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The Eusebian Canon Tables as a Corpus-Organizing Paratext within the Multiple-Text Manuscript of the Fourfold Gospel

Abstract: One of the most common multiple-text manuscripts (MTMs) in the Late Antique period was the codex containing the four canonical gospels of Matthew, Mark, Luke, and John, which originally circulated separately but were collected and bound together as a single manuscript sometime in the third century. Within a generation of the creation of this MTM, it had given rise to the first numerically based cross-referencing system in the ancient world, the so-called Eusebian Canon Tables apparatus. This paratext extended the organizing function of the MTM by ordering the textual content contained within the manuscript, effectively providing the reader with a map by which to navigate the dialectic of sameness and difference among these four texts.

By the end of Late Antiquity the fourfold gospel codex had become a standard feature of the diverse Christian traditions that inhabited the lands of the Roman Empire and beyond. A typical example in Greek is Codex Washingtonianus, also known as the Freer Gospels,[1] which was copied in Egypt in the late fourth or early fifth century. Well known examples in the Latin world include the Book of Kells[2] and Lindisfarne Gospels,[3] both coming from the British Isles in the eighth century, though earlier Latin examples dating back to the fourth century are also extant.[4] Two four-gospel codices in Syriac have also survived from the late fourth or early fifth century (the Sinaitic and Curetonian manuscripts[5]), and

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1 Washington, D.C., Smithsonian Institution, Freer Gallery of Art 06.274.

2 Dublin, Trinity College Library, MS 58.

3 London, British Library, Cotton MS Nero D IV.

4 The oldest surviving copy of the gospels in the Old Latin translation is Codex Bobiensis (Turin, Biblioteca Nazionale Universitaria, 1163 (G.VII.15)), copied in North Africa in the fourth century. The oldest copy of Jerome's Vulgate translation of the gospels is Codex Sangallensis 1395 (St Gall, Stiftsbibliothek 1395), dated to the fifth century. Both manuscripts are significantly lacunose. For a catalogue of Latin New Testament manuscripts, see Houghton 2016, 209–81. Also helpful is McGurk 1961.

5 St Catherine's Monastery, syr. 30; London, British Library, Add. MS. 14451. Cf. Haelewyck 2017; Taylor 2017.

dozens from later centuries such as the justly famous Rabbula Gospels[6] dated to 586. Further afield, there are also two early surviving Ethiopic manuscripts, known as Garima 1 and 2, which have recently been dated by radiocarbon analysis to some point between the fifth and seventh centuries.[7] From this same period, specifically the early sixth century, there survives Codex Argenteus,[8] a magnificently produced deluxe edition of the four gospels in Gothic that was made in Ostrogothic Italy. Further east, although the earliest surviving Armenian gospel-books are much later, such as the Etchmiadzin Gospels dated to the late tenth century,[9] these are undoubtedly representative of a manuscript tradition that stretches back into Late Antiquity. The case is similar in Georgian, with the earliest manuscript dated to 897, known as the Adishi Gospels,[10] though likely indicative of a much older tradition. Hence, by the sixth or seventh century, if you had attended Christian liturgy in Ireland or Ethiopia, Gothic-speaking Italy or Armenia, a manuscript containing the four canonical gospels, bound together in a single codex and regarded as saturated with symbolic significance, would have been central to the proceedings.

Those familiar with liturgically oriented Christian traditions today would be likely not to find this claim surprising. However, the late antique or early medieval gospel-book would have appeared strikingly odd to those who were accustomed to the book culture of the Greco-Roman world in which Christianity emerged. The transition from the roll to the codex is of course well known and would appear as an obvious oddity to an imaginary reader from the first century CE who had a chance to gaze upon a gospel-book from five centuries later. The fact that our later Christian gospel-book would likely be written on parchment rather than papyrus would also stand out as a difference, at least to those accustomed to Egyptian book culture. Upon opening the codex, our imaginary reader would encounter yet a further peculiarity, namely, the fact that the gospel-book contained not just a single work, but instead four works placed in succession and bound together as a corpus. In his recent monograph *Inside Roman Libraries*, focusing particularly on the surviving pre-Constantinian manuscripts from Oxyrhynchus in Egypt and Herculaneum in Italy, George W. Houston has pointed out that 'Greek and Roman book rolls never, so far as we know, included a miscellany of works by more than one author when they were first

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6 Florence, Biblioteca Medicea Laurenziana, MS. Plut. 1.56.

7 McKenzie / Watson 2016.

8 Uppsala, Uppsala University Library, MS DG 1.

9 Erevan, Matenadaran, MS 2374.

10 Mestia, Svaneti Museum, Georgian National Museum.

made,' an observation that has also been made by a number of other authors.[11] It is, therefore, a striking departure from Greco-Roman precedent that Christians revered a manuscript containing not just a single text, but an entire library of texts bound within a single physical artefact, in other words, a multiple-text manuscript (MTM).[12] A final difference that our reader would immediately notice is the penumbra of paratextual material in addition to the text of the four gospels. These paratextual features in late antique gospel-books may include any or all of the following: introductions to each of the gospels akin to brief authorial biographies, along with lists of foreign words used; lists of chapters into which the text was broken; various marginal reading aids; and not least authorial portraits and images of scenes from the gospels. All of this stands in contrast to what William A. Johnson has called the 'radically unencumbered stream of letters' evident in the elite book-roll, which not only lacked the sort of subheadings that are standard in books today but also spacing between words.[13] Paratextual material is almost always very minimal in such book-rolls, rarely providing more information than a simple statement of authorship and title, placed at the beginning and/or end of the scroll.[14] In contrast, the flow of text in

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11 Houston 2014, 78. Houston was following the earlier work of Puglia 1996, who was building upon Petrucci 1986. Cf. Crisci 2004, 109–110.

12 I use this terminology following Bausi 2010, 34–36, and here I define an MTM in terms of its contents rather than the physical structure of the book. On these two ways of defining the concept, see Maniaci 2004, 77. That is to say, a four-gospel codex is an MTM because it contains multiple texts written by various authors. Hence, even if a given four-gospel manuscript was made in one operation, and is thus a monomerous codex comprised of one codicological unit, it is still an MTM in terms of its content. Maniaci 2004, 82, however, puts manuscripts of the Bible in the category of the 'monotextual' ('monotestuale') codex, along with manuscripts containing a single work by a single author and those containing collections of texts with a 'complete meaning' ('senso compiuto'). For the Byzantine period with which Maniaci is concerned, it was certainly true that the four gospels were largely viewed as an indivisible collection of texts with a single meaning, and so a manuscript containing them was not conceptually an MTM. However, for the late antique period with which I am concerned, the four-gospel codex would have been viewed by its users as an MTM against the background of the wider Greco-Roman book culture of the period. Moreover, the fact that the gospels originally circulated separately (see below) suggests that, when they were first collected into a single codex, it would have been viewed as an MTM. For further terminological clarifications, see Gumbert 2004; Nyström 2009, 38–48; Gumbert 2010.

13 Johnson 2010, 20. See also Johnson's comments about the 'aesthetic' of the book-roll and how it differs from that of the codex in Johnson 2004, 85–86.

14 Houston 2014, 111–120. Houston says that 'many of the papyri' from Herculaneum included paratextual material, but that this usually consisted of 'an end title written by the scribe who copied the text and provided the name of the author, the title of the work, and, where appro-

a late antique four-gospel codex was constantly intruded upon by various kinds of paratextual material that grew more elaborate as the centuries progressed.[15]

   In the present chapter, I want to suggest that the development of these paratexts was driven in part by the unique nature of the fourfold gospel codex as a particular kind of MTM. In short, if the fourfold gospel codex can be understood as a 'corpus-organizer' by binding together originally separate texts into a new unit,[16] then it also generated further paratextual organizational schemes within the codex itself for the purpose of ordering the material contained therein.[17] Here, I want to focus on the most unique of these paratextual features, the so-called Eusebian Canon Tables, which represent the earliest known numerically keyed cross-referencing system in the Greco-Roman world. The structure of this chapter

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priate, the number of the book' (pp. 111–112). In the 30% of cases in which the *subscriptiones* go beyond this basic information, the additional information often consists of a sub-title to the individual book in the roll. Stichometric counts were also not uncommon in the villa papyri. Houston concludes on the basis of his analysis that 'there is no unambiguous example of a person working with the collection and adding information that would help in the identification, organization, or storage of the manuscripts' (p. 116). The papyri from Egypt that include paratextual material usually have similarly minimal information. On annotations in Egyptian papyri, see McNamee 2007.

15 The study of these paratexts is still largely in its infancy, but is quickly progressing through a spate of studies in recent years: von Soden 1902; den Hollander / Schmid / Smelik 2003; Blomkvist 2012; Gathercole 2013; Scherbenske 2013; de Bruyne / Bogaert / O'Loughlin 2014; de Bruyne / Bogaert / O'Loughlin 2015; Wallraff / Andrist 2015. On paratexts more broadly, see Genette 1997; Alexander / Lange / Pillinger 2010; Jansen 2014; Ciotti / Lin 2016.

16 Cf. Bausi 2010, 35: 'Here, the corpus represents a range of a "homogeneous continuum", including possibilities implied by traits that are "mentally" and "culturally defined" (including praxis such as liturgical needs, but also aesthetic and artistic appreciation, literary affinity, etc.). These traits give a set of manuscripts a precise status (i.e. which makes it a corpus from the internal perspective of a given manuscript culture), while the actual realization of the manuscripts include its format as well as its actual editorial and textual interventions. The structural and mutual interrelationship between the various manuscripts, and between each of them and the "corpus", is fundamentally one of "matter" to "knowledge" as a function of its organization. In its form and contents, a "corpus-organizer" realizes the contents contained in the "projectual intention" of the copyist, or of those who are behind him. The "homogeneous continuum"—determined by culture and praxis—is intercepted by sets of "corpus-organizers", in that they provide the necessary "slots" for hosting "modules" of written knowledge. Knowledge, in turn, has the function of filling up the "slots" of the "corpus-organizers"'. Cf. Crisci 2004, 144: 'il codice miscellaneo poteva infine proporsi come un modello di organizzazione libraria adatto a soddisfare esigenze molteplici'.

17 Ciotti / Lin 2016, VII identify three functions of paratexts: 'structuring,' 'commenting,' and 'documenting'. The Eusebian Canon Table apparatus is a particularly good example of the first of these functions.

will proceed as follows. First, I will briefly survey the history of the four-gospel codex prior to the work of the early fourth-century bishop Eusebius of Caesarea. Then I will examine two other works he composed, which represent similar attempts at 'ordering' different bodies of information and presenting them in codex form. Finally, I will set forth the literary problem posed by the fourfold gospel and Eusebius' revolutionary information technology he invented to address it.

1 The history of the Four-Gospel Codex

Before coming to the Canon Table system itself, it is helpful to gain a sense of the history of the four-gospel collection prior to the ingenious work of the early fourth-century bishop Eusebius of Caesarea. Combining archaeological and literary sources, we can glimpse the broad outlines of the process of development that resulted in the four-gospel codex that I have been describing.[18] The four texts that would later become canonical for the Christian tradition originally circulated independently of one another. Although our earliest surviving material evidence is at least half a century or more after the writing of the last of these four texts (e.g. $\mathfrak{P}^{52}$ and $\mathfrak{P}^{104}$, both dated to the second century),[19] the abundant material that was preserved in the trash heaps of Oxyrhynchus testifies to this separate transmission of the four gospels. Despite the random nature of the survival of manuscripts in such contexts, we would, if the four-gospel codex existed at this time, expect a relatively even rate of survival amongst the gospels we know of as Matthew, Mark, Luke, and John. This, however, is certainly not what we find. Among the papyri dated to the second and third centuries, there are 16 copies of John, 12 of Matthew, seven of Luke, and one of Mark.[20] This uneven rate of survival suggests that during this period there were many more copies of Matthew and John circulating than of Mark and Luke, undoubtedly because these were the most popular gospels among readers.[21] This also suggests that these gospels must have existed in separate manuscripts. Of course, some of these surviving fragments could have come from manuscripts containing

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18 For a recent study of the material evidence surviving from the early centuries and what it reveals about early Christian book culture, see Charlesworth 2016. And for a recent survey of the literary sources, see Watson 2013, chapters 8–9.

19 The dating here is that provided by the Institut für Neutestamentliche Textforschung. Cf. Orsini / Clarysse 2012, 443–474.

20 Statistics taken from Hurtado 2006, 20.

21 Cf. Hurtado 2006, 30–31.

more than one gospel, and there are some that contain, say, two gospels of the four (e.g. $\mathfrak{P}^{75}$ dated to the third century and containing portions of Luke and John), but there is no undisputed evidence for a single manuscript containing all four gospels in the second century. It is also the case that our literary sources from the first half of the second century do not demonstrate a clear sense of these four texts as a collective body of literature, but instead usually know only a smaller number of them, or perhaps others in addition to these four.[22] It is not until the end of the second century that we find an author making an argument for the necessity and authority of the four gospel collection, specifically Irenaeus, bishop of Lyons in the 180s and 190s.[23] Thereafter most of our surviving authors treat the four-gospel collection as a given, though some, such as Clement of Alexandria, Serapion of Antioch, and Origen, continued to make occasional use of other gospels in addition to these four core texts.

Our earliest material evidence for a codex containing all four of these gospels comes from roughly half a century after Irenaeus.[24] The papyrus known as $\mathfrak{P}^{45}$, usually dated to *c*.250, originally comprised 224 pages and contained the gospels of Matthew, John, Luke, and Mark, as well as the book of Acts. As such, it represents the earliest undisputed four-gospel codex.[25] After this point, codices with multiple gospels become more common, though the memory of the gospels as separate manuscripts continued, as can be seen, for example, in a fifth-century mosaic in the Galla Placidia Mausoleum in Ravenna that depicts a book cupboard containing separate codices for each gospel. Moreover, manuscripts containing a fewer number of gospels continued to be produced on occasion, as evidenced by the eighth-century pocket-sized St Cuthbert Gospel (also known as the Stonyhurst Gospel)[26] that contains only the Latin version of the Gospel of John. Nevertheless, from the fourth century onwards, the four-gospel collection, now bound together in a single codex, began to circulate widely throughout the Christian world. It is reasonable to suppose that part of the attraction of this format was that the single manuscript containing four texts reflected in material form the status these four had attained as a collection, with each component part being necessary as the church's canonical scripture.

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22 I have in mind here the texts traditionally grouped together as the 'Apostolic Fathers'.

23 See his *Against Heresies* 3.11.8–9.

24 For an argument that there is an earlier manuscript that has the honour of being the oldest four-gospel codex, see Skeat 1997, but see the response to Skeat's proposal in Head 2005. The debate is also reviewed in Hurtado 2006, 36–37. The question has recently been subjected to a thorough analysis in Nongbri 2018, chapter 7.

25 On $\mathfrak{P}^{45}$, see Skeat 1993; Hurtado 2006, 174–77.

26 London, British Library, Add. MS. 89000.

Generally speaking, the four-gospel manuscripts that survive exhibit a remarkable degree of consistency across a wide range of cultures. We never, for example, find one of the four canonical gospels bound with other gospels that would eventually be considered non-canonical.[27] Moreover, the surviving copies of these four gospels, regardless of whether they were bound individually or with other gospels, are without exception in codex form. In other words, our material evidence reveals that readers of these texts had a clear preference for the codex, a rule that is distinctively against the Greco-Roman book culture of the period.[28] The only significant deviation across our surviving four-gospel codices from this period is that these four texts were ordered in two alternate sequences that competed with one another for supremacy for a short time. Modern Bibles print them in the order Matthew-Mark-Luke-John, and most surviving copies from Late Antiquity onwards reflect this same sequence. However, this was not the only order and may not have been the earliest. $\mathfrak{P}^{45}$, just mentioned as the earliest surviving four-gospel codex, follows the sequence Matthew-John-Luke-Mark, and copies of the Old Latin translation of the gospels usually also have this order.[29] However, this alternate sequence died out in the Latin world as Jerome's new Latin translation won favour from the late fourth century onwards, and it eventually faded away in the Greek world as well. Hence, in contrast to the variability exhibited by some MTMs contemporaneous with the manuscripts we have been considering, the four-gospel collection achieved at an early stage a distinct stability attesting to its conceptual status as an authoritative corpus of texts.

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27 Cf. Hurtado 2006, 37, 72–73, 88.

28 On the Christian preference for the codex, a feature of these manuscripts that has generated extensive discussion, see especially Hurtado 2006, 43–89. Hurtado comments: 'So far as biblical texts are concerned, as noted already, there is no New Testament text copied on an unused roll among second- or third-century Christian manuscripts' (p. 58).

29 On the western order, see Parker 1992, 116–118. On the order of the gospels in $\mathfrak{P}^{45}$, see Skeat 1993, 31–32. See also Crawford 2018.

2 Eusebius of Caesarea, the design innovator of Late Antiquity

The technological shift from the scroll to the codex brought with it the potential to revolutionise the way in which readers interacted with books. One of the first to realise the potential inherent in the new book form was Eusebius, the bishop of Caesarea, who, quite deservedly, has been called a 'Christian impresario of the codex'.[30] To use another metaphor, we might say that Eusebius was the Steve Jobs of his day, in the sense that he was able to intuit the power inherent in design for improving the user's access to information.[31] Eusebius took over the impressive Christian library at Caesarea, which was the intellectual, and perhaps also the institutional, descendant of the library brought to the city by the famous philosopher-theologian Origen, when he moved from Alexandria in *c*.232.[32] He is probably most well-known for his presumed association with the Emperor Constantine and his authorship of the extremely influential *Ecclesiastical History* (*HE*), in which he recounted the first three centuries of the history of the Christian church. The *Ecclesiastical History* was a remarkably innovative work, particularly in the manner in which it incorporated so many earlier sources into a single narrative, frequently relying on large block quotations from prior authors. However, this historical narrative was related to another, less well known work, his *Chronological Tables*, or simply the *Chronicle*, which survives partially in Latin and partially in Armenian, despite the loss of the original Greek version.[33] In his prefatory remarks to the *Ecclesiastical History*, Eusebius pointed out that the 'narrative' (ἀφήγησις) that followed was built upon the 'summary' (ἐπιτομή) of the same material that he had already drawn

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30 The phrase is taken from the title to chapter 4 of Grafton / Williams 2006.

31 Cf. Grafton / Williams 2006, 200: 'No early creator of codices understood more vividly than Eusebius the possibilities that the new form of the book created for effective display of texts and information'.

32 On the continuity between Origen's library, that of Pamphilus, Eusebius' mentor, and Eusebius himself, see Grafton / Williams 2006, 179, who suggest 'the library at Caesarea probably did not have a continuous institutional history'. See, however, Carriker 2003, 10–11, who holds that Origen's library survived his death and might be what drew Pamphilus to Caesarea. Carriker gives a brief overview of the history of the Caesarean library prior to Eusebius on pp. 1–17.

33 For a German translation of the Armenian edition of Eusebius' *Chronicle*, which preserves both of the original two books of the work, see Karst 1911; and for Jerome's Latin translation and continuation of the second book, see Helm 1984. For a discussion of the complex textual history of the work, see Burgess / Witakowski 1999.

up in his *Chronological Tables*.[34] This earlier summary lacked almost all narrative comment and was instead a bare listing of events and persons in historical succession, in keeping with the earlier Greco-Roman chronicle genre.[35] However, what made Eusebius' work unique and innovative was the grand scope of his project. He did not merely report the significant events of a single past nation or city, as had been done ample times before. Rather, in an attempt to give as comprehensive an overview of post-Abrahamic world history as possible, he compiled and synchronized the past histories of some nineteen different nations and then invented a way of synoptically presenting all the material to the reader in tabular fashion.[36]

In its sheer ambition and in its innovative format of presentation, the *Chronicle* was a drastic advance upon earlier historiographical scholarship, and has rightly been called 'a dynamic hieroglyph of the succession of kingdoms,' or, in the words of the sixth-century Latin monk Cassiodorus, 'an image of history'.[37] It is almost inconceivable that a project of this scope would have been possible on a book-roll, or rather on a collection of book-rolls. At the very least it would have been incredibly impractical, so it is reasonable to suppose that this new format of presentation was made possible by the potential inherent in the new technology of the codex, specifically its greater size as a 'container' and the way in which it presents the reader with multiple random access points. Moreover, we should consider carefully the intellectual skills this work demonstrates in its creator, since these are relevant to the present discussion about the MTM of the fourfold gospel. In the *Chronological Tables*, Eusebius had to compile, synchronize and arrange the often divergent histories and calendrical systems of multiple nations, and then come up with a means to convey this newly ordered information to the reader in an accessible manner. Through this process, the originally unrelated histories of these nations were placed in a new relation to one another, and a new meaning emerged from this juxtaposition. These, I suggest, are the same skills he demonstrated in the new technology he developed for the MTM of the four-gospel codex.

Eusebius' experimentation with book technologies is also evident in the paratext he designed for the book of the Psalms. The psalter, which was one of

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34 *HE* 1.1.1.

35 On the broader history of the chronicle genre, of which Eusebius' work is an example, see Burgess / Kulikowski 2013.

36 For an insightful discussion of Eusebius' *Chronicle*, see Grafton / Williams 2006, 133–177.

37 Cf. Grafton / Williams 2006, 141–142. Grafton and Williams refer to the 'dramatic formal innovation' inherent in the *Chronicle* as a 'stunningly original work of scholarship' (p. 175).

the most important texts for Christians of the fourth century, consisted of 151 separate songs attributed to a variety of authors from the history of ancient Israel. A codex containing the psalter was, therefore, somewhat akin to a four-gospel codex insofar as it was a collection of texts of diverse authorship bound between two covers. Although navigation within this corpus would not have been difficult, given that each psalm was labelled with a number in sequence, the psalms were not grouped together according to authorship. As a result, if the reader wanted to identify all of the psalms belonging to a particular person, she was forced to rely either on her memory or on much flipping of pages in the codex. Eusebius greatly improved the user's navigation within the corpus of the psalter by creating a *pinax* (πίναξ, 'list' or 'catalogue') that grouped all of the psalms into nine lists according to authorship.[38] With this new tool, one could immediately see, for example, that psalms 71 and 126 belonged to Solomon, that psalm 89 was attributed to Moses, and that several dozen psalms were composed by David. However, because there was no need for coordinating the psalms listed in each of these categories to one another, all of the lists in the *pinax* were effectively isolated silos that required the reader to navigate up and down vertically, but not horizontally across the lists. As such they were not as complex as the Canon Tables for the gospels, but they do serve as a precursor insofar as the *pinax* for the psalms was a paratextual device intended to improve the navigation of a corpus comprised of diverse components and contained within a single manuscript.

3 The problem of similarity and difference in the MTM of the Fourfold Gospel

The reason why Eusebius faced a more difficult task with respect to the fourfold gospel is because the texts contained within this MTM simultaneously presented high degrees of similarity and difference with one another, to a degree that was probably without parallel for any other corpus of texts in Greco-Roman antiquity. These were texts that were not merely grouped together because they came from the same author or because they shared a certain genre. Rather, these were four

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38 Only a single copy of this work survives. For a study of it, including colour plates of the sole surviving manuscript (Oxford, Bodleian Library, Auct. D.4.1), a transcription, and an English translation, see Wallraff 2013. For a similar use of the word πίναξ, see Galen, *De indolentia* 16–17, discussed in Houston 2014, 259.

different versions of the exact same story, the life of Jesus of Nazareth. In fact, scholars today almost universally agree that these four works are so similar to one another that a literary relationship must exist amongst them, at least with respect to the three that are the most similar—Matthew, Mark, and Luke, known as the Synoptic gospels. Various solutions to the so-called synoptic problem have been offered over the past several centuries, none of which need to be considered here.[39] The important point for our purposes is to observe that the synoptic problem highlights the uniqueness of this corpus of texts. Never before had four different versions of the same story been combined into a single canon of literature. Indeed, one might suppose that it would have made much more sense for second-century Christians to choose just one of these four and ignore the others, yet this was a path that almost no one took. Even the Gospel of Mark, which was rarely ever quoted in the early centuries of Christianity, usually being overshadowed by its more popular neighbours, was not abandoned for this reason but was instead retained within the fourfold canon. The case with Mark is particularly illuminating of the challenge created by this canon of texts because among the four gospels it shares an especially close relationship with the Gospel of Matthew. According to one widely quoted estimate, Matthew, using Mark as a source for his own gospel, retained 90% of Mark's story and even 51% of his actual wording,[40] although he added in much more material taken from other sources. In other words, at least half of the Gospel of Mark was reproduced verbatim in the Gospel of Matthew, yet both sources were retained in the same canon of texts. Yet these statistics obscure the complexity of the relationships amongst these four works. Almost every possible kind of relationship exists. There are some stories common to all four gospels, which might be told almost verbatim or very differently; some stories or sayings occur in only three gospels; some are found only in two; and finally, every gospel has material that is unique to it.

From the perspective of a user of this MTM, the complexity of the dialectic between sameness and difference within this corpus created several potential problems. First, scribes copying the texts often inadvertently substituted the passage they were copying with the version of the same story found in another of the gospels with which they were perhaps more familiar.[41] Readers of these texts, even

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39 On the synoptic problem, see Dungan 1999; Goodacre 2001; Watson 2013, 117–285.

40 Streeter 1924, 151, 159.

41 This is a problem that late antique authors were already aware of. Jerome mentions it as the primary justification for his inclusion of the Eusebian Canon Tables in his new translation of the gospels into Latin. See his *Novum Opus* addressed to Pope Damasus which serves as the preface to his Vulgate edition.

those with very good memories, would also have found it difficult to recall where certain stories occur, whether in one gospel or multiple ones, and trying to find the passage one had in mind would not have been easy. Finally, given the similarity of these texts to one another, the tendency on the part of the reader would naturally have been to conflate them all together, producing one, perhaps rather vague, mental gospel that effectively erases the distinct contribution that each of the four sources makes to the collective canon. These issues would have been apparent even if the gospels were housed in four separate codices, as pictured in the mosaic from Ravenna, but grouping them together into a single manuscript only made the problem more acute. Therefore, despite its remarkable stability in transmission, this was an MTM that contained a corpus of texts in need of disambiguation from one another; in need, that is, of some sort of technology for organizing the texts contained therein so as to aid the reader's navigation and study of these texts. This was the need that Eusebius' Canon Tables fulfilled.

Eusebius set about addressing this problem using the skills of organization and presentation that he had already developed in his treatment of history and the psalter. He must have begun by identifying the possible relationships amongst the four texts contained within this canon. First, there were passages that occur in all four. Then, there are passages that occur only in three gospels, whether in Matthew, Mark, and Luke; or in Matthew, Luke, and John; or in Matthew, Mark, and John. Next, there are passages that occur in only two gospels, such as Matthew and Luke, Matthew and Mark, Matthew and John, Mark and Luke, and finally John and Luke. Finally, there are passages unique to each gospel. Eusebius provided a number to represent each of these relational categories, which became the organizational principle that he applied to order the textual material he had before him. In essence what he did was to place every passage throughout the gospels into one of these categories. In what must have been a painstakingly tedious process, he worked through each gospel individually, dividing it into chunks of text and assigning each section to one of the categories he had established. Because these chunks of text are demarcated according to their relation with the other gospels, the breaks between them often do not occur at natural points in the flow of the narrative or discourse, but at times even cut sentences in half. Some of these parallels identified by Eusebius are verbatim agreements between two or more gospels, some are more thematic, and others appear theologically motivated. Moreover, their length varies widely from what would be whole chapters in modern reckoning to what modern readers would know as half a verse. So, for example, when Eusebius came to Matthew 1.18, which reports of Mary's miraculous conception by the Holy Spirit, he realized that the Gospel of Luke had a single verse (Luke 1.35) that made this same claim, so he noted this passage down in

his category of Matthew-Luke parallels. This was not a verbatim agreement but a thematic parallel about the role of the Holy Spirit in Jesus' birth. However, the following verses, Matthew 1.19-25, which recount a dream sent to Joseph to inform him of Mary's situation, are unique to the Gospel of Matthew, so Eusebius made these a separate section of text and placed them in the Matthew-only category. Once he had gone through the entirety of all four gospels in this manner, creating 1,162 sections of text,[42] he numbered the sections within each gospel sequentially, so that each passage had a unique identifier. He then designed a *mise-en-page* to encode this information in the four-gospel codex as a paratextual apparatus, writing in the margin of each page the sectional enumeration in black ink, and beneath it in red ink the number of the relational category to which each section belonged. Finally, he collated the numbered passages from each gospel into tables representing the relational categories he had designated, creating ten 'canons' (κανόνες) placed at the head of the fourfold gospel collection. In each of these canons, the number for a given passage from one of the gospels was placed alongside the identifying number(s) of the passage(s) from the other gospel(s) that presented a parallel.[43]

The resulting paratextual apparatus created a series of connections across the corpus contained within the MTM that allowed for a new kind of engagement with this textual material. For example, when you read the opening of Matthew's gospel in a codex equipped with Eusebius' apparatus and come to the statement about Mary's miraculous conception by the Holy Spirit (Matthew 1.18), you will notice a black '3' representing the number for this passage in the margin next to this sentence. Below this is a red '5' indicating the category or Canon to which this passage belonged. When you then turn to the front of the codex, you can discover that Canon 5 lists parallels between Matthew and Luke. Thus, you immediately know that the passage about Mary's conception has a parallel in the Gospel of Luke. If you then find the number '3' in the column for Matthew in Canon 5, you will notice that it is next to a number '2' in the Lukan column The section of text in the Gospel of Luke numbered '2' is a passage that is parallel to the passage you began with in Matthew (Luke 1.35). Of course, the apparatus could work in the other direction as well, with the reader beginning with the tables and then turning

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42 That is, 355 for Matthew, 233 for Mark, 342 for Luke, and 232 for John.
43 On the layout of the ten canons, see the seminal work of Nordenfalk 1938 who used late antique and medieval exemplars to reconstruct the Eusebian archetype. Studies of specific manuscripts and traditions may be found in Underwood 1950; Nordenfalk 1951; Nordenfalk 1963; Nordenfalk 1982; Mathews and Sanjian 1991, 166–176; McGurk 2001; McKenzie and Watson 2016, 83–186; Gearhart 2016; Pulliam 2017; Strom-Olsen 2018.

to specific texts. Recall that the author of the Gospel of Matthew had taken over almost all of the Gospel of Mark into his new composition. But what about those passages that Matthew did not incorporate into his narrative, which are found only in Mark? When you turn to the Canon listing the Mark-only passages, you will instantly have a list of the textual content that is unique to Mark (19 passages to be precise), and you could examine these in the context of the gospel to determine the distinct contribution of Mark to this corpus of literature. In other words, the user of a four-gospel codex equipped with this new information technology, starting at any point in the text, could study which relationships any passage of interest has with the other gospels, or he could begin by studying all the passages that belong in any of the organizational categories devised by Eusebius. The latter is precisely the sort of methodological approach that would, over a millennium later, lead modern scholars to an awareness of the synoptic problem. In other words, Eusebius was well ahead of his time.[44]

The significance of Eusebius' achievement becomes clearer when we view it against the backdrop of the Greco-Roman world of Late Antiquity in which he was operating. I have already mentioned that paratexts were usually very minimal in the Hellenistic and imperial period, and even when they do appear, they tend to be very basic. Pliny the Elder's table of contents for his massive *Natural History* is one of the earliest examples we have, and it merely consists of a list of the books comprising the work and their respective topics.[45] By the fourth century, authors were regularly dividing up longer works into constituent books in a similar fashion, which they enumerated and collated in prefatory lists – a technique that Eusebius himself employed in his *Ecclesiastical History*, and one that is sure to have improved the user's experience of navigating around the work. However, these divisions were always at the level of an entire book and did not divide a text into any smaller subdivisions, as Eusebius' apparatus did. Moreover, cross-referencing within a corpus of texts was virtually non-existent. The tabular format of Eusebius' paratext was also strikingly innovative. In a forthcoming monograph on information technologies in the classical Roman world, Andrew Riggsby observes that tables were 'vanishingly rare' in the Latin world, even in the kind of places that one would expect to find them, such as grammar, arithmetic, and calendars.[46] The situation is slightly different in Greek, with examples like Ptolemy's *Handy Tables* for astronomical calculations. In fact, it may be that Eusebius

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44 See Crawford 2015.

45 On early tables of contents in the Roman world, see Riggsby 2007, and on Pliny specifically, see pp. 93–98.

46 Riggsby 2019.

was inspired by such astronomical tables, since they had been adapted in the previous century by Christian authors for use in calculating the date of Easter.[47] Yet even in the world of Alexandrian philology, never before had the relationship between texts been symbolically represented in tabular format. In short, what Eusebius produced was the first ever numerically keyed cross-referencing system for a body of texts. It is, therefore, emblematic of the late antique 'information technology revolution' that Riggsby suggests occurred in the two centuries following Diocletian's reign.

It can hardly be a coincidence that this remarkable achievement in the history of information technology and information visualisation was carried out in relation to a corpus of texts that presented a literary problem of sameness and difference that was also without precedent. In other words, the collecting of these four gospels into a single MTM created the conditions that allowed the emergence of this breakthrough. More specifically, the organizational purpose of Eusebius' paratext may be understood as an extension of the corpus-organizing function of the MTM itself.[48] Here the analogy with Ptolemy's *Handy Tables* is instructive. Ptolemy's astronomical charts formed a numerical map of the physical world, which provided a means for the amateur astronomer to predict and trace the orderly movements of the heavenly bodies. Similarly, Eusebius' Canon Tables provided a map of the microcosm of the text, allowing the reader to discern the presumed divine order inherent to this corpus of sacred literature. In both cases, the orderly columns and rows of numbers imply that the reality to which the table refers, either the celestial bodies or the fourfold gospel, is also an ordered, harmonious whole whose movements may be understood by an observer equipped with the right understanding and tools.

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47 See, e.g. Anatolius of Laodicea, whose career and works are described in Eusebius, *HE* 7.32.6–20. Hailing from Alexandria, he is reported to have been an expert in Aristotelian philosophy and authored a treatise containing tables for calculating the date of Easter, which was titled Κανόνες περὶ τοῦ πάσχα. Eusebius had access to this work and cited a passage from it. Cf. Mercier 2011, 2, who points out that Christian authors made use of Ptolemy's tables for 'determining the date of Easter'. Showing a similar concern is the roughly contemporary paschal calendar inscribed on the famous Statue of Hippolytus now in the Vatican museum.
48 In this respect, the Canon Tables seem to be exceptional against the background of other late antique Greek miscellaneous manuscripts, which, according to Crisci 2004, have 'dispositivi di impaginazione e di organizzazione del testo per lo più modesti e approssimativi' (pp. 142–143).

References

Alexander, Philip S. / Lange, Armin / Pillinger, Renate (eds) (2010), *In the Second Degree: Paratextual Literature in Ancient Near Eastern and Ancient Mediterranean Culture and Its Reflections in Medieval Literature*. Leiden: Brill.

Bausi, Alessandro (2010), 'A Case for Multiple Text Manuscripts Being "Corpus-Organizers"', in *manuscript cultures*, 3: 34–36.

Blomkvist, Vemund (2012), *Euthalian Traditions: Text, Translation and Commentary*. Berlin: De Gruyter.

De Bruyne, Donatien / Bogaert, Pierre-Maurice / O'Loughlin, Thomas (2014), *Sommaires, divisions et rubriques de la Bible latine*. Turnhout: Brepols.

De Bruyne, Donatien / Bogaert, Pierre-Maurice / O'Loughlin, Thomas (2015), *Prefaces to the Latin Bible*. Turnhout: Brepols.

Burgess, Richard W. / Kulikowski, Michael (2013), *Mosaics of Time: The Latin Chronicle Traditions from the First Century BC to the Sixth Century AD, Vol. 1: A Historical Introduction to the Chronicle Genre from its Origins to the High Middle Ages*. Turnhout: Brepols.

Burgess, Richard W. / Witakowski, Witold (1999), *Studies in Eusebian and Post-Eusebian Chronography*. Stuttgart: Steiner.

Carriker, Andrew (2003), *The Library of Eusebius of Caesarea*. Leiden: Brill.

Charlesworth, Scott D. (2016), *Early Christian Gospels: Their Production and Transmission*. Firenze: Edizioni Gonnelli.

Ciotti, Giovanni / Lin, Hang (eds) (2016), *Tracing Manuscripts in Time and Space Through Paratexts* (Studies in Manuscript Cultures, 7). Berlin, Boston: De Gruyter.

Crawford, Matthew R. (2015), 'Ammonius of Alexandria, Eusebius of Caesarea and the Origins of Gospels Scholarship', in *New Testament Studies*, 61: 1–29.

Crawford, Matthew R. (2018), 'A New Witness to the 'Western' Ordering of the Gospels: GA 073+084', in *Journal of Theological Studies*, 69: 477–83.

Crisci, Edoardo (2004), 'I più antichi codici miscellanei greci: materiali per una riflessione', in Edoardo Crisci and Oronzo Pecere (eds), *Il codice miscellaneo: Tipologie e funzioni. Atti del Convegno internazionale Cassino 14-17 maggio 2003*. Cassino: Università degli studi di Cassino (= *Segno e testo* 2), 109–144.

Dungan, David Laird (1999), *A History of the Synoptic Problem: The Canon, the Text, the Composition, and the Interpretation of the Gospels*. New York: Doubleday.

Gathercole, Simon J. (2013), 'The Titles of the Gospels in the Earliest New Testament Manuscripts', in *Zeitschrift für die Neutestamentliche Wissenschaft*, 104: 33–76.

Genette, Gérard (1997), *Paratexts: Thresholds of Interpretation*. Cambridge: Cambridge University Press.

Goodacre, Mark S. (2001), *The Synoptic Problem: A Way Through the Maze*. London: Sheffield Academic Press.

Grafton, Anthony / Williams, Megan Hale (2006), *Christianity and the Transformation of the Book: Origen, Eusebius, and the Library of Caesarea.* Cambridge, MA: Belknap Press of Harvard University Press.

Gumbert, J. Peter (2004), 'Codicological Units: Towards a Terminology for the Stratigraphy of the Non-Homogenous Codex', in Edoardo Crisci and Oronzo Pecere (eds), *Il codice miscellaneo: Tipologie e funzioni. Atti del Convegno internazionale Cassino 14-17 maggio 2003*. Cassino: Università degli studi di Cassino (= *Segno e testo* 2), 17–42.

Gumbert, J. Peter (2010), 'Zur Kodikologie und Katalographie der zusammengesetzten Handschrift', in Edoardo Crisci, Marilena Maniaci and Pasquale Orsini (eds), *La descrizione dei manoscritti: esperienze a confronto*. Cassino: Università degli Studi di Cassino - Dipartimento di Filologia e Storia, 1–18.

Head, Peter M. (2005), 'Is P4, P64 and P67 the Oldest Manuscript of the Four Gospels? A Response to T. C. Skeat', in *New Testament Studies*, 51: 450–457.

Helm, Rudolf (1984), *Eusebius Caesariensis Werke VII. Die Chronik des Hieronymus*. Berlin: Akademie-Verlag.

den Hollander, August A. / Schmid, Ulrich / Smelik, Willem F. (eds) (2003), *Paratext and Megatext as Channels of Jewish and Christian Traditions: The Textual Markers of Contextualization*. Leiden: Brill.

Houston, George W. (2014), *Inside Roman Libraries: Book Collections and Their Management in Antiquity*. Chapel Hill: The University of North Carolina Press.

Hurtado, Larry W. (2006), *The Earliest Christian Artifacts: Manuscripts and Christian Origins*. Grand Rapids: Eerdmans.

Jansen, Laura (ed.) (2014), *The Roman Paratext: Frame, Texts, Readers*. New York: Cambridge University Press.

Johnson, William A. (2004), *Bookrolls and Scribes in Oxyrhynchus*. Toronto: University of Toronto Press.

Johnson, William A. (2010), *Readers and Reading Culture in the High Roman Empire: A Study of Elite Communities*. New York: Oxford University Press.

Karst, Joseph (1911), *Eusebius Werke V. Die Chronik aus dem Armenischen übersetzt*. Leipzig: Hinrichs.

Maniaci, Marilena (2004), 'Il codice greco "non unitario". Tipologie e terminologia', in Edoardo Crisci and Oronzo Pecere (eds), *Il codice miscellaneo: Tipologie e funzioni. Atti del Convegno internazionale Cassino 14–17 maggio 2003*. Cassino: Università degli studi di Cassino (= *Segno e testo* 2), 75–107.

McNamee, Kathleen (2007), *Annotations in Greek and Latin Texts from Egypt*. New Haven: American Society of Papyrologists.

Mercier, Raymond (ed.) (2011), *Πτολεμαίου Πρόχειροι Κανόνες. Ptolemy's Handy Tables,* Vol. 1b*: Tables A1–A2*. Leuven: Peeters.

Nyström, Eva (2009), *Containing Multitudes: Codex Upsaliensis Graecus 8 in Perspective*. Uppsala: Uppsala Universitet.

Orsini, Pasquale / Clarysse, Willy (2012), 'Early New Testament Manuscripts and Their Dates: A Critique of Theological Palaeography', in *Ephemerides theologicae lovanienses* 88: 443–474.

Parker, David C. (1992), *Codex Bezae: An Early Christian Manuscript and Its Text*. Cambridge: Cambridge University Press

Petrucci, Armando (1986), 'Dal libro unitario al libro miscellaneo', in Andrea Giardina (ed.), *Tradizione dei classici trasformazioni della cultura*. Roma: Laterza, 173–187. Reprinted in Armando Petrucci (2007), *Scrivere e leggere nell'Italia medievale cur. Charles Michael Radding*, Milano: S. Bonnard.

Puglia, Enzo (1996), 'Il catalogo di un fondo librario di Ossirinco del III d. C. (PSILaur. inv. 19662)', in *Zeitschrift für Papyrologie und Epigraphik,* 113: 51–65.

Riggsby, Andrew M. (2007), 'Guides to the Wor(l)d', in Jason König / Tim Whitmarsh (eds), *Ordering Knowledge in the Roman Empire*. Cambridge: Cambridge University Press.

Riggsby, Andrew M. (2019), *Mosaics of Knowledge: Representing Information in the Roman World*. Oxford: Oxford University Press.

Scherbenske, Eric W. (2013), *Canonizing Paul: Ancient Editorial Practice and the Corpus Paulinum*. New York: Oxford University Press.

Skeat, Theodore Cressy (1993), 'A Codicological Analysis of the Chester Beatty Papyrus Codex of Gospels and Acts (P45)', in *Hermathena*, 155: 27–43.

Skeat, Theodore Cressy (1997), 'The Oldest Manuscript of the Four Gospels?', in *New Testament Studies*, 43: 1–34.

von Soden, Hermann F. (1902), *Die Schriften des Neuen Testaments in ihrer ältesten erreichbaren Textgestalt, hergestellt auf Grund ihrer Textgeschichte*. Berlin: Verlag von Alexander Duncker.

Streeter, Burnett Hillman (1924), *The Four Gospels: A Study of Origins*. London: Macmillan.

Wallraff, Martin (2013), 'The Canon Tables of the Psalms: An Unknown Work of Eusebius of Caesarea', in *Dumbarton Oaks Papers*, 67: 1–14.

Wallraff, Martin / Andrist, Patrick (2015), 'Paratexts of the Bible: A New Research Project on Greek Textual Transmission', in *Early Christianity*, 6: 237–243.

Watson, Francis (2013), *Gospel Writing: A Canonical Perspective*. Grand Rapids: Eerdmans.