiled at the midpoint of the first century.<sup>32</sup> Although the injunction against the use of a scroll format for rabbinic sayings may not have influenced any written format of this work as initially circulated in rural Galilee, it is tempting to consider these short sayings written in Aramaic in the format of small notebooks.

Speculation is not required to consider the format of a copy from the second quarter of the fourth century of a first century work very similar to the Q1 gospel. This is the sayings of Jesus as compiled in the Gospel of Thomas,<sup>33</sup> a copy of which was found in the Gnostic books discovered at Nag Hammadi. This is the Codex II, 2, a single quire papyrus codex consisting of 38 interleaved folios that were sewn through the fold with two separate stitches of flax thread. The page size is approximately 27 x 15 centimeters. The cover is goat leather painted a rose color and decorated with debossed lines painted with black ink. The design is a very attractive pattern of triple line rules that cross the covers diagonally dividing them into zones. These zones are filled with rows of repeated meanders, spirals and heart shaped leaves. Other motifs include the ankh hieroglyph of life that became the Christian cross.

The place of bookbinding in liturgical art provides another influence on the advent and adoption of the codex. In a generally non-literate society the theatrical and pictorial role of the book may have eclipsed its role as a literary work. In processions or as personal physical talismans the book assumed the status of a relic and the role of a container of myth and wisdom. The codex was seen theatrically as a prompt for sermons and as a visual attribute of the iconography of teachers and Apostles. The visual diptych of the opened codex enabled the presentation of illuminations as well as the image of the calligraphic text in a dramatic, magical revelation.<sup>34</sup> The meaning of the book as liturgical art, not just a transmission device, would have been important in its acceptance and popularity.

#### CONTEMPORARY RELEVANCE OF THE ADVENT OF THE CODEX BOOK

"In every age, humankind imagines itself to be moving through a period of transition so acute that the effect borders on the dysfunctional. Our own age is no exception.

We long for a simpler past, or for a more focused future, but the fact is that every era is one of profound change, and it is now our turn.” Ross Atkinson<sup>35</sup>

Early north and eastern African bookbinding methods are continued in Africa and in Israel by Ethiopian crafts people. This survival is an exception to an entire Eastern tradition of book craft that has disappeared. Yet the perennial features of the earliest codex are still with us. Now the qualities of the sewn boards binding type with its easy opening action and flush edge cover and text has reappeared in high speed binding for computer publications which must lay flat at the keyboard.<sup>36</sup> The adaptability of this ancient structure to face-down scanning for conversion to digital images is also relevant.

The legacy of the African model codex is apparent in the modern paperback. The speed and economy of three-edge trimming and perennial features of stackability, portability, light weight and structural pliancy project this early prototype far into the digital era.<sup>37</sup> The African model and the modern paperback have no rounding or backing, that is, no shaping of the contour of the text back. The boards are flush to the folds of the endpapers and the binding has a rectangular geometry that shelves like a video cassette or CD case. Other characteristics of the African model that persist in the modern paperback are its all paper construction, its equitable leaf attachment, attachment of covers as if they were outer leaves and a flush trim of covers and text to the same size. These perennial features are so taken for granted that they are frequently discounted.

Along with the technical issues prompted by the African book model there is also a cultural legacy. The remote era of the early centuries of the first millennium of north and eastern Africa offers a parallel for our own time of changing communication media, knowledge revision and philosophical diversity. That ancient period of the advent of the codex format with its emergence of multiple and contradicting theologies and its personal challenge of living simultaneously in both worldwide and narrow ethnic social settings, all prefigure our current lives.

In the craft of bookbinding there were whole processions of book formats, the codex, the scroll, concertina and fan. The mythology of the Ethiopian church even includes possession of the Ark containing the tablets of the Law given to Moses. In the context of processions and in pilgrimage bookbinding was a liturgical art, not a commercial trade, and reading was a theatrical experience. Even the idea of books in a procession is suggestive to us as the use of books in a different reading mode.

The wider implication here may be the interaction of the traditional book with the on-line reading mode. There is conjecture that the book will migrate from the artifactual world into cyberspace and ultimately be more familiar in a searchable, electronic reading mode. The exemplar of the early African codex indicates a more complex scenario in

which the book can be projected into many reading modes yet eventually return the reader to a personal and talismanic original. From the codex, to the text recited over and over, to the suddenly revealed reading and back again, these transitions were understood at the time of the adoption of the codex book.

There is also the parallel of the interaction of social institutions with their communication media. The codex was a missionary technology of the emerging Christian church, but while the codex enabled “distance learning” it also spread ideas beyond any central control and beyond any parent literature or culture. Now another change in reading mode is influencing social institutions. Visionaries project different political and social constituencies unified through electronic communication. We may be crossing a divide as human consciousness is augmented by machine consciousness. If so, the emergence of such a cyberspace consciousness echoes the story of the desert sectarians who also defined a new social order with a new reading mode.

#### NOTES

† The following essay was distributed during the Library Collections Conservation Discussion Group, June 6, 1998, which was concerned with the preservation of paperback books. In the context of the meeting the essay was intended to add historical dimension to the modern paperback through an association with the papyrus codex prototype

1. In this interview the bibliographer Roger Chartier expressed the view that the transition to electronic communication is a more fundamental change than the shift from manuscript to print production with which it is frequently equated. He commented that the invention of printing was “a revolution fundamentally in the technique of production and reproduction of the text, not in the fundamental structure of the written object, and not in a certain sense, in reading practices.” (see reference SHARP News)

2. E. G. Turner (see reference) found that a great majority of Christian papyri known from the first centuries are codices while pagan literature of that period is almost exclusively in scroll format.

3. C. H. Roberts and T.C. Skeat (see references) suggest that practical advantages favoring a choice of the codex over the scroll, factors such as economy, compactness, comprehensiveness, convenience of use or ease of reference, are inconclusive and may have been irrelevant in the first few centuries AD.

4. The papyrus industry, though exclusive to Egypt, supplied world-wide demand and proved itself competitive with parchment manufactured locally elsewhere. The papyrus industry was “on a gigantic scale, involving many thousands of persons and supported by massive amounts of invested capital.” (Roberts and Skeat, p. 10).

5. The early Christian innovation of a literary or scriptural genre based on letters (i.e., the letters of Paul) also suggests con-

nection with this prior ambiguity of the folded imposition of papyrus letters and papyrus codices.

6. Origen of Alexandria and Augustine of Hippo were both involved in attempted control of the arrangement of sections of their works. Both the disorder of “books”, or separate portions of a treatise, in distributed copies and the collation of authorized sequences suggests that both copyists and authors were dealing with codex format sub-sections. (see reference Gambel, pp. 120-134.)

7. This characteristic book action is corroborated in the depiction of books in art. Mosaic depictions from the early Church, such as those in Ravenna Italy, consistently show the fully opened, or even over-opened, book and frequently indicate the knife kerfs for the stitch chains. Later European medieval illuminations depict the restrained, partial opening of bindings sewn onto heavy cord or thong supports.

8. Even the close traditional church link was ended in 1961 when the Ethiopian Church declared its independence from the Coptic patriarch in Alexandria.

9. This insight and others from Keith Smith are discussed in his book *Text in Book Format*

10. Although most of the Nag Hammadi codices are a single gathering, codex I contained four gatherings. Its cover still retains three tacket stitches and other additional sewing holes. The fifth century Acts of the Apostles (Glasier manuscript) and the Gospel of Matthew (Scheide manuscript) are both multiple gathering books. The method of sewing multiple gatherings would have developed before the fourth century.

11. Utilitarian notebooks, “membranae”, of the first centuries were made from vellum while formal works were written on papyrus. In the next millennium just the opposite preference emerged. The vellum surface of the notebook leaves permitted erasure by washing off the gum based ink.

12. The lack of distinction between a book and an author’s manuscript is discussed on page 30 of *The Birth of the Codex* by C. H. Roberts and T. C. Skeat.

13. Scribal evidence in the Nag Hammadi manuscripts indicates that they may have been produced by their owners and users, or at least, not by a large scriptorium. (see Robinson #3)

14. An interesting parallel is provided by the importance of printing and book production in the early Mormon community of the second quarter of the 19th century. Here also the emergence of new scripture required massive book production.

15. A surviving letter from Constantine in 332 orders 50 new testament bibles to outfit churches being built in Constantinople.

16. p.72-3, ref. Lampe.

17. (see page 48, Saenger)

18. The magnitude of the changes from the early to the later Greek manuscripts of the Gospels, Acts and Epistles was ultimately confronted when the need arose to identify exemplars for the first printed editions. The 1707 John Mill edition of the New Testament identified over 30,000 variant sources.

19. It is interesting to consider if the process of translation, as added to the goal of copy production, somehow facilitated codex

production. With the African model, the translation from a Greek exemplar to copy in Coptic may have involved an intermediating papyrus work draft which could also provide useful information on casting off copy from one language to another into the codex format.

20. In our terms, a standard markup language had not been developed and text consisted of an uninterrupted string of letters. Reading and writing required a programmers’ skills. (see Saenger)

21. (see reference Gamble, p. 120.)

22. The scene of the Apostle Paul writing a letter was described on the radio as I drove through Lebanon, Missouri, deep in the Bible Belt.

23. The careful, sophisticated preservation of early codex bookbindings by librarians of late Antiquity can only be contrasted with their quick destruction in the twentieth century. The archaeologically recovered books were immediately cut apart, some times in a rush to “restore” them. Their codicological significance, as physical exemplars of the modern book, was not considered. An example of damaging, later day practice relates to the handling of Nag Hammadi Codex II.: “When the quire was removed from the cover, the stub probably remained attached to the cover and disappeared with the catonnage, as did perhaps two fragments near the inner margin of the last folio that were present when it was still in the cover but absent after it was removed (compare plates 6 and 157/158). Transparent tape was then put around the outside of the quire to keep it together, thus joining inaccurately the front flyleaf A/B with <145>/E (see plates 9 and 158). Once the quire was cut in two at the spine for conservation, part of the last half of the quire was laid back in the cover in the inverse direction and so photographed in 1960.....” from *Facsimile Edition of the Nag Hammadi Codices*.

24. His own working notebooks are specifically mentioned by Paul in II Tim. iv.13. He may even have made these himself considering his skill in the trade of sewing leather tents for the Romans.

25. C.H. Roberts speculates that copyists in Alexander followed the format as well as the text in their production of copies of the Gospel of Mark. The presumed exemplars were Mark’s autographed manuscripts in their vellum notebooks.

26. The social behavior of the sectarians as influenced by the risks of living in late antiquity is graphically portrayed by Rodney Stark in his new book on the rise of Christianity. (see reference)

27. The book by Elaine Pagels on the contradictory interpretations of the letters of the apostle Paul describes the contests between written and spoken presentation in late antiquity and adds dimension to modern consideration of “mutability” of text. (see reference)

28. (see reference Gamble for a complete study of the letter & codex connection)

29. The interplay of the letter as a communication medium and edited letters as literary genre mirrors a current interplay between eMail and WebSite publication. Here, in place of the codex, digital communication provides a seamless reading mode for both immediate, informal and considered, formal expression.

30. As an echo of this period, the Church of Ethiopia remains particularly close to Judaic observance with features such as Saturday worship, dietary restrictions, pilgrimage to Jerusalem and Temple derived church architecture.

31. (see reference, Foote)

32. The role of this work for the reconstruction of beliefs of the first followers of Jesus and for the evaluation of the mythologies subsequently overlaid on this source is wonderfully presented in Burton Mack's book, *The Lost Gospel*.

33. The authorship of this collection is attributed Didymos Judas (the twin) Thomas who is regarded in the Syrian church as the brother of Jesus. (see The Nag Hammadi Library)

34. Throughout history the codex has been used in carnivals as a magical display device, especially in performance before non-literate audiences. (see reference, Jay)

35. Library Resources & Technical Services, 42:1, 1998, p. 7.

36. This is a reference to the in-line Otobind process as well as to contemporary limited edition versions of historical sewn boards binding. The entire category of paperback binding can be equated with features of the African prototype.

37. The expression; "soon out in paperback" may eventually refer to a post-digital edition.

## REFERENCES

### 1. The African Codex Model

Canfora, Luciano, *The Vanished Library*, University of California Press, 1990, isbn 0-520-07255-3.

Cockerell, Douglas, "The Development of Bookbinding Methods - Coptic Influence", *The Library*, 4th series, 13(1933) pp. 1-19.

Cockerell, Sidney, "Ethiopian Binding", *Designer Bookbinders Review*, #10 (1977).

Ettinghausen, Richard, "Foundation-molded leather work; A Rare Egyptian Technique also Used in Britain", *Studies in Islamic Art & Architecture*, American University in Cairo Press, 1965 p63-71.

Grenberg, Gary, *The Bible Myth, The African Origins of the Jewish People*, Citadel Press, 1996, isbn 0-8065-1970-3.

Grierson, Roderick, ed., *African Zion, The Sacred Art of Ethiopia*, Yale University Press, 1993, isbn 0-300-05819-5.

Isichei, Elizabeth, *A History of Christianity in Africa*, African World Press, 1995, isbn 0-86543-443-3.

Lamacraft, C.T., "Early Book-Bindings from a Coptic Monastery", *The Library*, v.20, 1939.

Lamb, Malcome, "The Hausa Tanners of Northern Nigeria", *The New Bookbinder*, Vol. 1, London, 1981.

Peterson, Theodore, "Early Islamic Bookbindings and their Coptic Relations", *Ars Orientalis*, I(1954), pp. 41-64.

Powell, Roger, "Some Early Bindings from Egypt in the Chester Beatty Library; Additional Notes" (comments on B. Regemorter of the same title), *The Library*, vol.18, 1963, p218-223.

Regemorter, B. van, "Ethiopian Binding", *The Library*, 5th series, vol.17, 1962, p85-88. (see also Scriptorium series translations of Jane Greenfield)

Regemorter, B. van, "The Binding of the Gnostic Manuscripts at Nag Hamadi", *Scriptorium*, XIV, 1960.

Robinson, James M., "The Construction of the Nag Hammadi Codices", *Essays in Nag Hammadi Texts*, M. Krause, ed., Leiden: Brill, 1975, p170-189.

Robinson, James M., *The Nag Hammadi Codices*, Institute for Antiquity and Christianity, 1977.

Robinson, James M., ed., *The Nag Hammadi Library*, rev.ed., Harper & Row, 1978, isbn 0-06-066934-9.

Selassie, Sergew Hable, *Bookmaking in Ethiopia*, Leiden, 1981.

UNESCO, *The Facsimile Edition of the Nag Hammadi Codices*, E. J. Brill, Leiden, 1972

### 2. Technical Influences

Bagnell, Roger S., *Reading Papyri, Writing Ancient History*, Routledge, 1995, isbn 0-415-09376-7.

Gamble, Harry Y., *Books and Readers in the Early Church*, Yale University Press, 1995, isbn 0-300-06024-6.

Healey, John, *The Early Alphabet*, University of California Press / British Museum, 1990, isbn 0-520-07309-6.

Lampe, G.W.H., ed, *The Cambridge History of the Bible*, vol. 2, "Early Christian Book-Production: Papyri and Manuscripts", Cambridge, 1969.

Parvis, Merrill M. and Wikgren, Allen p., ed. *New Testament Manuscript Studies: The Materials and making of a Critical Apparatus*, Chicago University Press, 1950.

Powell, Roger and Waters, Peter, "Technical Description of the Binding", *The Stonyhurst Gospel of St. John*, The Roxburgh Club, Oxford, 1969, p45-55.

Roberts, Colin H. and Skeat, T.C., *The Birth of the Codex*, Oxford University Press, 1983, isbn 0-19-726024-1.

Roberts, Colin H., "The Codex", *Proceedings of the British Academy*, xl (1954), p169-204.

Saenger, Paul, *Space Between Words, The Origins of Silent Reading*, Stanford University Press, 1997, isbn 0-8047-2653-1.

Schmandt-Besserat, Denise, *How Writing Came About*, University of Texas Press, 1996, isbn 0-292-77704-3.

Sharpe, John Lawrence, "The Earliest Bindings with Wooden Board Covers, The Coptic Contribution to Binding Construction", International Conference on Conservation and Restoration of Archival and Library Materials, 1996, *Pre-Prints*.

Sharpe, John Lawrence, ed., *The Bible as Book*, The British Library & Oak Knoll Press, 1998, isbn 1-884718-38-8.

Smith, Keith A., *Text in the Book Format*, 2nd ed. 1995, isbn 0-9637682-3-9.

Smith, Keith, A., *Structure of the Visual Book*, 3rd ed., 1995, isbn 0-9637682-1-2.

Turner, Eric G., *The Topology of the Early Codex*, University of Pennsylvania, 1977, isbn 0-8122-7696-5.

Weitzmann, K., "Book Illustration of the 4th Century", *Art, Archeology & Architecture of Early Christianity*, Garland, 1993.

Weitzmann, K., *Illustrations in Roll and Codex - Studies in Manuscript Illumination*, Princeton University Press, 1947.

### 3. Social Influences

Bagnall, Roger S., *Egypt in Late Antiquity*, Princeton University Press, 1993, isbn 0-691-01096-x.

Golb, Norman, *Who Wrote the Dead Sea Scrolls?*, Scribner, 1995, isbn 0-02-544395-x.

Horsley, Richard A., and Silberman, Neil Asher, *The Message and the Kingdom*, Putnam, 1997, isbn 0-399-14194-4.

Pagels, Elaine, *The Gnostic Paul*, Trinity Press, 1992, isbn 1-56338-039-0.

Stark, Rodney, *The Rise of Christianity*, HarperCollins, 1997, isbn 0-06-067701-5.

Wilson, A.N., Paul, *The Mind of the Apostle*, W.W. Norton, 1997, isbn 0-393-04066-6.

### 4. Literary & Liturgical Influences

Drogin, Marc, *Biblioclasm, The Mythical Origins, Magical Powers, and Perishability of the Written Word*, Rowman & Littlefield, 1989, isbn 0-8476-7502-5.

Foot, Mirjam M., "Bookbinding and the History of Books", *A Potencie of Life*, ed. Nicholas Barker, British Library, 1994.

Gamble, Harry Y., *Books and Readers in the Early Church*, Yale University Press, 1995, isbn 0-300-06024-6.

Jay, Ricky, *The Magic Magic Book*, Library Fellows of the Whitney Museum of American Art, 1994.

Mack, Burton L., *The Lost Gospel, The Book of Q & Christian Origins*, Harper, 1993, isbn 0-06-065375-2.

Mercier, Jacques, *Art That Heals, The Image as Medicine in Ethiopia*, Museum for African Art, 1997, isbn 0-945802-19-6.

Merton, Thomas, *The Wisdom of the Desert*, New Directions, 1960, isbn 0-8112-0102-3.

Pagels, Elaine, *The Gnostic Gospels*, Vintage Books, 1979, isbn 0-679-72453-2.

### 5. Contemporary Relevance

Bailey, James, *After Thought, the Computer Challenge to Human Intelligence*, Basic Books, 1996, isbn 0-465-00782-1.

Kelly, Kevin, *Out of Control, The New Biology of Machines, Social Systems, and the Economic World*, Addison-Wesley, 1994, isbn 0-201-48340-8.

*SHARP News*, interview with Roger Chartier, 6/2, spring, 1997, pp 4-6.

GARY FROST  
Library Conservator  
BookLab, Inc.  
Austin, Texas



The ninth of these suggestions reads: "The textual history of the New Testament differs from corpus to corpus, and even from book to book; therefore the witnesses have to be regrouped in each new section." A corollary to this suggestion is the fact that certain manuscripts also differ from book to book and even within books as to the type of text they represent. Codex W, which makes a distinct change from a Neutral to a Byzantine type of text at Luke viii. 12 and is Western in Mark i. 1-16, is an example of this kind of "divided" MS. Therefore, in the latest manuals text-type groupings which we provide a new edition of the text, and compare it with the data from Greek and Georgian Hagiopolite sources, speculating about the original state of this enigmatic codex and its relation to the Lectionary of Jerusalem. The codex is written on parchment, except for folia 46 and 47, which are written on paper, probably of Arabic origin from 8th-9th centuries. This aspect of Palestinian / Sinaitic book production "presuppose bilingual readers" and must have been intended to meet the demands of Arab-Christians or Arabic speaking Egypto-Palestinians in a centre where this bilingualism or multilingualism was present. To make reading easier we have saved the confused foliation of the codex but organized all the texts in their proper order. Also, we have divided it into three blocks: #1. From Scroll to Codex "How the Bible Became a Book. OVER the centuries, people have preserved information in many ways. In times past, writers recorded their words on monuments, stone or wood tablets, leaves of parchment, and other materials. By the first century, in the Middle East, the accepted and established format for the written word was the scroll. Then came the codex, which in time replaced the scroll and became the universal means of storing written material. It also contributed greatly to the distribution of the Bible. What was the codex, and how did it come into use? Codices were also practical for personal reading. By the end of the third century, parchment pocket Gospels were in circulation among professed Christians. Frost, G.: Adoption of the Codex Book: Parable of a New Reading Mode. The Book and Paper Group Annual, vol. 17. BPG, Utah (1998)Google Scholar. 3. Antonacopoulos, A., Karatzas, D., Krawczyk, H., Wiszniewski, B.: The lifecycle of a digital historical document: structure and content. In: Munson, E., E., J., V.-D. (ed.) 2004 ACM Symposium on Document Engineering, pp. 147-154. ACM Press, Milwaukee (2004)CrossRefGoogle Scholar. 4. Gladney, H., Mintzer, F., Schiattarella, F., Besc s, J., Treu, M.: Digital access to antiquities. Communications of the ACM 41, 49-57 (1998)CrossRefGoogle Scholar.

The codex was a new format for reading the written word, consisting of individual pages loosely attached to each other at one side and bound with boards or cloth. It came to replace the scroll thanks to several problems that limited the scroll's function and readability. For one, scrolls were very long, sometimes as long as ten meters. ^ Frost, Gary, "Adoption of the Codex Book: Parable of a New Reading Mode", *The Book and Paper Group Annual*, Retrieved 12/1/2014. ^ Roberts, Colin H., and Skeat, T.C. (1987), *The Birth of the Codex*. London: Oxford University Press for the British Academy, p. 75. Frost, G.: *Adoption of the Codex Book: Parable of a New Reading Mode*. *The Book and Paper Group Annual*, vol. 17. BPG, Utah (1998)Google Scholar. 3. Antonacopoulos, A., Karatzas, D., Krawczyk, H., Wiszniewski, B.: The lifecycle of a digital historical document: structure and content. In: Munson, E., E., J., V.-D. (ed.) 2004 ACM Symposium on Document Engineering, pp. 147-154. ACM Press, Milwaukee (2004)CrossRefGoogle Scholar. 4. Gladney, H., Mintzer, F., Schiattarella, F., Besc s, J., Treu, M.: Digital access to antiquities. *Communications of the ACM* 41, 49-57 (1998)CrossRefGoogle Scholar. Codex, (plural codices), is the name given to a form of book used in antiquity that would eventually replace the roll and become the standard format for the book for more than a thousand years until the development of paper and printing would transform it into the book form we use today. Although a prototype for the modern book form, the term codex is used only for manuscript books produced from Late Antiquity to the Middle Ages. The Christian's total and complete adoption of the codex form from the outset cannot be explained by practical concerns alone. It has been argued that one of the possible explanations for the adoption of the codex form by the Christians is that it differentiated them from both Jews and pagans. See the article "Adoption of the Codex Book: Parable of a New Reading Mode." This site discusses the role of the codex in the change of reading habits, including the development of page spacing, paragraph division, and word division, all later designed for the eye and not for the ear. There is another interesting website about ancient reading titled "Historical Development of Writing and Reading." Dr. Martin wrote briefly on this topic in his article "The Divine Names and the New Testament," citing Prof. Paul J. Achtemeier's excellent article, "Omne Verbum Sonat: The New Testament and the Oral Environment of Late Western Antiquity" in *Journal of Biblical Literature*, 109/1 (1990) 3-27. I will write a future detailed article about Achtemeier's article and sources in the future. Conclusion. The adoption of the codex among early Christians is as explainable as the attraction of modern sectarians to cyberspace. With both groups there has been a need for a reading and communication mode suited to construct a society of odd, dispersed and beleaguered individuals. The surviving early codex books contain literary works; sayings, gospels, prayers, letters and works of instruction, almost exclusively Christian related.