

**AN INVESTIGATION OF SYNOPTIC HISTORY AND STYLE  
BY MEANS OF A COMPREHENSIVE ASSESSMENT OF SYNTAX CHAINS**

by

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## Summary

### AN INVESTIGATION OF SYNOPTIC HISTORY AND STYLE BY MEANS OF A COMPREHENSIVE ASSESSMENT OF SYNTAX CHAINS

The goal of the thesis is to trace the sequence of materials of different origin in the synoptic Gospels through stylistic features. The question is whether an author's style is typical in the way it employs syntax. Using syntax, the thesis tests whether a sample can be correctly associated with one author, rather than incorrectly associated with another author. 'Syntax,' in this thesis, quite specifically intends 'an assessment of a very broad range of syntax.'

The thesis reviews the literary debate over the 'synoptic problem,' finding that Luke knew and depended the triple tradition known to Mark. Luke did not know or use the unique parts of Mark. This set of materials, then, can be used to test whether syntax indicates a similar relationship.

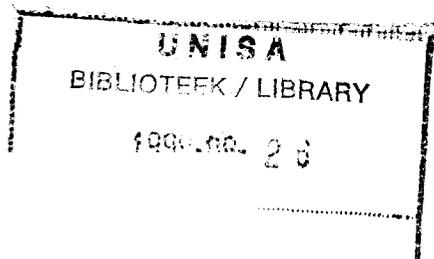
Regarding the literature on style in authorship attribution, the thesis develops principles for measuring style through syntax, and compares the distribution of the occurrence—the 'weighted sum of the logs of the ratio'—of syntax in each of three blocks of text. Such a distribution associates a reference block of text with the correct distribution from the distributions in two alternative texts offered. That is, a reference block drawn from the editorial layer in Mark proves to be closer to the remaining editorial layer in Mark (which is correct), than it proves to be to the editorial layer in Luke (which would be incorrect). This is at least a first step towards using this method with sources that appear in New Testament documents, even when they are small or fragmentary.

The thesis then applies such an analysis to one of the clearest sources in the synoptic Gospels, namely, the 'triple tradition' as presented by Luke. The analysis is congruent with the results of literary criticism. This supports the idea that syntax can discern or define a source, and so it can help us understand more about the evolution of the New Testament. Nevertheless, the thesis finds that although Luke knew the 'triple tradition' that Mark used, yet Luke appears not to have fully relied on the version of the triple tradition that we know in, and as edited by Mark.

#### Key terms:

Authorship; Style; Syntax frequency; Synoptic problem; Synoptic Gospels; New Testament; Biblical; Bible; Greek language; Linguistics.

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*Chapter One: The motivation, aims and organisation of this thesis*

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**1 Motivation**

In the late 1980s, the International Q project assigned me a task. The task related to this verse from Luke 11:27-28:

A woman in the crowd called out, 'Blessed are the breasts which gave suck to you.'  
But Jesus answered, 'Rather, blessed is the one who hears the word of God and does it.'

The task was to discuss the origin, synoptic layer, or synoptic Gospel source (see 'Working Definitions,' p. 243) from which it arose. I read the opinions of several scholars on the subject. The methodology typically was based on a comparison of the frequency of words or linguistic features. These authors would take a word, words, or other linguistic features from this verse, and then discuss 'how often' the words, or the features, appeared either in the 'Q' layer, or else, secondly, in Luke's 'special material.' They concluded that the verse should be associated with the layer in which the feature appeared most often.

Most, if not all such scholars adopted a methodology which I found troubling, however. For example, when they discussed how often the feature appeared, they did not say how large they estimated each of the two layers to be. It seemed to me that they could have said how many words, or the population that they would attribute to each of the two layers in question. (The word 'layer' here refers to any part of a completed document which may be separable from another part by

virtue of its origin. Since they could or would have different origins, either a source or else the contribution of the final editor will be referred to as layers within the document.) In the absence of defining the population, this meant that the data such scholars offered in support of their opinion was a frequency of appearance, say, three times, or four times, rather than a proportion of appearance.

Another example was that there was little discussion about the appropriateness of their selection of features for distinguishing authorship. One could imagine different reasons why a word could be a 'special case' rather than a distinctive characteristic of a writer.

A third example was that there was insufficient attention to the *form of writing* (see 'Working Definitions,' p. 239) in which the selected word or features appeared. As we will see on page 90, one or another form of writing can be associated with the presence or absence of certain linguistic features.

My investigation into what constitutes a reasonably reliable measure of authorship has taken many years since I was assigned that original task on Luke 11:27-28. The 'Q' source must still be ranked as a hypothetical source. This thesis required material that was of clearer origin to lay a foundation for what is still a future answer to that question on Luke 11:27-28. I have been on a long journey towards finding a satisfactory method for this kind of a task, but a worthwhile journey. That is because the method provides a conceptual 'tool' that is fruitful not only for this exploration, but also promises to be useful for other explorations into questions of source analysis and the internal history of ancient documents.

There are those that doubt that the New Testament is a proper object for objective study. The tools developed in this study will be useful, however, not only for ancient Christian documents, nor yet will it be useful only for ancient religious documents, but it may well be useful for all ancient documents. Then again, in our age that looks so hard at immediate effects, ancient documents are only marginally more respectable entities for objective study than the New Testament. This study was undertaken in the belief that such documents reflect aspects of human history that is neither

'bunk' (Ford, *Chicago Tribune* May 25 1916) nor 'falsehood' (Nietzsche [1889] 1968:35). Rather, there is in such documents a history that is real, significant, profound and inescapable (Lincoln 1862). There are, of course, divergent opinions and beliefs about Jesus of Nazareth, and about Christianity. Whatever we may believe, it is a wise person that seeks to know and to understand human history, if only for the sake of perspective. However the message of the synoptics is assessed, what a perspective and a view they present! For that understated reason, they rank among the most influential documents in history. Within such a frame of reference, a study of the Christian Gospels cannot be a fatuous one.

## 2 The value of source analysis

The four gospels and Acts reached the form in which we know them, arguably, in the period CE 66 to CE 110. If we set aside the sources of the Gospels, then the earliest writings in the New Testament would be Paul's early letters. An example would be 1 Thessalonians. The early Pauline letters may have been in the late 40's of the first century CE or AD.

When we enquire about the years from the crucifixion of Jesus to the first letters of Paul, however, our resources appear to be scant. First, a few primary sources may be considered, including the Dead Sea Scrolls (see 'Working Definitions,' p. 238) and the Nag Hammadi literature (see p. 241). Neither of these provide concrete information about early Christianity during this period, however. Secondly, there is not very much, or no information from Roman historians and governmental records, in the Jewish writings of historian, Flavius Josephus (see p. 240), or Philo. Frend (1982:1) said,

In Judea, 'under Tiberius all quiet' (Tacitus *Hist.* v. 9). Thus Tacitus, writing about the period of the Crucifixion. Both he and his contemporary Suetonius refer to minor matters, the remission of taxes, the growth of ill-feeling between Jews and Samaritans, and suchlike, but of the events that have made the governorship of Pontius Pilate forever memorable, not one word.

Thirdly, neither was there any complete and independent Christian document dated during this period, the first decade of the Christian community. Our best and important witnesses, then, are the

several 'sources' that appear in the synoptic Gospels. We do not have these blocks of source material as complete, independent works from that period. Nevertheless, the nature of the parallels between the compilers and writers of the Gospels suggests that they incorporated these materials--quotations and other source materials--in a form that retained at least some of their preceding structure and wording. Examples of this can be seen on page 18 onward. As a result, we can discern source material in our version of the Gospels, in which they reside. Such source materials are extremely important for reconstructing the history of the first two decades of the Christian community not because they were consciously recording history, but because they reflect developments in the community.

With regard to 'history' in the documents of the New Testament, Perrin and Duling (1982:65-66) said this:

Historical information about the Christian movement down to A.D. 140, the approximate date of the writing of 2 Peter, the last work to come into the New Testament canon, is hard to come by... [because] the New Testament is concerned with proclamation and parenesis, myth and history. But the history lies buried in forms and genres that are not intended to be historical narrative in the modern sense. To get at that narrative we must interpret the forms and genres and evaluate them critically while we attempt to reconstruct history.... However difficult it is to reconstruct historical information from the New testament it is not impossible, once we have learned to read it critically.... If one way to get at the history of the early church is a critical reconstruction of Acts, a second way is source criticism [for example] with the 'synoptic problem.'

We can see, then, that an advance in what we know about the evolution of our Gospels--and especially of the sources in them--is of strategic value for this period of Christian history. The primary tool of literary criticism for discerning such layers, and their evolution, has always been by means of comparing and contrasting *parallels* between the accounts we find in the synoptic Gospels.

A secondary tool in accomplishing this task is *stylistic analysis*. In this thesis, style is taken to be the consistent manner of expression of one author in one writing that they composed, by contrast with a different author in another particular writing, when the period, genre and form is the same in both. Therefore, the style of a writer is distinguished from consistent linguistic features connected with either the genre of the writing, or with its form. The reason for counterbalancing the same genre and

form in the works compared is that at least some stylistic features of genre or form are more prominent than those of the author. We will discuss this further on (in Radday and Shore, on page 87 below).

## Genre

Genre is an English word for the Greek literary category that bore the name γέννη or εἶδη (Cairns 1972:6-7). Genre refers to the interrelation of [purpose,] form, style, and content (Suggs 1962:370) within a class, type or kind of literature (Cuddon [1976] 1979:285). It is identified at least by the persons, situations or functions which are logically necessary for [purposes of] the genre (Burridge 1992:59, 65, 69). In this thesis we will use the word 'genre' for a literary category that includes a whole of a book (of the New Testament), for example the synoptic Gospels as we have them. When we use the word 'form,' on the other hand, we will be referring to textual or literary components, sections, or units that are smaller than the whole of a canonical gospel, and that are contained within it. A further consideration of form appears on page 91 below.

Returning to our discussion, stylistic analysis examines the linguistic habits of writers. We are often confined to the literary analysis of parallels in deciding whether an author composed certain material, or whether they drew it from a source of some kind. A determination of a writer's style, and the measurement of differences in style give us a different way to find whether a writer composed material, edited it, or used some source. We will further develop a working definition of style below (page 83), and consider examples of stylistic measures (page 110).

Literary and stylistic analysis both work together with texts like an archeologist works with potsherds in an ancient tell, separating the layers of material underneath an old city. In this way, these different disciplines can outline earlier layers of material that gave rise to later developments. We will review the first tool, literary analysis in chapter two. We will discuss the second tool, stylistic analysis, in chapter three.

Therefore, our resources for CE 35-45 are restricted to the separate 'sources' that emerge in the synoptic Gospels, which are essential value for this phase of Christian history. We better our comprehension of these sources in two ways: First, through literary study; and, secondly, through stylistic study.

### 3 Aims

We will see that there is evidence for some process of evolution from earlier to later material within what we know as our three synoptic Gospels. For example there were first, cycles of tradition that may have arisen as oral units in a geographic region. Secondly, there were subsequently sources that were more structured, extended and more widely circulated. Third, there was the theological contribution of the final editors of the synoptics. This last was like the glue that both assembled and partially modified the previous two categories into the final form in which we know as one or another synoptic Gospel. We will use the name 'layers' to refer to such evolutionary phases or stages.

Stylistic analysis refers to the way that scholars have compared the style of writing in layers of material from the synoptic Gospels. Some ways in which that has taken place appear in chapter two. In such ways as we will see there, they have contributed to our understanding of the possible relationship of such layers to one another. Therefore, although stylistic analysis is sometimes extremely challenging, yet it is indispensable with regard to understanding the evolution within the synoptic Gospels.

We aim to examine the ways that scholars have examined such layers, the way they have used style within such examinations, the way they acquire their stylistic evidence, and the way they draw their conclusions. Then we aim to consider another way of doing all this, or a new synthesis for doing it. That other way will be to examine the style of the various parts of the synoptics, with a particular emphasis on an extensive analysis of syntax. The theoretical basis for doing this appears in chapter three, and an outline of the method of doing this appears within chapter four.

The working theory is that style is the consistent manner of syntactical expression in text by one author by contrast with that found in text from a different author, if the effects of subject, period, genre and form are excluded. With this understanding of style, the goal is to measure the style in two blocks of text which have a similar period, genre and form, to establish the following: first, where the blocks are of different authorship, whether the style is relatively dissimilar; while, secondly, where the blocks are of common authorship, whether the style is relatively similar. That is, the purpose is to answer this question: Is the syntax in two blocks of the same authorship measurably closer than the syntax in two blocks of different authorship? (The word 'block' will be used in *ad hoc* way for any selection of text for any reason. It is not connected in a fixed way with any particular length of text, or kind of text.)

We will conclude that the findings from our examination of syntax accord with the literary critical dialogue on important principles in the synoptic studies. The link will signal that syntax analysis is a useful tool for the student of ancient texts. We will further conclude that such a study presents new information for the synoptic scholar. For example, it adds new and better characteristics of the style of different synoptic writers and layers; it contributes a new ability to apply acknowledged stylistic tools in ancient, fragmentary texts; it gives a fresh way to know whether a synoptic source existed; and it renders a different approach to determining the contents of a source. Taken together, these measures of syntax analysis can allow us to know more about the history of the Jesus event, or at least of the early Christian community.

#### **4 Method**

We will begin with two blocks of known and different authorship, and then make up a third block drawn from one of the two known blocks. In this case, a relative measure of similarity or difference would emerge clearly through comparing the syntax in each of the first two with the syntax in the third block. The blocks of text by authors that are known to be different from one another will be these: text—for example, certain parts of the material which exists uniquely in each—that is attributed

to redaction in Mark on the one hand, and the same in Luke on the other. We can call such text their respective editorial layers.

To measure syntax in these blocks, we will take a series of 'windows,' each consisting of ten consecutive words, from each of the two layers. In these 'windows' the various features of each word will be duly noted, for example:

1. ARCHE ('The beginning' Mk 1:1) will be designated as (1.1) noun; (1.2) feminine; (1.3) nominative case; (1.4) singular;
2. TOU ('of the') will be (2.1) definite article; (2.2) neuter; (2.3) genitive case; (2.4) singular;
3. EUAGGELIOU ('gospel') will be (3.1.) noun; (3.2) neuter; (3.3) genitive case; (3.3) singular.

Noting down one grammatical feature from each word to make a grammatical construction, a syntactical unit, or a syntax chain of three grammatical features, we will register each and every small syntactical unit that appears in the text. That is, the measure of syntax will be to record all the syntactical chains that appear from elements of individual accidence. For example, the first three syntax chains would be:

- (1.1) noun-(2.1) definite article-(3.1) noun
- (1.1) noun-(2.1) definite article-(3.2) neuter
- (1.1) noun-(2.1) definite article-(3.3) genitive

This yields a comprehensive list of each and every such syntactical unit that appears in each of the respective blocks. This enables us to examine the proportion in which a range of syntax appears in each block. In this way it will be argued that it is possible to obtain a realistic statistical comparison between the syntactical styles of the texts under examination.

## **5 Problem statement**

It is my hypothesis or contention that the empirical or observable evidence suggests this: A writer is distinctive in the pool of syntax chains they use in their writing. A syntactical unit is the term we will use for an ordered set of three grammatical features within a 'window,' which is a set of ten

consecutive words. A comprehensive assessment of syntax is a complete listing of all the syntax chains in such a window. Further on, we will discuss or show that such a syntax chain is distinctive of a given author or writer.

Dionysius, Bishop of Alexandria (d. c. CE 264), arguing against a common authorship of John's Gospel and the Apocalypse, pointed out the following:

And further, by means of the style [φράσεως—'speech, way of speaking, expression] one can estimate [τεκμήρασθαι] the difference between the Gospel and Epistle and the Apocalypse. For the former are not only written in faultless Greek, but also show the greatest literary skill in their diction, their reasonings, and the constructions [συντάξεσιν] in which they are expressed. There is a complete absence of any barbarous word, or solecism [σολοικισμόν, a violation of the rules of syntax], or any vulgarity whatever. For their author had, as it seems, both kinds of word, by the free gift of the Lord, the word of knowledge and the word of speech. But I will not deny that the other writer has seen revelations and received knowledge and prophecy; nevertheless I observe his style and that his use of the Greek language is not accurate, but that he employs barbarous idioms, in some places committing downright solecisms. These there is no necessity to single out now. For I have not said these things in mockery (let no one think it), but merely to establish the dissimilarity [ἀνομοιότητα] of these writings.

(Eusebius, *HE* 7:25:24-27)

The emphasis in this reflection on authorship in the Johannine literature was not in terms of individual grammatical features, or vocabulary, but rather in terms of the similarity and dissimilarity in the syntax of the author or—for Dionysius—the authors involved. Dionysius conducted the authorship argument for which he is known on the basis of syntax. He compared two similar texts (the Gospel and the Epistle) against a dissimilar text (the Apocalypse) on the basis of style, through syntax.

All writing draws on a pool of syntactical structures that are common in the language of the writer. This is essential for there to be any communication at all. A particular writer becomes quite distinctive, however, in the way they combine a large number of syntax chains, for example, in a phrase or in a sentence. The stylistic work of Hawkins (1968) and other scholars (see p. 110) discussed certain instances of such characteristic syntax in the synoptics. On page 14 below, there are analogues that suggest that an individual's combination of many forms of syntax should be distinctive to them.

This is an interdisciplinary thesis. The first four chapters continuously introduce New Testament and statistical concepts that are of significance to the thesis. The New Testament concepts will contain some material which seems introductory to the New Testament student. The statistical sections will contain some material which seems introductory to the statistician. This needs to be a lucid and reasonably independent work, however. Therefore, we will confine our attention to the most essential of the technical concepts involved in each field, and of the relevant studies in each field.

The primary problem statement below involves technical terms that are specific to this thesis.

### **Distribution**

Dionysius' comments on the style of the Apocalypse imply that the solecisms in that book are spread through the book. The word 'distribution' refers to a list or spread of values, which, in our case, is a list of proportions of syntax. (An explanation of the term 'distribution' appears page 239 under 'Working Definitions'). In chapter four (on page 143) we will further define a 'distribution of syntax chains,' and we will also there develop a method for obtaining such a distribution.

Let the 'population' be a block representing the whole of a synoptic layer, and let a 'sample' be a selection from that population or synoptic layer. The problem statement below also requires the construction of a certain pool of information. To acquire this pool of information, we will take the distribution of a comprehensive list of grammatical constructions, that is of syntax chains, from three places: (a) **First**, from a *reference sample* taken from the same synoptic layer as (b)—the editorial layer of Mark. The 'editorial layer' refers to redactional material in Mark that can be thought of as having a different origin (that is, an origin in Mark as the author or composer) from the quotations, sources, forms, or cycles of tradition that appear in Mark. On pages 21 and 91 below, which attend to the subjects of 'genre,' 'cycles of tradition,' and 'form,' there will be further discussion on whether it is possible to separate redaction from anything else in Mark. (b) **Second**, from a *block representing one synoptic layer*—the editorial layer of Mark. (c) **Third**, from a *block representing a synoptic layer with different authorship*—the editorial layer of Luke.

The primary problem statement for this thesis is to show that (a) the distribution of syntax in the first block—the sample from the editorial layer of Mark-- is closer to (b) the distribution of syntax in the second (which is of the same authorship as the first block)—the editorial layer of Mark--than it is to (c) the distribution of syntax in the third (which is of different authorship from the first block)—the editorial layer of Luke. The three blocks should be of the same period, genre and form. This is worked out by first, drawing all the grammatical constructions in the three. Secondly, by working out the proportions of each construction in each of the three blocks. Third, comparing these three proportions one by one: (a) to (b) in column (K); and (a) to (c) in column (M). Fourth, a second comparison, that of columns (K) to (M), can be noted in column L. Fifth, combining the results in column L at the end in one symbol.

Table 1.1: A diagram illustrating the primary problem statement

| The relationship between the syntax in (a) and (b)                         |   |   | L | The relationship between the syntax in (a) and (c)                         |   |   |
|--|---|---|---|--|---|---|
| (a) Proportions in the reference sample block from Mark's redactional work | ←(K): A representation of the distance or difference between the two proportions (a) and (b)→ | (b) Proportions in the block representing the whole of Mark's redaction |   | (a) Proportions in the reference sample block from Mark's redactional work | ←(M): A representation of the greater distance or difference between the two proportions (a) and (c)→ | (c) Proportions in the block representing the whole of Luke's redaction |
| Grammatical construction 1   | ←A smaller difference between the two proportions →   | Grammatical construction 1  | 1 | Grammatical construction 1   | ←A larger difference between the two proportions of grammatical construction 1 →                      | Grammatical construction 1  |
| Grammatical construction 2   | ←A smaller difference between the two proportions →   | Grammatical construction 2  | 2 | Grammatical construction 2   | ←A larger difference between the two proportions of grammatical construction 2 →                      | Grammatical construction 2  |
| ...  |   | ...   |   | ...  |   | ...   |
| Grammatical construction 100 (say)   | ←A smaller difference between the two proportions →   | Grammatical construction 100 (say)                                      |   | Grammatical construction 100 (say)   | ←A larger difference between the two proportions of grammatical construction 100 →                    | Grammatical construction 100 (say)                                      |

This is equivalent to what Dionysius was doing—although he did not refer to the three different genres involved. By comparison to our 'first,' 'second,' and 'third' blocks above, Dionysius' 'first' block was the Gospel of John the Evangelist; his 'second'—with the same style and syntax as the first—the Epistles

of John; and his 'third'—with different style and syntax from the first—the Apocalypse of St John the Divine.

Table 1.2: A diagram illustrating our primary problem statement as it relates to Dionysius' reflections

| The relationship between the syntax in (a) and (b)             |   | L | The relationship between the syntax in (a) and (c)             |   |
|--|---|---|--|---|
| (a) Proportions of syntax in the Gospel of John the Evangelist | ←(K): A representation of the smaller distance or difference between the two proportions (a) and (b)→ |   | (a) Proportions of syntax in the Gospel of John the Evangelist | ←(M): A representation of the greater distance or difference between the two proportions (a) and (c)→ |
|  |   |   |  | (c) Proportions of syntax in the Apocalypse of St John the Divine                                     |

In the context of such a comparison, a smaller difference between two distributions is also a similarity of syntax, relatively speaking, which may be taken as an indication of authorship. A greater difference between two distributions is also a dissimilarity of syntax, relatively speaking, which may be taken as an indication against authorship. This is emphatically a relative statement, one which arises from a comparison of two (or three) sets of syntax. It is not an absolute statement that differentiates one author's syntax from all other authors. In this way, we will have shown that 'a comprehensive assessment of syntax chains' is capable of distinguishing the authorship of text or texts from the synoptic Gospels, where the circumstances are comparable. That is, we will have shown that the empirical or observable evidence suggests the following: Relative to one other writer, a given writer leaves distinctive characteristics in the set of those syntax chains that they most use, that follow a distribution—a patterned and predictable spread—through their work. The particular steps in this syntax chain method are stated in chapter four, beginning on page 138.

In chapter five we will build further on this foundation. We can give the name 'Luke's version of the triple tradition' to those sections of Luke that are parallel to (//) Mark and to Matthew (see 'Working Definitions,' p. 245). Chapter two will already have included a review of the literary-critical argument for the theory that the triple tradition in Luke was not only parallel to, but it was also dependent upon, the 'triple tradition' in Mark. Corresponding to that theory of dependence, in chapter five we will follow a similar procedure to the one in chapter four. That is, we will take the distribution of a comprehensive assessment of syntax chains from three places: First, from the whole

of the 'triple tradition' as presented by Luke. Second, from the whole of the editorial layer that is unique to Mark. Third, from the whole of the editorial layer that is unique to Luke.

Corresponding to the literary theory in chapter two, in chapter five we will see that the distribution in the first (Luke Triple) is closer to the distribution in the third (unique Luke editorial) than it is to the distribution in the second (unique Mark editorial). We will take such 'closeness' as an indication of common authorship. As a result, it will indicate that Luke drew his version of the triple tradition from a source other than from the Gospel of Mark as we know it.

In chapter six, we will draw together the conclusions, the limitations, and the implications of this study.

A few analogies can help us picture how and why extended chains of syntax chains should be characteristic of a writer.

Francis Andersen (1976:7) said an 'idiolect' or 'styleprint' can be as typical as a fingerprint, which is a statement that may be rather ambitious. It is ambitious because the stylistic features connected with period, genre and form are more prominent than the stylistic features connected with an individual, and so the first (stylistic features of genre and form) are more pervasive than the second (stylistic features of the individual). Therefore, it would be necessary to first have a way of either counterbalancing, or else withdrawing the stylistic features connected with the first (period, genre, and form).

The approach adopted in this thesis is to exclude the effect of these factors by counterbalancing them, ensuring that the comparison is between two works of the same period, genre and form. Another way of excluding the effect of such stylistic features would be by withdrawing them. To withdraw them would presumably require a complete taxonomy of the stylistic features connected with these factors (period, genre, and form). Such a taxonomy would enable one to differentiate the stylistic features connected with the individual from such factors of period, genre and form, and then extract the syntactical style of the individual author. Such a taxonomy of the syntactical style of the

period, the genres and the forms does seem possible, but it is a step that must be referred to the category of 'further study.'

Nevertheless, if there is any validity in this still evolving analogy of personal stylistic fingerprints, then we may say this: Fingerprints are not initially apparent. They have to be dusted and perhaps magnified to become clear. In writing, the writer's choice of vocabulary is far more obvious than the writer's choice of syntax. Even if we do notice a particular writer's syntax, we find it difficult or impossible to focus on more than a very few such features. Like fingerprints, the full range of syntax chains a writer prefers are not immediately obvious to us at an initial glance. With careful examination, however, we make a comprehensive listing of all the syntax chains. It will emerge, later, that at least some appear in a distinctive way in each individual writer.

A writer's personal syntax chains can also be compared to the DNA of a person. DNA is responsible for the distinctive characteristics in the person, for example, their physical build, their looks, their skin colour, and their vulnerability to certain diseases. DNA is made up of long chains of common molecules. These common molecules form DNA that is unique to the individual by means of the unique pattern of the long chain that they form. So with writing. Writing is made up of common forms of grammar. When we examine the way a particular writer selects and groups together these common syntactical structures, then that writer becomes quite distinctive.

In pursuing this problem or question, there are several other factors that we must visit. One factor is to provide a reasonable basis for the above technique in relation to other statistical studies of style in ancient texts (chapter three).

## **6 Organisation**

Chapter one: Here we have introduced our concern for a means of tracing the development of the critically important source material in the synoptic Gospels through stylistic features. The question is whether an author is typical in the way they employ or connect many small syntactical structures.

Another way of putting the question is whether syntax constitutes a measure of style that can satisfactorily define the authorship of source material. This thesis will test whether a sample can be associated with one author rather than another on the basis of syntax.

Chapter two: To state the nature of the challenges involved in the debate about the evolution of the synoptics, chapter two will examine two matters: First, the relationship between the synoptic Gospels. We will see that it is at least plausible, if not probable, that Luke was dependent upon Mark in the material that was common to both of them. Secondly, we will consider a suitable block of material for our purposes further on, namely, the study of the syntax in a source. The probability that Luke was dependent on the triple tradition from Mark's community (if not from Mark's Gospel, arising from the first point above) will provide an appropriate source for our purposes in chapter five.

Chapter three: In chapter three we will take a closer look at the use of style in authorship attribution. From that review of the literature, we will develop a rationale and six methodological principles for identifying authorship by means of analysing style through syntax.

Chapter four: Here we intend to define and elaborate a method for such 'a comprehensive assessment of syntax chains.' The 'comprehensive assessment of syntax chains' method will involve the following three main steps: First, forming a distribution of all the syntax chains in each of three blocks of comparable material, two blocks (including the reference, or 'unknown' block) of which come from the same author. Secondly, comparing the distribution in the reference block, to the distribution in each of the other two blocks. Third, concluding which of the two main distributions was closer to that of the reference block.

In chapter four we will apply the method to the three following blocks of text: First, the whole of one synoptic layer—the editorial layer of Mark. Second, a reference sample taken from the first synoptic layer—the editorial layer of Mark. Third, the whole of another synoptic layer—the editorial layer of Luke.

Essentially, this will be a comparison between the distribution of the occurrence of syntax chains in each of the above three blocks of text. Such a distribution in the reference block from the editorial layer in Mark will prove to be closer to the first block of text (the editorial layer in Mark) than it is to the second (the editorial layer in Luke). This is at least a first step towards using this method with sources, or with fragments of sources that may appear within Mark, Luke, or other New Testament documents.

Chapter five: This opens the way to bring the method of comprehensive assessment of syntax chains, from chapter four, to bear on one of the clearest sources in the synoptic Gospels, namely, the 'triple tradition' as presented by Luke. We will see that there is a congruence in two areas: First, the results of literary criticism, from chapter two; and, secondly, the results of an examination of the syntax chains, from chapter four. This will corroborate the possibilities of syntax chains for discerning or defining a source. This will be an important example of the way that syntax chains can contribute to the understanding of the evolution of the New Testament.

Now we may turn to chapter two. There we will consider the relationship between the synoptic Gospels.

## **Chapter Two: The relationship between the Synoptic Gospels**

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In chapter one we presented our concern to establish a convincing means of discerning or defining source material in the synoptic Gospels through stylistic features. We wanted to see whether syntax chains could be stylistic features that could satisfactorily delineate the authorship of source material.

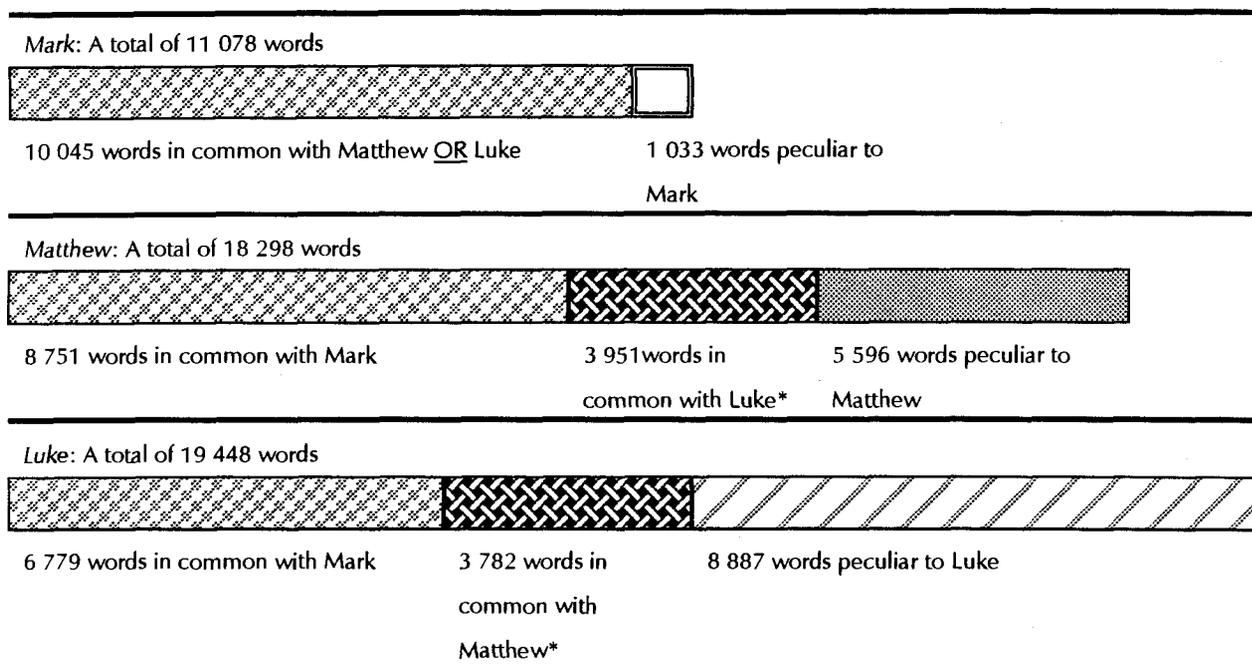
The purpose of this chapter is to examine the relationship between the synoptic gospels and the discussion about sources in them. We must attend to this first, for it is an essential point of reference for this entire study. As an important part of this discussion, we will show that it is at least plausible, if not probable, that Luke was dependent upon Mark or Mark's community for the (triple tradition) material that was common to them. This dependent relationship provides an appropriate source for our purposes. In our conclusions, we will find that syntax analysis accords with the literary critical dialogue on important principles in the synoptic studies. This chapter, then, is important in describing such principles in the literary critical dialogue.

### **1 The relationship between Mark, Matthew and Luke**

There is a suspicion, or a conviction that there was some kind of relationship between Mark, Matthew and Luke. This suspicion or conviction is kindled by the amount of common material between them. Streeter ([1924] 1930:151, 159-160) counted the verses and said that 90% of Mark appears in Matthew, while approximately 54% of Mark is found in Luke. Looking at the number of words involved, but giving a curious total for the number of words in Mark, De Solages (1959:1052) said that Luke has 7,036 of Mark's 8,485 words. At any rate, this substantial volume of common material is what gives rise to the name 'synoptic Gospels,' because synoptic means 'seen together.'

It is a little easier to visualise the material that is in parallel among the three synoptic Gospels if we use a graphic format. The diagram below shows the amount of material that is in common, or, in parallel, between Mark, Matthew and Luke. This is a form of the diagram that appears in Du Toit (1988:30), which, in turn, was based on a diagram in Barr (1938) and one in Farmer (1979).

Table 2.1: The common material among the three synoptic Gospels



\*Note: Despite the discrepancy, these are the numbers which appear in du Toit.

Fitzmyer (1970:134) calls the common material among the three 'the triple tradition' because there are three gospels that have this material in common. Considering Mark and Luke alone, there are two main ways in which the similarities between Mark and Luke can be explained. Either Luke came after a Greek text of Mark, and Luke was dependent on Mark, or the other way around. There is debate about which of the three synoptic Gospels came first in the material that was common to all three, or which of the three has *priority*. There are two major theories explaining these phenomena. They are the Griesbach hypothesis (on page 27 below) and the two source hypothesis.

A discussion of this problem appears in standard introductions to the New Testament like Feine, Behm, and Kümmel (1966:38-80) and Wikenhauser and Schmid (1973:272-289). Though the issue is well discussed, yet it is not resolved—that is, the two source solution is not unanimously received—and it is of great significance to this thesis. Therefore, we will begin with an outline of each hypothesis, and then turn to a more detailed examination of the arguments in favour of each.

First, however, we must note the word ‘hypothesis’ in each of these two explanations. It is probably too much to claim that we can *prove* anything about the evolution of the documents of the New Testament. One reason for this is that we live in a vastly different time and culture. A substantial amount of the evidence we have from that period would not stand, for instance, in a modern court room cross-examination. As a result, we limit our project to examining the main hypotheses about the synoptic relationships, and evaluate the relative *probability* or *plausibility* of each hypothesis. The work that we are doing on a comprehensive assessment of syntax chains should corroborate one or another hypothesis, or challenge one or another of them, or provide evidence that could be used for such purposes.

### **1.1 A naming convention or definition for a source**

When we talk about a ‘source’ (see also ‘Working Definitions,’ p. 243), it is part of a discussion about the composition of a particular document or other block of text. Such a block of text may encompass a large complex of literature, or more than one document, like the Pentateuch. The term ‘source’ refers to the pre-existing materials which a biblical or ancient writer used to compile their particular document or block of text.

**A source, and a cycle of tradition** (See also page 243 below.)

A source was material of earlier origin, that appears within another document of a different authorship. A source is similar to a ‘cycle of tradition’ in that they both had an earlier origin than the

document in which we know them, and in which they are embedded. A source was different from a 'cycle of tradition' in that a source existed in a written form. With Gerhardsson (1961), and despite the reservations of Riesenfeld (1970) and Teeple (1970), we will take as a working proposition that there were not only written sources, but also oral sources. The oral period was 'long or short, before the sources of our present gospels were committed to written form' (Mann 1986:16). If a source was in an oral form, then it was transmitted with a high degree of consistency. A cycle of tradition could then be an oral precursor of a source, whose transmission had a lower degree of consistency. Perrin and Duling (1982:234) suggest that there may be cycles of tradition, or collections of sayings, in the following: the controversy stories (Mk 2); the parables (Mk 4); the miracle stories (Mk 5, 7); the complex made up of the feeding (Mk 6:30-44, 8:1-10); the lake crossing (6:45-56, 8:10); the controversies (7:1-13, 8:11-13); the teaching concerning bread (7:14-23, 8:14-21); the Lord's Supper (Mark 10:42-45, 1Cor 11:23-26, Lk 22:24-27); and the apocalypse (Mk 13).

Hayes and Holladay (1987:73, 76) use the words 'source,' 'layer' and 'layer of tradition' interchangeably. Another term that is used in this field is 'cycles of tradition.' We need to be as clear as possible about the nature and the size of each.

We will argue that what appears in our version of Mark was also a source for Matthew and Luke. It is probable that Mark, in turn, also relied on sources or 'cycles of tradition' (Hayes & Holladay 1987:76). The phrase 'cycles of tradition' may allude to a phase up to and including that point of development at which we would describe a composition as a 'source.' A cycle of tradition may be linked to a geographic locality (Rowlingson 1962:495), and *may or may not* have an independent written history of its own. A source, however, is material that *probably did* have an independent written history of its own—and may therefore also be less connected with one locality. Two likely examples of cycles of tradition in Mark are first, the passion narrative and secondly, the parables. Hayes and Holladay (1987:77, 78) said this:

Various factors in a document may indicate the use and incorporation of sources. Among these are: 1. changes in literary style; 2. shifts in vocabulary; 3. breaks in the continuity of thought or presentation; 4. the presence of secondary linking and connecting statements; 5. changes in theological and other viewpoints; 6. duplications or repetition of material; 7. clearly defined and isolatable sub-units; and, 8. chronological, factual, or other inconsistencies.

A ninth factor is that some sections can be removed from a document without affecting the flow of the whole document. An instance of this is found with the account of the woman accused of adultery in John 7:53-8:11. In such a case, the section may not be a source that the writer used, but may rather be an insertion after the time of the writer of the document.

Therefore, we have at least nine factors that we can apply to help us know whether Luke was dependent upon a source. We will see (page 38 below) that, since Luke referred to more than one source, Mark was likely not the only source for Luke. Furthermore, it is possible that Luke did not use Mark in the version in which we know Mark, but rather that Luke used constituent parts of what we know as Mark. We will further examine such factors beginning on page 30 below, under the heading 'Ten Issues in the Debate.'

We will follow Fitzmyer's (1981) naming convention for the main synoptic sources. The two main documents are these: First, 'the double tradition' which is often or closely associated with or equated with Q. The double tradition is the material that appears twice over, that is, in Matthew and in Luke but *not* in Mark. One of the most prominent examples of this is Luke 3:7-9// Matthew 3:7-10.

Secondly, 'the triple tradition' will be used here to refer to material that appears three times over: in Mark, in Matthew, and Luke. At least for the present, we do not intend to include in the triple tradition any material in the following two categories: first, material that appears in Mark and Matthew, but not Luke; and secondly, material that appears in Mark and Luke, but not Matthew. Our attention will be occupied mainly with these materials that exist in a parallel version in all three synoptics, and with the materials that are unique in Mark and Luke. As a result, we will simply refer to the double tradition by that name, and leave alone the question of whether the double tradition was a 'Q source.'

It may be possible to separate the material that is uniquely in Luke into two strands, or even three. 'L,' or Luke *Sondergut* (see 'Working Definitions,' p. 242), if it had a particular origin of its own,

could be material Luke may have drawn from a *source that only Luke used*. A second strand could be a strand that Luke *composed*. A third source or strand in Luke could be the 'infancy' material in Luke. We exclude this 'L' and the 'infancy' material from the present study.

In a similar fashion, the material that appeared uniquely in Matthew could be separated into two strands, or even three. One strand, usually called 'M,' could be material Matthew may have drawn from a *source that only Matthew used*. A second strand could be composed by Matthew. A third source or strand in Matthew could be the 'infancy' material in Matthew.

Since 1945, the two source hypothesis has been vigorously debated by Butler and Farmer, among others, who most often propose a version of the Griesbach theory as an alternative. Butler and Farmer followed Lummis and Jameson (1922), who had written earlier along the same lines. Other more recent writers in this vein have been Longstaff, Orchard, and Dungan (1990).

## 1.2 An outline of the 'two source' hypothesis

The basis of the two source hypothesis was proposed as the 'fragment hypothesis' by the German theologian Schleiermacher ([1818-22] 1897; d. 1834) and by the German classical philologist Lachmann in 1835. They observed that Matthew and Luke concurred in their order only when following the same sequence as Mark. They concluded that, for the material that was common to all three of the synoptic Gospels, a *primitive* form of Mark presented the tradition in its early form.

### **Mark, or a precursor to Mark**

According to Lachmann ([1835] 1942:570), all three synoptics could be dependent upon one preceding document containing the Markan order, the *Ur-Markus*. This was known as the 'primitive gospel hypothesis.' This *Ur-Markus* would have preceded the 'canonical' version of Mark that we know. Lachmann was followed in this by Weisse (1838:28).

An example that provokes such speculation appears in that Luke omitted Mark 6:45-8:26. Another was that Luke 'overlooked' Mark's version of the Beelzebub controversy (Mt 12:22-45//Mk 3:20-29//Lk 11:14-26; 12:10; 6:43-45). It is strange that Luke 'overlooked' Mark's account, because Luke was normally quite close to Mark's text. Perhaps Luke saw a version of this account that did not appear in Luke's version of Mark. If so, there could be a different and perhaps earlier form of Mark, different to the 'canonical' Mark, or the version of Mark that we know. (Certain results of our research, on page 205, may accommodate this idea.) Such an earlier form of Mark, used independently by all three synoptic evangelists, could account for the similarities in *order* between the three. It can also account for those occasions in which there are agreements in *wording* of any two of the three against the third. The reason would be that two were following the early Mark, while the other one departed from it for their own reasons.

Jülicher (1904:348f) articulated discomfort with the idea of such a primitive version of Mark: '...for in that case it would be...extraordinary that [Mark] should, practically without exception, have...use[d] precisely those portions which had also been selected...by the other two.'

By 1885 Holtzmann ([1886] 1892, 1963) had renounced the idea of an *Ur-Markus* and said that Matthew and Luke had read and used the version of Mark that we know. Farmer (1976b:86 n. 62) described this change in Holtzmann's views from one position in 1863, to the other in 1880, in the following words:

Holtzmann brought this out clearly in 1863 in his recognition that Matthew was not infrequently more original than Mark, and that sometimes Mark has in only a shorter form what Matthew and Luke have more fully. He lists thirty-six significant agreements between Matthew and Luke against Mark, and concludes that Mark cannot be the earliest Gospel: 'In der That steht es fest, dass unser kanonischer Marcus kein Originalwerk sein kann.' (:60-67) It was not until after 1880 that Holtzmann was free to change his mind and pronounce Mark as the earliest Gospel, used as a source by both Matthew and Luke. This change was made possible because by then he had become convinced that Luke had used Matthew, and in this way he was able to reduce the difference between *Ur-Marcus* and Mark to the point of practical insignificance. But Holtzmann at no time would have been able to agree with the position of Jülicher and Streeter—that Luke did not copy Matthew *and* that there was no *Ur-Marcus*. For Holtzmann...knew well that there were secondary features in the text of Mark which created serious difficulties for any such view. There was, however, one ingredient in Holtzmann's synthesis, which could...obviate the necessity of both an *Ur-Marcus* and Luke's use of Matthew, and still allow for [Markan] priority, namely 'oral tradition.'

Boismard (1979:17) wanted to define a proto-Mark Document 'A.' In this view, proto-Mark would be not an earlier form of Mark, but rather a Markan *source*. It would be a source that not only Mark but also Matthew and Luke would have used.

According to the two source hypothesis, either the earliest form of Mark or the source that Mark used, then, was posited as the source of the parallel materials in Matthew and Luke. 'The priority of Mark' was the idea that Mark's source, or some form of Mark, came first, and was used by both Matthew and Luke.

### **The double tradition**

'The double tradition' is the name that Fitzmyer (1970:147) and others use for the material that was common to Matthew and Luke alone. Two examples of such material are first, the sermon; and secondly, the temptation of Jesus. During the 19<sup>th</sup> century, some German scholars said that Luke relied not only on Mark, but also on a second document, a collection of 'sayings.' Lachmann, Bernhard Weiss (1827-1918), followed by his son, Johannes Weiss (1863-1914), and the Old Testament theologian and orientalist Ewald (d. 1875) were among the first to concur on this.

This collection of sayings was first titled 'Q' by Bernhard Weiss (Silbermann 1979:287-88, Fitzmyer 1981:806). The name 'Q' stands for *Quelle*, which is German for 'source,' as a part of the more full German title *Redenquelle*, sayings source. It was conceivably a reformulation of Wellhausen's use of *Quattuor* for a foundational document in Old Testament studies.

In this way, the two source hypothesis proposes that Matthew and Luke were not relying on each other for this common material—one did not copy it from the other--, but they both read it independently in the double tradition (or Q source) and reproduced it in their own way. Matthew and Luke were, then, independent of one another.

From these two documents--Mark and the double tradition (or Q)--, then, comes the name, 'the two source hypothesis.' This was a leading contender among the hypotheses that try to explain the order of the parallels in Mark, Matthew and Luke, and that try to account for the relationship between them.

If we were to subtract from Matthew and Luke all the material that they [supposedly] borrowed from Mark, we would find three types of material remaining: some material that was found only in Matthew, which we designate as 'M'; some material that was found only in Luke, which we designate as 'L,' and, finally a very large amount of material that was common to both Matthew and Luke but which was missing in Mark. This material we designate as 'Q' [that is, the 'double tradition'].

(Havener 1987:24)

The four source hypothesis proposes not only these primary two documents of Mark and Q, but also separate, secondary groups of material. The first of these was the material that was special to Matthew, and called 'M' or 'Matthean *Sondergut*.' The second was in Luke, and was called 'L' or 'Lucan *Sondergut*.' The 'two' documents of the two source hypothesis refer to Mark and Q. The 'four' documents or sources of the four source hypothesis are Mark, Q, M and L.

These two sources, M and L, are also hypothetical. The two source hypothesis posits Mark as the first *compiled* edition of the three synoptics. That is, Matthew and Luke in their compiled forms, or the forms in which we know them, came later than Mark. The two source hypothesis thus posits 'Markan priority.'

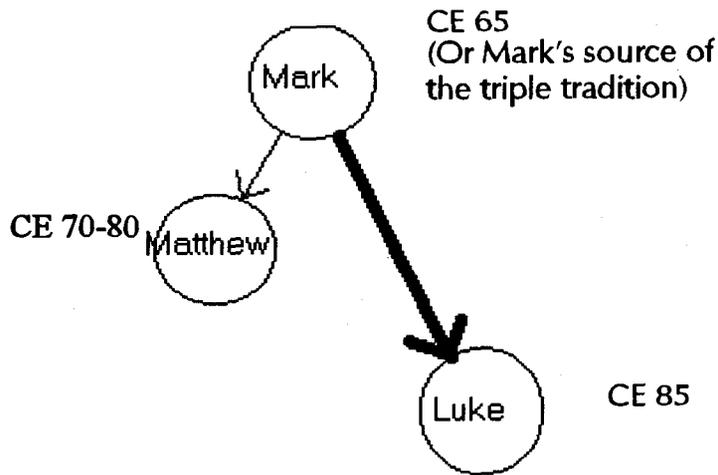


Figure 2.2: The two source view of the relationship between Mark and Luke

The above diagram depicts a rough idea of the relationship between Mark, Matthew and Luke according to the two source hypothesis. The diagram shows that Luke's compilation of the triple tradition materials in Luke (85 CE?) came later than both the compilations of (the triple tradition as represented by) Mark (CE 65?) and Matthew (CE 70-80?). The diagram also depicts Luke as dependent on Mark.

The point of this diagram is to indicate the relationship between Mark and Luke. The heavy line is used to emphasise the relationship most important in this thesis. The heavy line is not meant to illustrate the strongest or closest relationship. For example, it is not meant to imply that (the triple tradition in) Mark was Luke's only source, nor is it meant to indicate the depth of dependence on Mark of Luke by comparison with Matthew. The diagram is not intended to illustrate the relationship between Matthew and Luke. Furthermore, the diagram does not attempt to display other possible source materials like the double tradition, M, or L. That is because the debate over these, which is extensive, can be separated from this study.

The relationship that is shown between the triple tradition in Mark and in Luke is important for our purposes, because in this chapter we will show it to be at least a plausible one, or even a probable one. We will use it to examine the relationship between the triple tradition as represented in Mark and in Luke respectively.

### 1.3 An outline of the Griesbach hypothesis

Augustine of Hippo (*De consensu evangelistarum* ca. 400:1.2.4) said the Gospels developed in the order in which we find them in the New Testament. That is, Mark followed Matthew and was an

abbreviation of it: '*Marcus eum [that is, Matthew] subsecutus tamquam pedisequus et breviator eius videtur,*' or 'Mark follows him, Matthew, closely and seems to be his slave and epitomist.' That means that Augustine understood the brevity of Mark to show that Mark summarised Matthew. This is doubtful, however. For example, a closer look shows that Matthew's version of the same event was often the one that was shorter: 'If Mark is an abbreviation of Matthew and Luke, why is Mark's story [in Mk 1:40-45// Mt 8:1-4// Lk 5:12-16] longer than Matthew's and Luke's?' (Engelbrecht 1996:97). The third in the order of the synoptics, in Augustine's view, was Luke.

In the eighteenth and nineteenth centuries there was a surge of interest in the analysis of the synoptic Gospels. Among its representatives, who also left treatises for us, we find Michaelis ([1750] 1777), Griesbach (1783, 1789-1790), Lessing (1788), Eichhorn ([1794] 1804-1827), Herder (1796-1797), Paulus (1828), Schleiermacher ([1807] 1897; [1821-1822] 1928), and Gieseler (1818).

Griesbach (1745-1812) was a German New Testament scholar who taught at Jena in Germany. 'The first critic to make a systematic application of literary analysis to the Gospels, [Griesbach] maintained that Mark was the latest of the three synoptists and [Mark] based his work on Matthew and Luke' (Cross [1957] 1974:602). Griesbach in 1783 hypothesised that Mark summarised not only Matthew but also Luke. Either Mark summarised them, or Mark else *fused and conflated* them. Griesbach's view was that Mark largely adopted Matthew's order and content, but followed Luke in some sections. Griesbach's departure point was Mark 1:32//Matthew 8:16//Luke 4:40. The Griesbach hypothesis posited also that Luke read and rewrote Matthew (Farmer 1976b:69). Proponents of the Griesbach hypothesis wish to minimise reference to external sources to explain similarities and differences between the synoptic Gospels. This desire was appealing to many, and it still is.

The Griesbach hypothesis was adopted by Strauss (1835-1836) and Schleiermacher's pupil Baur (1847), the latter of whom formed the Tübingen School. Baur assigned the synoptic priority to Matthew on the grounds of historical theology, approaching the New Testament on the basis of the idealist philosophy of Tübingen's Hegel (b. 1770, d. 1831). One stage of progression required the next in Hegel's 'triadic development,' or dialectic process of reality. The struggle of history is a quite rational repetition of the triad of thesis, antithesis, and synthesis. One principle, thesis, is succeeded

by its converse, the antithesis. The developing opposition between them results in a new principle, or synthesis, which becomes thesis of yet another triad. This pattern was more evident in tangible phenomena than through speculation.

Baur thought that this related to the order of the synoptics in the following way: he identified Matthew with Peter's 'Jewish Christianity,' and therefore, that Matthew must have been first in order. The succeeding 'antithesis' was represented by Paul, or Gentile Christianity. Baur identified the conflict between the two in Paul's Epistle to the Galatians. He said John would be the latest gospel, because John represented a concluding catholic synthesis.

The view of Griesbach and Baur held the field to the mid-1800s. More recently, since the 1960s, it has been again urged by Butler, Farmer, Farrer, Mann and others. They have emphasised the importance of the 'minor--or major--agreements,' which we will examine below (on page 63).

#### **1.4 Principal issues in sequence and dependence between Luke and Mark**

Comparing Mark, Matthew and Luke, the two source hypothesis gives four main reasons that Luke must have come *after* Mark. The four reasons, or the four main arguments *for* the two source hypothesis are based: 1. on content; 2. on the order of events; 3. on the choice of words; and, 4. on grammatical detail (Fitzmyer 1970:134-135). We will elaborate each of these among the two source hypothesis points in the discussion below.

The strongest arguments *against* the two source hypothesis are two. First, there are the *parallel omissions* from Mark by both Matthew and Luke, and secondly, the *parallel agreements* of Matthew and Luke against Mark. The two source hypothesis said that both Matthew and Luke were working independently and were using Mark as a source. If this was the case, we have to consider how they could both have made the same changes, whether omissions or additions. We will examine this question more closely below (page 63). A combined summary of the ten points in the following discussion appears on page 76.

## 2 Ten issues in the debate

### 2.1 Verbal agreements, or agreements in substance

Agreements in wording indicate a source. If the agreements are exact, and if they extend over a *series of several words*, the agreement indicates that the source was in a written form. Here is an example:

Table 2.2: An example of where we can see the triple tradition in the synoptic Gospels

| Matthew 26:55  | Mark 14:48-49   | Luke 22:52-53  |
|--|---|--|
| At that hour Jesus said <u>to the crowds</u> , 'Have you come out as against a robber, with swords and clubs to capture me? Day after day I <u>sat</u> in the temple teaching, and you did not seize me....' | And Jesus said to them [that is, to Judas, <u>a crowd from</u> the chief priests, the scribes, and the elders [v.43]] 'Have you come out as against a robber, with swords and clubs to capture me? Day after day I was with you in the temple teaching, and you did not seize me....' | Then Jesus said <u>to</u> [πρὸς with the following accusative] <u>the chief priests and officers of the temple and elders, who had come out against him</u> , 'Have you come out as against a robber, with swords and clubs? When I was with you day after day in the temple, you did not lay hands on me....' |

This is an example not only of the parallels, but also of the order that may be argued by virtue of the modifications that appear in each.

**Mark:** First, Taylor (1969:561) thinks that 'I was...teaching,' ἤμην διδάσκων, a periphrastic imperfect, connected Mark's version with Palestinian speech customs. Secondly, Mark's version described the group that came to seize Jesus as a mob. This group was a more likely one than the group in Luke's version, namely, the officials themselves. These are two arguments for the fact that Mark's version may have a more primitive background.

**Matthew:** 'I sat...teaching,' ἐκάθην διδάσκων. Sitting was the more formal teaching posture of an acknowledged teacher. Matthew had an interest in describing Jesus as a teacher like Moses, or more contextually to Matthew, like the rabbis. This variation was consistent with Matthew's editorial concerns. Therefore, this variation was then a later adjustment by Matthew rather than a part of the material Matthew was working with.

**Luke:** In Luke's version, there are two or three features that were customary in Luke's writing. First, there was the introduction. Secondly, there was the construction πρὸς with an accusative (Fitzmyer 1981:1448). Thirdly, Mann (1986:598), who was usually in favour of Mark's dependence upon Luke, said that it was 'highly unlikely that any such official [as those listed by Luke] would have been present at the arrest.' Notably, Mark's version described 'a crowd from' these officials. Of these two options, the crowd was the more likely origin for Mann, who said that 'they had hired a mob to take care of the seizure.'

Therefore, these three variations are Luke's contribution and not part of the material from which Luke worked.

On the other hand, Luke did not have the word 'teaching.' If Luke was copying Mark, first, it was strange that Luke would omit the word, because Luke does refer to the teaching activity of Jesus, and even his teaching in the Temple (19:47). Secondly, Luke regularly changed Mark's use of the verb 'teach.' Perhaps there was a connection between Luke's variation on this verb, 'teach,' here, and those regular changes elsewhere in Mark // Luke.

Such parallels are not just an isolated few. Rather, there is a comparable degree of similarity in the text which forms a substantial percentage or even the majority of the synoptics. The choice of

words—often very similar—in the triple tradition indicates that there is a relationship, and that Mark was prior at least to Luke and probably to Matthew as well. When one examines the choice of words, Mark never looks like a mere connecting link, and it never looks as if Mark borrowed from either Matthew or from Luke (Fitzmyer 1970:139).

## 2.2 Agreements in the order of parallel material

When one compares the three orders of events in Matthew, Mark, and Luke, one finds that on occasion then each one of the three first, lacks elements that are present in, and whose relative order is shared by two others; and, secondly, contains elements that are not present in either of the others. Some examples of this appear in the following tables:

| Table 2.3: Material that is present (or absent) in two of the three synoptics, and is lacking (or is present) in the other.                     |   |
|---|---|
| Synoptic Gospel   | These two synoptic Gospels contain this material in parallel, they reflect the same chronology or order in representing the events, and this material is lacking in the synoptic Gospel in the first column.  |
| Mark  | <p>Matthew and Luke:<br/> <u>First event:</u> The preaching of repentance John the Baptist (Mt 3:7-10// Lk 3:7-9);<br/>           --<u>relative to this second event:</u> the start of the sermon (Mt 4:24-5:3// Lk 6:17-20a);<br/>           --<u>or relative to this third event:</u> the Beatitudes (Mt 5:3-5:12// Lk 6:20b-23).<br/>           See also the 'minor, or major omissions' discussion below.</p> |
| Matthew   | <p>Mark and Luke:<br/> <u>First event:</u> Jesus departs from Capernaum (Mk 1:35-38// Lk 4:42-43);<br/>           --<u>relative to this second event:</u> The chief priests and scribes conspire against Jesus (Mk 11:18-19// Lk 19:47-48);<br/>           --<u>or relative to this third event:</u> the widow's mite (Mk 12:41-44// Lk 21:1-4).</p>  |
| Luke  | <p>Mark and Matthew:<br/> <u>First event:</u> The walking on the water (Mt 14:22-33// Mk6:45-52);<br/>           --<u>relative to this second event:</u> healings at Gennesaret (Mt 14:34-36// Mk 6:53-56);<br/>           --<u>or relative to this third event:</u> the fig tree is withered (Mt 21:20-22// Mk 11:20-26).</p>  |
| This synoptic Gospel alone contains this material, event or events:   | These two lack this material, event, or events:   |
| Mark: Jesus thought to be beside himself (3:19b-21); Parable of the seed growing secretly (4:26-29); a blind man healed at Bethsaida (8:22-26). | Matthew and Luke  |
| Matthew: Parables of the hidden treasure and the pearl, the net, and treasures new and old (13:36-52).  | Mark and Luke   |
| Luke: Parable of the Good Samaritan, Mary and Martha (10:29-42).  | Mark and Matthew  |

None of the material in the above two tables is without its own significance, so this is at least some *prima facie* or first impression evidence that none of the three completely represents either, or both, of the other two as we know them. We could ask whether this means that perhaps none of the three synoptic Gospels represented the lead, or the prototype, or had priority.

The relative order of the synoptic Gospels provides some clues for answering such a question. The two source hypothesis rests upon the observation of the pattern that 'Matthew and Mark can agree against Luke, and Mark and Luke can agree against Matthew, but *Matthew and Luke do not normally agree against Mark where they share the same material, i.e. where there was a triple tradition*' (Perrin & Duling 1982:67). This applies not only to the *general order* of the material, but also to the majority of the *word order* choices in Matthew, Mark and Luke.

### **The order of wording**

The Greek word ordering of many passages in the triple tradition matches. When we examine these passages, they do not indicate that Mark has adopted from or shortened Matthew and Luke. Each case, like the example above, suggests that the likelihood is the other way round (Fitzmyer 1981:69).

### **The order of episodes**

It is necessary to define 'an agreement in order.' At first, the discussion centred on the units as they were designated, headed and printed by Tischendorf ([1841] 1869-1872), Huck and Leitzmann ([1892] 1949), and many publishers of the synoptic texts. These units, or pericopes, were made up of the separate events or *episodes* in Mark. In a synopsis, these units could have a heading of their own, like 'The Cleansing of the Leper' in Mark 1:40-45.

The common order in *episodes* between Matthew, Luke and Mark--the triple tradition--follows Mark's order, generally speaking. Woods ([1885] 1903:61-62), described it in this way:

1. The earliest and latest parallels in all three Gospels coincide with the beginning and end of St. Mark...; 2. With but few exceptions we find parallels to the whole of St. Mark in St. Matthew or St. Luke, and to by far the larger part in both; 3. The order of the whole of St. Mark, excepting of course what is peculiar to that Gospel, is confirmed either by St. Matthew or St. Luke, and the greater part of it by both; 4. A passage parallel in all three Synoptists is never *immediately* followed in both St. Matthew and St. Luke by a *separate incident or discourse* common to these two evangelists alone.'

Another way of putting this is that Matthew and Luke never agree together against Mark in their *sequence of pericopae in the triple tradition*. Wood's fourth point is particularly striking, for if either Luke or Matthew was using the other's work, then there ought to be at least some 'double tradition' material that is immediately connected with triple tradition material in their accounts. Since there is no material like this, Luke cannot have been copying Matthew, and there is no support for the fact that Matthew was copying Luke.

Arguing for the Griesbach hypothesis, that Mark primarily followed Matthew's order and content and secondarily that of Luke, Mann said this: The adoption of order was to be explained *not* in that Mark wrote first, and somehow *passed on* the order of events to Luke or to Matthew. Rather, it was the opposite direction, that Mark wrote last, and *received* the order of events from Matthew or from Luke. Specifically, he (Mann) said:

[It] was understandable that Mark would preserve in each section, each event, or each pericope, of his work the internal order of the two major documents he was using, principally that of Matthew. But there seems no very good reason why Matthew or Luke, faced with a relatively short document and having considerable documentary resources of their own, should have reproduced the internal order of the individual units, events, or pericopes, of Mark.

(Mann 1986:ix)

Mann's second sentence is quite curious. First, it seems quite possible for Matthew or Luke to use Mark's material as an outline at least, particularly if Mark or a document like it had already begun to be used in more than one place. Secondly, one reason why we may think that it was Luke that preserved Mark's order rather than the other way round is that Luke was quite conservative with the lexical wording of his sources. In chapter five we will note that Luke displayed a fairly steady process of changing the grammar and syntax of his sources, however. We can see that Luke preserved this

(lexical) category of the wording he found in his sources, for example, in the speeches in Acts. Luke included these speeches although some of them were not very consistent with his (Luke's) theology. Under 'transpositions' below, we will see the third point: to propose that Mark reordered Luke's outline would require Mark to have been quite erratic and purposeless.

Mann believed it was more reasonable to assume that a shorter document like Mark would summarise a longer document like Matthew, rather than to assume that the longer document expanded the shorter document. This assumption of Mann's was shown to be at least possible by Sanders in a different study (see page 57 below). Mann's view is reductionist, actually, because where Mark and Matthew share an account, it is Matthew's account that is usually more terse (see (Engelbrecht 1996:97, page 28 above). Furthermore, whether or not it is in principle either reasonable or possible that one summarised the other, yet in ancient literature there exist no examples in which one whole work summarised another whole work. If such summarizing occurred, then it may have happened in terms of parts of the tradition, but it was unknown in terms of whole works. That adds doubt to the idea that Mark, or any of the three, simply summarised the whole work of others.

More recently than Woods, it has become clear that arguments from order are properly based on *literary units*, which are usually smaller than the units called *pericopae*. Still, once the larger *pericopae* are broken up into literary units, the small points where Matthew and Luke agree are as difficult to explain as large ones. Here is one example: On the one hand, Matthew 11:10 // Luke 7:27 place the ἴδου ἐγὼ ἀποστέλλω ('Behold I send') quotation concerning John in the context of John's question and Jesus' testimony to him. On the other hand, Mark 1:2 places it in the context of John's preaching. See also Mt 7:2//Lk 6:38 cf Mk 4:24; Mt 3:2 // Lk 3:3 cf. Mk 1:4; Mt 3:11// Lk 3:16 cf. Mk 1:7f (Biggs 1980-1981:20).

In this connection, Mann (1986:52) asked the following question: If Mark was first, why were Luke and Matthew not consistent in following the Markan order, but were at one time conservative of the Markan order, and elsewhere deserted it? The answer to this question usually falls under the name, 'transpositions.'

## Transpositions

The synoptic transpositions come naturally under the heading of 'agreements in order.' A transposition was where one synoptic writer, 'A,' has a series of events that also appeared in another synoptic writer, 'B.' The series of events was different in 'A' from that in 'B,' however. A transposition is such a 'move' from one point to another in the order. What has to be ascertained is whether it was 'A' or 'B' that made the transposition.

Lachmann's argument for the priority of Mark was that 'an acceptable explanation can be given for [either of] Matthew's and Luke's transpositions [from Mark's order], and no good reason has been found why Mark would change the order of Matthew and Luke' (Neiryck 1962:846). An example of how Matthew's transpositions can be explained is as follows: Matthew's transpositions of the Markan material on the Baptist are paralleled by Matthew's transposition of the double tradition material on the Baptist. We can see a similar parallel transposition from both Mark (4:35-5:43, 6:6b-11) and Q (inserted at Matthew 8:19-22). The reason for Matthew's transposition would be Matthew's interest in bringing miracle and discipleship sections close together. Therefore, Matthew is dependent on Mark, or on the material that appears in Mark, and not the other way round.

There are several places where we find that although Luke had an event that appeared in Mark, yet Luke's order of events differed from that of Mark. This is particularly marked in the passion narrative (Donahue 1962:644). The degree of variation in the passion narrative implies that there may have been a different process that took place in the formation of this tradition, a process connected with the unique circumstances surrounding what must have been its very early development.

An example of a Lucan transposition during the ministry of Jesus is the section known as 'The imprisonment of John the Baptist.' This appears at Mark 6:17-18, *deep* into his account of Jesus' ministry in Galilee. This event appears *earlier* in Luke's order, namely, near the *start* of Jesus' ministry in Galilee, at Luke 3:19-20. We can consider different explanations for the two alternative moves, and decide which explanation (and so, which move) is most reasonable. There is no clear

theological intention for its position in Mark. That is, either position would make no real difference in terms of Mark's main concerns.

There is a clear theological intention that we can see in Luke, however. Luke's intention was to complete the story of John the Baptist, so ending 'the period of Israel,' before Luke began 'the period of Jesus.' Luke's 'period of Jesus' began with Jesus' baptism and ministry (Fitzmyer 1970:138, 165 n. 20). Luke's transpositions can be explained either by redaction, or else by the influence of a non-Markan source, Proto-Luke (:847).

Therefore, in most transpositions, there is a better explanation for why Luke would have moved the passage out of Mark's order than there is an explanation why Mark could have moved the passage out of Luke's order. As a result, it was Luke that was dependent upon Mark, or the material in Mark, rather than the other way around.

Butler (1951:62-71) said that the common sequence of events between the synoptics can be explained not only by the hypothesis of Markan priority but any hypothesis that proposes Mark as the middle unit, as long as Mark was not dependent upon Luke (Neiryck 1962). Wood (1953-1954:65) said that Butler's arrangement was problematic, because Butler's argument, or Butler's version of the Griesbach hypothesis, was like that of St Augustine. That is, it also requires that Luke knew Matthew—that is, Luke came last and knew both Matthew and Mark. If Luke knew Matthew as well as Mark, however, there should be several agreements in order between Matthew and Luke against Mark in the triple tradition, whereas this was almost never the case.

Interestingly, Butler's proposal agrees with the two source hypothesis at least in one important way. That is, they both place Luke after Mark and say that Luke was dependent on Mark, or was dependent on something very much like Mark. This is precisely the point that we seek to establish adequately in this chapter.

We can now say the following: We must acknowledge that it is possible that none of the three synoptic Gospels represents the lead, or the prototype, or had priority, in the complete written form

in which we know them. Nevertheless, the agreements in the order of parallel material are most consistent with the fact that Luke came after Mark and that Luke was in some way dependent upon something very like the material that we know in the Gospel of Mark. Therefore, the order of events in the synoptics seems to support the priority of Mark. First, in the common sections, Matthew and Luke do not usually accord against Mark. Secondly, it is easier to explain Matthew and Luke's inversion of events from Mark's arrangement; but more difficult to explain Mark's inversion of events from Matthew's arrangement. Thirdly, agreements in order between Matthew and Luke against Mark are meager, so it is improbable that Luke knew Matthew as well as Mark. Fourth, there are no other early examples of one book summarising another, so Mark is not likely to have summarised Matthew. It is possible that none of the three synoptic Gospels represents the lead, or the prototype, or had priority, in the complete written form in which we know them. Nevertheless, the agreements in the order of wording and events in the parallel material are most consistent with the fact that Luke came after Mark and that Luke was in some way dependent upon something very like the material that we know in the Gospel of Mark.

### 2.3 Luke accredited sources

In the prologue of Luke's Gospel (1:1-2) we read this:

1. Since many writers have undertaken to compile an orderly account of the events that have come to fulfilment among us, 2. just as the original eyewitnesses and ministers of the word passed them on to us, 3. I too have decided, after tracing everything carefully from the beginning, to put them systematically in writing...

Luke said that there were written compilations of the events before Luke's own decision to trace them and to write them down systematically. In Luke 1:1 above, there is the Greek *plural*, πολλοὶ (in the GNT 3 text, from πολὺς, 'many'). Luke was among the most, or was the most fluent and eloquent of the Greek writers that appear in the New Testament. This Greek plural must mean that there were *more than* two sources, since there was a *dual* form in Greek that Luke could and would have used if there were *only* two sources that Luke used.

Havener (1987:17) pointed out that Luke's allusion to sources did not define those sources very well. Among the 'ministers of the word,' there were perhaps written sources. That is, Luke may have been referring to Mark, or a version of Mark, or to a source like the double tradition. Among the 'eyewitnesses,' Luke may have been referring to Mary, as an oral source, to other written or spoken forms of the Jesus-tradition--or to none of these. Luke did not expressly say whether the sources were written or not, but we will show that there is a strong case for the fact that the triple tradition was a written source. If it was oral, then there must have been so rigorous a process of rote learning as to make it tantamount to a written source. There is no better candidate for what could have been Luke's written source material than the material that the synoptics share in common, and the likely place in which a written form of the triple tradition existed was in another gospel. Since (from page 36 above) it is unlikely that Luke knew Matthew, the only contender--short of suggesting alternative productions of the triple tradition--would be the Gospel of Mark. Therefore, that Luke accredited sources in this way makes it more likely that Luke depended upon Mark than the other way round.

## **2.4 The setting and purpose of Mark and Luke**

A reflection on the respective goals and audiences of Mark and Luke can contribute to our discussion on their order relative to one another. In this regard, we examine the evidence regarding their circulation, and regarding their respective relationships with socio-religious developments in the first century.

### **2.4.1 Mark**

#### **2.4.1.1 Mark and Peter**

Papias, the Bishop of Hierapolis, c. CE 130-140, was a hearer of John, or of the pupils or followers of John the Elder, and he was a companion of Polycarp. Papias was the earliest person we know of to have referred to Mark by name, and his reference to Mark was quoted by Eusebius:

[Papias] already quoted a tradition which he has set forth concerning Mark who wrote the Gospel. It is in these words: 'This also the elder used to say. 'Mark, indeed, having been the interpreter of Peter, wrote accurately, howbeit not in order, all that he recalled of what was either said [ἢ λεχθέντα] or done [ἢ πραχθέντα, perhaps referring to narratives] by [the Christ]. For he [Papias] neither heard the Lord, nor was he a follower of his, but, at a later date (as I said), of Peter; who used to adapt his instructions to the needs [of the moment] but not with a view to putting together the Dominical oracles [τῶν κυριακῶν ποιούμενος λογίων] in orderly fashion: so that Mark did no wrong in thus writing some things as he recalled them. For he kept a single aim in view: not to omit anything of what he heard, nor to state anything therein falsely'.'

(Eusebius *HE* 3.39.15-16; Stevenson 1957:50)

Kloppenborg (1987:52) said that 'A strong apologetic tone is evident [in this quotation]. The elder wishes to exonerate Mark of any charge of inaccuracy and to apologise for the account's lack of order [τάξις]...Papias' testimony...[and] claims...refer to the canonical Gospels, not to their sources.' Perrin and Duling (1982:258-259) found Papias 'dubious' evidence that the gospel of Mark was 'built up largely of the reminiscences of Peter,' and saw it only as 'a tribute to the realism of the narratives in Mark's gospel.'

It is true that this quotation of Papias is apologetic in tone, and it is true that we must consider the amount of literary structuring in Mark (see below). Yet the quotation of Papias seems to have more substance than is perhaps allowed for by Kloppenborg, Perrin and Duling. That Mark had an association with Peter of some kind appears in 1 Peter 5:13 ('Mark, my son' in Babylon=Rome). Perhaps on the basis of either or both of the above references (Papias and 1 Peter), or perhaps independently of both of them, the Anti-Marcionite prologue to Mark (ca. CE 160-180), as well as Irenaeus (ca. CE 180, *Her.* 3.1.2), concurred that Mark was 'the interpreter' of Peter. Even if the prologue and Irenaeus were relying on Papias, still, all four come from a period quite close to that of Mark. The Gospel of Mark was evidently widely known quite early. We could expect a contradicting statement somewhere in the literature if there was another point of view.

If there was any connection with Peter, it could help to date Mark, since we can take it as factual that Peter died and was buried in Rome in the persecution of Nero in the 60s CE (R E Brown 1962:657).

There is evidence for this in 1 Clement 5.4, and Dionysius of Corinth and Gaius in Eusebius (*HE* 2.25.7-8). Mark could have been written in Rome, and if so, then in the mid 60s of the first century.

All this is not to say that the Gospel of Mark should be understood as Mark's record of Peter's dictation. Far from it. In the parallel Mk 8:27–30//Mk 16:13-20//Lk 9:18-21, Mark (with Luke) lacks Jesus' prediction of Peter's future leading role in the Christian community or church. Peter is not a figure of heroic dimensions in the Gospel of Mark. Any reference to the execution of Peter and Paul on Mark's 'front door step' (if Mark was in Rome in that period) is strangely lacking from Mark's Gospel, unless we are to find it in the triple tradition of Mk 8:34-91//Mt 16:24-28//Lk 9:23-27. Nevertheless, there seems little reason to deny some form of contribution from the apostles or from Peter. Some themes in the triple tradition (below) could have been of apostolic (or of Peter's) construct, arising from years of reflection, or they could have been yet earlier, already incorporated in the triple tradition, whether or not Peter had anything to do with its transmission.

At any rate, there are grounds for believing that Mark acquired material that was quite structured already, and that Mark made his own editorial contribution in his Gospel. Mark was not (simply) recording Peter's *ad hoc* verbal recollection of events, nor was Mark only relaying tradition concerned with Jesus' life, parables, miracles, execution or death, and resurrection. The first reason for saying this is that form critics have already noticed developments within the individual pericopae in Mark. The second reason is that we can see Mark's editorial interests as they appear in his introductions to these pericopae, in his arrangement of them, and in his conclusions to them, as follows. We will pause to consider this matter because it will be significant for our syntactical examination in chapter five (on page 185), and the discussion of the results there.

#### **2.4.1.2 Themes in Mark (triple or unique)**

Among the features that argue for the existence of one or more layers of editing, and at least the editing work of Mark, are these two: first, that certain concepts span across the whole work. Secondly, that there are unique details in this Gospel.

In terms of concepts that span across the whole work, we can see that the Gospel as a whole has a significant literary structure. Despite the recurrently changing location of successive episodes, it is not likely that this Gospel was formed in a haphazard way. The episodes were not linked together, for instance, simply by a word, a catchword, that reminded a speaker like Peter, or a writer like Mark, of another episode. Neither is the linkage through the consecutive development of time and place, like the development that is so prominent in Luke. The linkage is through other themes, as we will see below.

#### 2.4.1.2.1 Thematic material in the triple tradition: The messianic mystery

The origin of the triple tradition is by no means sure. Its themes, then, should be considered on their own, at least to begin with. A major theme that appears in some form across the synoptic versions of the triple tradition is the messianic secret or mystery. Wrede ([1901] 1963) pointed out that the idea of the 'messianic secret' ran through the introductory and concluding framework of the respective pericopae of the Gospel of Mark. Wrede attributed this idea to Mark, but, if one may make a distinction between the unique parts of Mark and the shared tradition, at least some aspects of this 'secret' or mystery theme, if not all of them, are to be found in the shared or triple tradition.

By means of theme of paradox, and more particularly, through the idea of the 'messianic secret,' the triple tradition both revealed and yet hid the significance of Jesus. Here are two examples of the way in which the triple tradition *revealed* the significance of Jesus. First, there is the healing of the demoniac in the synagogue, '... and they were all amazed (ἐθαμβήθησαν)...' (1:25-27//Lk 4:35-36). Secondly, there is the account of Jesus foretelling his passion, 'And he began to teach them that the Son of man must suffer many things...' (Mk 8:31// Mt 16:21//Lk 9:22).

In terms of *hiding* the significance of Jesus, the shared or triple tradition described Jesus' identity and the coming of the kingdom of God as a *strategic secret* or *mystery*. We read, 'To you has been given the secret [or mystery, μυστήριον] of the kingdom of God, but for those outside, everything is in

parables' (4:11//Mt 13:11//Lk 8:10). Jesus silenced the demons who knew who he was ('But Jesus rebuked [the unclean spirit]... "be silent" (Mk 1:25//Lk4:35; Mk1:34//Lk 4:41). Jesus warned many people to keep secret (Mk 1:44// Mt 8:4) and not to tell anyone about the miracle or revelation they had experienced.

In the shared or triple tradition, the meaning of Jesus' degrading death was also such a secret. Jesus silenced the Twelve (9:9 'charged them...'/'Tell no one'/'//Mt 17:9 'commanded them...'/'Tell no one'/'//Lk 9:36 'they kept silence'). Using this theme of paradox, the triple tradition explained why the one that Christians called the 'Son of God' should end his life and mission in such a degrading way. In the account where Jesus foretold his passion, the triple tradition said that it was privately (and here, uniquely in Mark, 'plainly') revealed to the twelve that Jesus or the Son of God was the 'Son of man' ('The Son of man must suffer many things' 8:31//Mt 16:21//Lk9:22). Still, this did not mean the 'Son of man' in the traditional apocalyptic role of Daniel 7 and Enoch. In the triple tradition, the 'Son of man' had the additional and even key characteristic of having come to serve and give his life as a ransom for many (Mk 10:45// Mt 20:28, cf. Lk 22:27).

#### **2.4.1.2.2 Thematic material in the triple tradition: The disciples' misunderstanding**

Such silence, secrecy, or mystery, has some connection with the triple tradition theme of the disciples' limited understanding, opacity, and, finally, their desertion of Jesus. The linking nature of this theme appears in its spread throughout the Gospel of Mark (and the other synoptics) early in the account (Mk 4:13), in the middle (8:21), at the end (14:50), and at other points between.

Although Matthew has his own project, as is indicated below, this opacity is still evident in Matthew's material. In the triple tradition account of the interpretation of the parable of the sower, there is some lack of understanding of hearers, of a varying nature (Mk 4:13-20//Mt 13:18-23//Lk 8:11-15). This can be contrasted with the unique view of Matthew. At Matthew 13:19 we find the word παντὸς (in GNT3, from πᾶς, πᾶσα, πᾶν, gen. παντός). That means that for Matthew, while just

'anyone' may not understand, yet the true disciple could understand (συνιείς a unique word in Mt 13:23).

The triple or shared tradition described the early disciples as at a loss in the stilling of the storm, 'Who then is this, that even wind and sea obey him?' (Mk 4:41// Mt 8:27//Lk8:25). It described them as not understanding in the account of Jesus' perspective on defilement—traditional and real: "Are you [disciples, privately] also without understanding?" (Mk 7:17). In that shared account, Matthew, however, envisaged an end to their existing state of misunderstanding: 'Peter said, "Explain the parable to us." And he said "Are you also still without understanding?"' (Mt 15:15-16). Another illustration of the theme of misunderstanding in the shared account is in the leaven of the Pharisees: "Do you not yet understand (συνίετε)?" (Mk 8:21). It is again offset by Matthew: "'How is it that you fail to perceive (νοεῖτε)...?' Then they understood (συνήκαν)...' (Mt 16:11-12). Finally, the disciples were disloyal in the shared account of the arrest—'All forsook him and fled' Mk 14:50//Mt 26:65. Yet, in the triple tradition, despite this strong and repeated statement of their misunderstanding, during Jesus' own ministry (that is, before his death) these same disciples were imbued with apocalyptic powers and commissioned by Jesus (6:7//Mt 10:1//Lk 9:1).

#### 2.4.1.2.3 Thematic material in the triple or shared tradition: Galilee

Third, there was in the shared tradition an emphasis on Galilee, perhaps as an important connecting link for the constituent materials of this Gospel. The triple tradition ministry began in Galilee (1:9, 14). The remaining references to Galilee are in the material that Mark shared with Matthew: The report of Jesus went out from Galilee (1:28), Jesus ministered throughout Galilee (1:39); and there are further references in 3:7; 7:31; 9:30. In 14:28 we read 'But after I am raised up, I will go before you to Galilee')// Mt 26:32; and in 16:7 that 'He is going before you to Galilee; there you will see him as he told you'.

Marxsen ([1968] 1976:142) thought that Galilee, in Mark, may have been a theological symbol of the place of the παρουσία (the 'coming') of Jesus. This word does not appear in this Gospel, however.

Furthermore, over time, and in the transition from Jewish apocalyptic to the Christian eschatological or apocalyptic writing of later Christians, this concept went through different meanings. In Daniel, the 'coming' of the one like a Son of man was a 'coming' to God. In Christian circles, this only slowly moved towards a meaning of the 'coming' being that of Jesus 'coming' (back) to his community. Mark 16:1-8 lacks resurrection appearances. In wording that is shared with Matthew, but (probably for the sake of Luke's redactional intentions, it is) lacking from Luke, there is an expectation of a return or coming back of Jesus of some kind in 16:7 ('he is going before you to Galilee; there you will see him as he told you'// Mt 28:7b). The response of the disciples in unique Mark (16:8), which formed the great finale of that layer, was that they 'fled...for trembling and astonishment had come upon them, and they said nothing to anyone, for they were afraid.' In the last verse of Mark, any residual significance that there may have been in the role of Galilee seemed to suddenly evaporate in the turmoil. Matthew 28:8 knew at least about fear and a rapid departure from the tomb, but understood it in a thoroughly different way: 'they departed quickly... with fear and great joy, and ran to tell his disciples.'

This reference (Mk 16:7) has only a very tenuous connection with Daniel's representation of the 'coming' of one like a Son of man, however, if it has any connection with Daniel at all. At any rate, we can see that the concept of the 'coming' of the Son of man at a critical moment, or at the end of time, has a spectrum of meaning. As a result, if we are to entertain the meaning of a term like this as a key theme in (a given layer of) Mark, and use it to explain its structure and intentions, then we should first clearly define or designate the particular meaning (from the spectrum of possibilities), and then show the various appearances of such a meaning or meanings throughout one or more layers of Mark.

#### **2.4.1.2.4 Thematic material in the triple or shared tradition: Apocalyptic concerns**

A reflection of the risks or cost of discipleship in the congregation or community of the triple tradition is visible in the 'If anyone would come after me...' pericope (at Mk8:34-38//Mt 16:24-28//Lk9:23-27); and in the shared material in 13:9-13.

The apocalyptic concern emerged in Jesus' secret apocalyptic discourse to his disciples in Mark chapter 13. A good deal of the content of that chapter is shared with Mt 10:17-22a; 24:15-36, 42-44; 25:13-15. Perhaps we are to think about the eschatological-apocalyptic theme largely in terms of the material that Mark shared with Matthew. It is more likely that Luke minimised or reconceived this theme than that Luke did not know about it, but the latter is presumably not impossible.

### **2.4.1.3 Thematic material unique in Mark**

#### **2.4.1.3.1 Unique Markan themes: Gospel, εὐαγγελίου**

First, Mark has the title 'gospel,' εὐαγγελίου (1:1 (unique word), 14b (unique word); 8:35 (unique word); 10:29 (unique phrase); 13:10 (unique verse); 14:9//Mt 26:13), showing the special meaning that this word had for unique Mark. The absence of an article before the first word lends support to the idea that the first verse contains a title (Taylor [1952] 1969:152). If the title was added by someone other than Mark (which Taylor doubts), then it would show the meaning this word had for the early Christian community concerned. Whether or not Mark contributed this title, yet the title is a testimony to the fact that this Gospel was not understood to be an individual's detached attempt at an objective biography. Rather, it was a document whose editor had a particular interpretation of the meaning of the Jesus event, and his arrangement (as we will see in the paragraphs below) reflected the concerns of Christian congregations in his context (L Johnson 1986:147-8).

#### **2.4.1.3.2 Unique Markan themes: Heightened pessimism about the disciples**

In the unique wording of Mark, the 'pessimism' about disciples that appears in the triple or shared tradition is a good deal sharper than even the somewhat 'negative' image of the disciples that appeared above in the triple tradition. The inability of the twelve and others to understand is thoroughgoing, comprehensive, and it will continue (4:10-13). At best, the word could be accepted by them (παραδέχονται), a term unique to Mark at 4:20. The reason, apparently, appears after

the account of Jesus' walking on the water, 'For they did not understand about the loaves, but their hearts were hardened (πεπωρωμένην)' (unique wording Mk 6:52). Then there is Mark's unique wording in the shared account about the leaven of the Pharisees: Mk 8:14-21 '[The leaven of the Pharisees] and the leaven of Herod...' '[Do you not] understand (συνίετε)? Are your hearts hardened (πεπωρωμένην)?'" Perhaps Mark was structured to echo the inner conflict of the disciples in or through Jesus' conflict with other groups. The turmoil of the disciples is especially seen in the unique wording's emphasis on the theme of the paralyzing amazement (ἐθαμβοῦντο) and fear (ἐφοβοῦντο) (10:32) experienced by the disciples, within the triple account of the third prediction of the passion. One of these words, 'they were amazed' (ἐξεθαμβήθησαν) appears also in the unique wording of Mark at 16:5. Three additional words, 'fled,' 'trembling' and 'astonishment' (ἔφυγον, τρόμος and ἔκστασις), which follow along the same lines, are at Mark 16:8 in the resurrection account. Such unique elements were probably Mark's own contribution or at least what marked out his interests (by contrast with Matthew and Luke).

The reason for the relatively pessimistic characterization of the early disciples in the wording that is unique in Mark's Gospel was surely that Mark's own audience was opaque, anxious, and perhaps incredulous. That is, at first sight, this Gospel may look like history or biography. Mark's purpose, however, was different. It was to rally the tormented congregations of his situation. The Herodians were singled out for special comment with regard to the troubles of such a community or communities. Mark's purpose was to rally the community around their preaching mission in the name of the improbable figure that they called the 'Son of God.' That the figure is emphatically improbable can be seen in unique Mark at 3:21, where Mark saw fit to include the account that Jesus' family thought he was beside himself. It was a note that was either unknown to Matthew and Luke, or else set aside by them.

#### **2.4.1.3.3 Descriptive detail that is unique in Mark**

Secondly, another argument for Mark's characteristic hand has been seen in his distinct version of the triple tradition. Mark's version looks like an edition with a 'storytelling' character. An example of

such unique, vivid, descriptive detail appears in the triple account of the stilling of the storm. Three unique Markan details are the beating of the waves, Jesus' location in the stern of the boat, and the cushion (4:37-38). Again, in the account of the arrest, it said uniquely in Mark that 'A young man followed him, with nothing but a linen cloth about his body; and they seized him, but he left the linen cloth and ran away naked' (Mk 14:15-52).

The audience that was most likely to require an explanation that emphasised the paradoxical death of 'the Son of God' will give us a clue to Mark's probable situation. We know Mark's audience was not Jewish because he translated Aramaic expressions (3:17—in unique Mk; 5:41—in unique Mk), and explained Jewish customs to his audience (7:3-4—in unique Mk; 15:42—'that is, the day before the sabbath,' in unique Mk), along with the testimony of 9:13—'as it is written of him' in unique Mk, and 12:42 ('which are a penny (κοδράντες)')—also in wording that is uniquely in Mark.

We find hint of the triple or shared tradition audience in the identity of the first person, other than Jesus' disciples, that is described as having recognised the identity of the crucified Jesus. In Mark 15:39//Mt 27:54 we read that this recognition was voiced first by a Roman centurion. Another argument in favour of the fact that the most likely non-Jewish audience was a Roman one, was that the triple tradition in Mark used a greater proportion than other Gospels of Latinisms, leaving Latin terms untranslated (5:9//Lk 8:30; 6:37 [in Mk alone, but set in a triple tradition story]; 12:15 [triple tradition]; 15:39 [triple tradition]). We noted that Peter was in Rome, with Mark (1 Pet 5:13), for some time at the end of his (Peter's) life. There is also 'the testimony of the Anti-Marcionite Prologue, of Irenaeus, and of Clement of Alexandria' (Taylor [1952] 1969:32). As a result, a Roman setting for the triple tradition is quite as reasonable as any other, or more so. The unique material in Mark may have shared that setting.

There was a far more intense anxiety, however, in Mark's own congregation or community (by distinction with the apocalyptic interest in the triple tradition, above). This is visible in the strange conclusion at 16:8, where the first witnesses to the resurrection were highly fearful, as well as other places already noted. Such fear that Mark described among the disciples of the mid-30s CE could mirror the fear that the Christian community felt in Nero's Rome in the mid-60s CE. Its members

were not only afraid, but surely also self-derogating, since the Romans grouped them with the least important socio-economic classes. That would match well with the triple tradition having solidified into the written form in which it did, an account which adopted an eschatological or apocalyptic perspective, accentuated the weakness of the disciples of Jesus, tried to rally them, and perhaps tried to close ranks as well.

This is strangely different, however, from the calm conduct of Paul as Luke described it in Rome in the mid-sixties of the first century (Acts 28:30-31—though see the discussion on Jervell, page 53 below). It is possible that Luke was trying to pour oil on troubled waters, and that those verses reflecting a Rome that was in harmony with (Jewish) Christians were not a realistic reflection of the situation, but rather a euphemistic reflection of it, on one hand. Luke, after all, was quite aware of the emerging hatred towards Christians from family, the synagogue, and from the state (21:12-19, especially v. 12, 17, 'People will lay their hands upon you and will persecute you, they will hand you over to synagogues and prisons, and you will be led off to kings and prefects because of my name.... You will be hated by all because of my name'). In the mid-50's Paul's letter or diatribe to the Romans reflected the deep divisions that existed between Roman Christians who were strict about dietary rules (Jewish Christians) and those who were not (Hellenistic Christians). Such divisions within the community may have been 'fault lines' arising from the growing tension with the citizens of the surrounding city. On the other hand, perhaps Luke (in Acts 28) did give a realistic reflection of the mood of Christians in Rome. If this was the case, then the unique parts of Mark, if written in Rome, should be allied to a time different than that of Acts 28:30-31, or to a persecution different than that of Nero.

A persecution that was different to that of Nero would have to be at a later time for the following reason: After the death of Jesus, the imperial action of Claudius was the first episode of a pogrom against Jews or Christians in Rome (CE 49).

From the Roman historian Seutonius (*Life of Claudius* 25.4) we learn that in A.D. 49 Claudius expelled the Jews from Rome because of a disturbance which Seutonius believed was instigated by a certain 'Christus.' The probable cause, however, was a dispute over Christus, that is, a dispute between Jews and Jewish Christians. Perhaps, then, the church in Rome arose among Diaspora Jews there. At any rate, Acts 18:2 claims that the Jewish *Christian* Aquila and his wife Priscilla were among the expelled

Jews. By the time Paul wrote his letter to the Romans, there was a sizeable Christian congregation there.... Since the letter was written about two or three years after the Decree of Claudius was rescinded by Nero in A.D. 54, we may suppose that some Jews and Jewish Christians had returned to Rome. If chapter 16 was part of the letter, Aquila and Prisca (Priscilla) were among them (16:3). Therefore, by the mid-fifties Paul wrote to an established church at Rome; it consisted of a majority of Gentiles and a minority of Jewish Christians, the latter having perhaps recently returned from exile.

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Nero's persecution was the second. The series of such imperial threats and actions became worse with each new episode, not better.

Meanwhile, we appear to have two phases of behaviour or responses of the disciples in one part and another of Mark. This may reflect the mood of two communities that formed the audience of this Gospel, or two phases in the life of one community. In the triple sections of Mark, the mood among the disciples (and, we suggest, the first or early audience) is less tense, while in the unique sections, the mood among the disciples (and, we suggest, the second or later audience) is more tense.

If the phase of community life of the triple sections is to be linked to one imperial action or another, then the milder mood of the triple section would have to coincide with an earlier (and milder) imperial action. The greater turmoil in the unique section would have to coincide with a later and more severe imperial action. Acts 28:30-31 gives us some pause as to whether we should count the persecution in Nero's time, in Rome, at all. At any rate, we could say that the triple sections (since they are earlier) are unlikely to reflect an imperial action against the community after Nero. At the same time, the unique sections (since they would be later) are unlikely to reflect an imperial action against the community before Nero. Thus the written and circulated version of the triple tradition as it appears in Luke, which arose from Rome, should not be dated after Nero, while the circulated version of Mark that we know, which also emerged from Rome, should not be dated before Nero.

Documents written around the time or place of persecution often have an apocalyptic tone, or an eschatological interest (Perrin & Duling 1982:73).

Apocalyptic eschatology... is a child of hope and despair: hope in the invincible power of God and the world [God] created, as well as [God's] plan and purpose for... people, but despair of the present course of human history in that world. ... [T]he actual experience of the people of God in the world was catastrophic: ...conquest; ...exile; ... domination.... The burdens of war, occupation... and taxation... produced an intolerable experience of alienation and powerlessness. Human history was a virtual descent into hell. But God was the ruler of all things and, therefore, the tragic events of human history must have been foreordained by [God]. Thus, there was some divine plan through which the horrors of history would reach a climax and everything would change..... This change would be marked by tremendous historical and cosmic catastrophes. In the meantime the people of God had to prepare themselves for the change and watch for the signs of its coming.  
(Perrin and Duling 1982:28)

Thus the environment of such documents is usually one of frustration, fear, danger, disillusion, rejection, persecution or failure. Apocalyptic documents can have an adversative or even a warlike tone, and their concern is with limited objectives, immediate survival, strategic analysis, victory and imminent vindication. In chapter 13, Mark's version of the shared tradition contains the longest piece of apocalyptic writing in the New Testament after that of the Revelation to John. Therefore, the shared tradition is likely to have come from a setting similar to the usual setting of apocalyptic writing.

On the other hand, Luke-Acts originated in a more peaceful time or place, and we can see contrasting assumptions and characteristics. Luke-Acts took a long-range, a more civic-minded, and a more philosophic view of their environment. For example, Luke had in view, first, the longer period of church history that we see in Acts. Secondly, he had a more developed social engagement (Acts 2:45 'distributed to all according as anyone had need'; 6:1 'widows... in the daily serving'). Third, Luke had a more positive assessment of the religious authorities (Acts 5:34-40 'Gamaliel, a teacher of the law honored by all the people... said... "If it is from God, you will not be able to destroy it." And they obeyed him'). Fourth, Luke had a more positive assessment of the governmental authorities (Acts 23:10 'The chiliarch commanded the soldiery to go down to snatch [Paul] out of their midst'). The apocalyptic element of the shared tradition in Mark did not fit into this category.

It was likely, then, that Mark was associated with one of the points of conflict. The most notable times and places of conflict were the following: First, there was a sharp and continuing conflict between the early Jewish Christians on the one hand, and the Jews in Judea and in the diaspora on the other hand. Dating from the 30's or 40's, it was visible in the Q-writings and in Paul's letters, for example 1 Thessalonians. Secondly, there was the edict of Claudius (Acts 18:2) expelling the Jews from Rome—perhaps in CE 49. Thirdly, there was persecution of the Jews and the Christians by the Romans in Rome (only) under Nero, in CE 64. Fourth, there was the Jewish revolt in Judea in CE 66, ending with the destruction of the Temple by Titus in CE 70. Fifth, there was a persecution of Christians that was more widespread than that of Nero under Domitian in CE 95. Of these, the shared tradition or triple tradition in Mark seems to fit best with the first (increasing conflict with the synagogue), the third (Nero) or the fourth (the Jewish War). The even more anxious community reflected in unique sections of Mark may fit better with the third (Nero), the fourth (the Jewish War), or even with the fifth (Domitian).

#### 2.4.2 Luke

The author of the document we have titled 'The Gospel According to Luke' was possibly or probably the traditional one, Luke, that was spoken of in Philemon 24, Colossians 4:14 and 2 Timothy 4:1. 'But the identification of Luke as Paul's 'fellow worker' is complicated for many commentators today who regard Colossians as Deutero-Pauline' (Fitzmyer 1981:8, 36).

The anti-Marcionite prologue for Luke (2<sup>nd</sup> century CE) has this, where the italics emphasise information that is not reflected in the New Testament, and that cannot be confirmed:

Luke was a *Syrian of Antioch*, by profession a physician, the disciple of the apostles, and later a [close] follower [*παρακολουθήσας*, from *παρακολουθέω*] of Paul until his martyrdom. He served the Lord without distraction, *without a wife, and without children*. He died at the age of *eighty-four in Boeotia*, full of the holy Spirit....Though the Gospels were already in existence, that according to Matthew, composed in Judea, and that according to Mark in Italy, he was prompted by the holy Spirit and composed this gospel entirely in the regions about *Achaia*....Later the same Luke wrote the Acts of the Apostles.

Fitzmyer (1981:42, 44, 47) did not think that Luke was a Gentile Christian, but a non-Jewish Semite, and a well-educated native of Antioch. Colossians 4:11 implies that Luke was not among the converts from Judaism. The loose linkages and lack of place references in the travel narrative (9:51-18:14, e.g. 13:22 and 17:11) suggest that Luke was distant from a geographic familiarity with Galilee and Judea. Furthermore, that Antioch was so fleetingly mentioned in Acts 18:22-23 implies that Luke's association with Antioch was *early* in his life. It is plausible simply from the reference in Colossians 4:11 that Luke was a physician, but Luke's language was not particularly that of a medical doctor. Still, whether Luke was a doctor or not does not make much difference to how we read or understand what Luke wrote (Fitzmyer 1981:53).

Most of Acts was related in the third person, but there is a series of texts in Acts that describe three journeys with Paul, that are related in the first person plural, 'we.' Here are the references: from Troas in Asia Minor to Philippi in Greece, Acts 16:10-17; from Philippi to Jerusalem, 20:5-15, 21:1-18; from prison in Caesarea, on the Judean coast, to Rome, 27:1-28:16. These 'we-sections' of Acts may indicate that the writer of these sections, probably Luke, was with Paul at these times and likely the intervening periods. Glover (1964-1965:97-106) pointed out that if this was so, then Luke was with Paul during the *later* part of his ministry, but was *not* with Paul during the *earlier* part of his ministry.

If Luke's later travels with Paul included Rome, then we have reason for saying that there could have been a face-to-face contact between Mark and Luke, and possibly Paul with Peter, in Rome. That also means that Luke was not with Paul during the earlier period in which he (Paul) had written the most important of his epistles (Fitzmyer 1981:48, 50, 51).

To know the reason for which Luke's record or version of certain events was different from that of Paul could cast light on Luke's situation, or *modus operandi*. The difference in their records may be explained by the brevity of the personal acquaintance of Luke with Paul. Here are two examples: First, in Galatians 2:1-10 Paul asserted that the discussion at Jerusalem was between himself, Barnabus and three Jerusalem apostles. Acts 15 described the same meeting as a public meeting of

the whole church. Secondly, Vielhauer (1966:48) said 'Paul's speeches' as they appear in Acts (13:17-41, 26:22-23) were not very consistent with the Paul we encounter in the epistles.

First, Vielhauer said that the Acts speeches of Paul had an 'adoptionist' Christology. That is, the figure of Jesus was one or more of the following: First, that of a man gifted with divine powers; secondly, of a normal human being that God *adopted* as the son of God; or, third, of a man that God adopted to become the Messiah or Christ. Is this so clear? There was perhaps not a very large gap between the following three: First, the Christological concept that Luke had on the lips of Peter in his speech in Acts 2:22-24; secondly, that on the lips of Paul in his speech in Acts 13:32-34; and, third, what was more surely the thought of Paul in Romans 1:4.

Nevertheless, we can acknowledge that Paul usually portrayed Christ in more cosmic terms: '...Lord Jesus Christ through whom are all things, and we through him' (I Cor 8:6). Paul's Christology was usually 'the all-embracing.....eschatological]....eternal [2 Tim 1:9, Tit. 1:2]....explication of the absolutely unique, one-time-only redemptive event [2 Tim 1:9, 10] that was enacted in Christ's advent [Gal 4:4], his suffering, death, and resurrection' (Ridderbos 1975:26, 49-50). However one assesses the authorship of the following two documents, there was also an exalted Christology in them: Ephesians (e.g. 1:10) and in Colossians 1:15ff (Ridderbos 1975:78-86).

Secondly, the two speeches of Paul in Acts (13:17-41, 26:22-23) place little emphasis on the cross, a matter that was quite emphatic in Paul's writings (I Cor 2:2 'I would think of nothing but Jesus Christ nailed to the cross'). Thirdly, these speeches show no expectation of an imminent end of the age, whereas Paul at least in 1 Thessalonians and 1 Corinthians expects the age to end fairly soon (1 Thess 4:15 'We who are left alive until the Lord comes').

Jervell (1972:77) said that Luke was writing for Christian readers who were under attack from their Jewish neighbours because of Paul's controversies. This did not mean that those for whom Luke wrote were Jewish-Christians. To the contrary, several factors indicate that his audience was Gentile and *in a Gentile setting*.

These factors include first, the sophisticated Greek language and rhetorical devices of Luke, like the long periodical sentence in Luke 1:1-4. Secondly, there is his use of the style and text of the Septuagint (the Greek version of the Hebrew Scriptures), for example 1:5f, and 3:3b-4. Third, there is his possible vagueness about or editorial glosses over some details of Palestinian geography. For example, Luke (4:44) said Jesus' early ministry was in the synagogues 'of Judea' (P<sup>75</sup>,  $\aleph$ , B). Even allowing for Luke's particular theology, that should still be 'Galilee.' The manuscripts A, D,  $\Theta$  and the Koine family used 'Galilee' in order to harmonise the Lucan text with the other synoptics. Luke, perhaps a little vaguely, included Galilee in Judea as a generalised way of saying, 'in the country of the Jews' (e.g. 1:5, 6:17 and others). By listing 'Adam, the son of God' at the head of his genealogy, rather than Abraham, as Matthew did, Luke referred to humanity at large. He gave dates and references to world history, like the Caesars--Augustus (Lk 2:1) and Tiberius (Lk 3:1); the 'innocent' governor of Judea, Pilate (Lk 3:1, 23:4, 14, 22); and the magistrates (Acts 13:4-12, 16:35-40). Luke also referred to the proconsul Gallio, of Achaia, CE 50-51 (Acts 18:12-17), the Asiarchs at Ephesus (Acts 19:31), Paul's appeal to Caesar [Nero], (Acts 25:10-11), and the comments of Agrippa (Acts 26:32).

Luke emphasised through his widely acknowledged 'salvation history' structure that the Christian community followed Jesus on the 'way' through all time, to the ends of the earth (Acts 1:8). This way addressed the whole society--women and men (1:39-67); poor and rich (6:20-26); old and young (Lk 2:36-38); Jews, Samaritans and all nations (Lk 2:22; 24:47; Acts 1:8). Therefore, Luke's audience was surely fluent in Greek, urban and cosmopolitan.

### **Place and date of writing**

The breadth of the horizon indicated above points toward an origin for Luke's Gospel (and Acts) not in Judea, but probably in some cosmopolitan Mediterranean urban area, for example Achaia, Antioch or even Rome. If it were Rome, then the ending of Acts, with Paul awaiting a hearing before Caesar, may mean that Luke wrote, at least initially, to defend Paul before the courts of the Roman

emperor. For the following internal or external reasons, it was likely that Luke crafted the Gospel, and Acts, after CE 70 and before CE 90.

First, the reference in Luke 1:1 to other attempts infers that Luke must have come after some time. On the other hand, Luke-Acts did not know about the formation or circulation of the Pauline corpus (Fitzmyer 1981:57), so it cannot have been too late in the first century. Secondly, 'Luke 13:35a, 'your house is abandoned,' addressed to Jerusalem, was almost certainly a reference to the destruction of Jerusalem' (Fitzmyer 1981:54). The reference in Luke 21:20 to 'Jerusalem surrounded by camps' was a change from 'the abomination of desolation' in Mark 13:14. That is, a prediction about the Temple has changed to a prediction about Jerusalem itself. Therefore, if it was a *vaticinium ex eventu*, or a statement after the fact, it must refer to the destruction of Jerusalem. That would date Mark before CE 70, and Luke after CE 70. The city of Jerusalem appears frequently in both the Old Testament and the New Testament, and Josephus made much of the city. If Luke's reference was to the past event of Jerusalem's destruction, it must be conceded that it was remarkably fleeting. Perhaps the explanation could be that the focus of the Christian leadership was on the movement in the Mediterranean world, and no longer on Palestine (Fitzmyer 1981:56).

This discussion of goals, setting, date and place of Mark and Luke supports a scenario in which Luke came after the triple tradition in Mark and in which Luke was dependent upon the triple tradition in Mark rather than the other way around.

Therefore, we can envisage the triple tradition in Mark having come from something other than the direct oral dictation of Peter, and being linked with Peter and his execution in Nero's Rome. Linguistic details make a Roman setting for this Gospel likely. The theme of the messianic mystery in the triple tradition reflects the enduring alienation and tension of the Jewish Roman Christians in that city up to the time of Nero's Rome. There is an echo in the latest strand of Mark, reflected in unique Mark's 16:8, of a level of fear that corresponds best with the later episodes of persecution in Rome, and certainly no earlier than Nero's Rome of the mid-60s CE.

On the other hand, Luke acknowledged sources, and was probably a non-Jewish Semite, and a well-educated native of Antioch, which he left in his adult years. He was possibly with Paul during the later part of his ministry, but was not with him during the earlier part of Paul's ministry. There could have been a face-to-face contact between Mark and Luke, and possibly Paul with Peter, in Rome. Luke wrote to Christian readers under attack from their Jewish neighbours because of Paul's controversies. His audience was probably Gentile--Greek, urban, and diverse--and in a peaceful cosmopolitan Gentile setting for example Achaia, Antioch or (less likely, but possible,) even Rome. A likely date is after CE 70 and before CE 90. This discussion of goals, setting, date and place of Mark and Luke supports a picture in which Luke came after Mark and in which Luke was, or could have been, dependent upon Mark for a written form of the triple tradition, rather than the other way around.

## 2.5 The contents of Mark and Luke

Fitzmyer (1970:134-135) reasons as follows that *the content* in Luke must have come after that (of a written, circulating form of the triple tradition) in Mark:

1. There is insufficient reason for creating something like the Gospel of Mark if the other two already existed. One could understand why Matthew and Luke were necessary even if Mark already existed. It is difficult to imagine why Mark was necessary if Matthew and Luke already existed.
2. If Mark came after Matthew and Luke, Mark's omissions of so much significant material are incomprehensible—for example, the Sermon on the Mount. Then we are expected to follow in the opposite direction, and believe that Mark would burden his 'summary' with meaningless details like the cushion in the boat (Mark 4:38); and the 'four men' in Mark 2:3.
3. It is not credible that Mark could have eliminated all Lucanisms.
4. It would be difficult to imagine why Mark removed even those elements in the infancy narratives of Matthew and Luke that they shared. If Mark was concerned for story by contrast with teaching, he would have rendered an infancy narrative joined from those of Matthew and Luke.

5. Mark's resurrection narrative (16:1-8) cannot be thought of as a summary of the resurrection narrative in Matthew or Luke, or both.

6. Mark has a more primitive Christology and ecclesiology than that of Matthew and Luke. It is unlikely that Mark's unique theology could have arisen from a summary of Matthew's theology, or Luke's, or both.

Certain scholars said the *shortness* of Mark is evidence of its being earlier, but Sanders (1969:87) dismissed this as evidence for priority.

Considering the scope, the contents, the linguistic changes, and theologies of Mark and Luke, then, we may reasonably suppose that Luke came after Mark and was dependent upon (the written form of the triple tradition in) Mark, rather than the other way around.

## 2.6 The objective existence of a source supplementary to Mark, namely Q

The priority of Mark suggests a corollary, although it does not require this corollary. The corollary is that the material that exists in parallel between Luke and Matthew could have come from a second document, Mark being the first document. Many scholars call the second source 'Q,' or the '(Wisdom) Sayings Source,' but we will try to confine our terminology to 'the double tradition.' We have already touched on the hypothesis of the Q source several times. Although our attention is on the relationship between Mark and Luke, a limited consideration of this double tradition source is necessary.

We have a known and independent form of Mark, on the one hand. It gives us a way of examining our ideas about the relationships between the synoptic Gospels. On the other hand, we know of no independent form of Q. We know it only as embedded in Matthew and Luke.

The lack of an objective copy of a source weakens its case. After all, it may be said that Q was (as far as we know, at present) only a hypothetical entity, and perhaps it never actually existed, nor did anything like it. There are at least three considerations here: First, we have the known and

independent form of the *Gospel of Thomas*, which was a document similar in genre to the sayings we find in the double tradition (or the hypothetical sayings source, Q). Secondly, without the Q hypothesis, we would need to develop an alternative and possibly quite similar hypothesis for the distinctive sayings material in Matthew. Third, the first synoptic Gospel, no matter which one it was, must have drawn on a source, sources, or some form of tradition. Though we do not have an objective copy of whatever such material may have been, this does not constitute a moratorium on considering its nature.

First, we have the known and independent form of the *Gospel of Thomas*, which was a document similar in genre to the sayings source Q. Farrer did not discuss the parallels between the double tradition and a document like *Thomas*, which was similar to 'Q' both in style and content. The possibility that the sayings collection could have formed a separate genre of its own receives some support from references to sayings collections in the New Testament itself, for example, 1 Thess. 4:4, 1 Cor. 7.

Secondly, without Q, we would need to develop an alternative and possibly quite similar hypothesis to explain the oral and documentary history of the distinctive sayings material in Matthew. Farrer said that the so-called 'Q' material was not a form of communication used by early Christians, since it was neither letter, sermon nor Gospel. Farrer did not recognise a 'sayings source' of the *Gospel of Thomas* type as an early Christian communication. Whichever of the synoptics appeared first, it appeared more than two decades after the life of Jesus. Farrer demurred from admitting a literary vehicle of the 'sayings source' type. Such a literary agency is unavoidable for the Christian community to have conserved and transmitted the sayings of Jesus, however. Some literary vehicle, form and genre must have portrayed the circumstances, the *Sitz-im-Leben*, under which the community transmitted and then recorded such sayings. Such a vehicle or agency would surely be very similar to what one can conceive of with regard to Q.

That sayings material contained much that must have been very precious—like the 'Lord's Prayer'—to the Christian community then, as it is today. Engelbrecht (1996:95) said: 'The fact that Mark omitted so much of the teaching of Jesus is one of the most important problems for the Griesbach hypothesis

to explain.’ That is a point very well said, and taken. Let us take, from the synoptics, anything that is a ‘Dominical saying,’ that is, a saying of Jesus Christ as Lord. History shows that nothing has ever (lastingly) gainsaid such a saying for the followers of Jesus. Therefore, there would have to be very convincing reasons offered for why Mark may have omitted not only one saying, but all this sayings material. There is only one explanation: that Mark did not know this sayings tradition, and, therefore, that Mark did not know the full extent of what appears in the writings of Matthew and Luke.

Proponents of the Griesbach hypothesis do offer explanations for why Mark should have summarised Matthew and Luke. One of the most interesting examples is that Mark required a short Gospel version, possibly for a one-time event, for a community in urgent circumstances. In this scenario, the urgent circumstance of the community was what drew forth the apocalyptic emphasis in Mark, for example, chapter 13. This is dubious, however. The Lord’s Prayer is an eschatological prayer, and the sign of Jonah is an eschatological sign. If Mark had an eschatological or an apocalyptic interest, and if Mark knew the sayings tradition, then there would have to be some other strong reason for which Mark should have omitted the Lord’s prayer, and the saying about ‘the sign of Jonah.’

Thirdly, even if comparable documents to the sayings material of the double tradition existed, the absence of an objective copy of the double tradition source itself did nothing to strengthen the two source hypothesis. One tends to doubt a proposition about sources if it appeals to a great deal of redaction. Possible distress about extensive redactional work must be offset by two observations. First, lengths of the double tradition contain verbatim agreements between Matthew and Luke and contain no signs of editing. Secondly, the Griesbach hypothesis involves the proposition that Mark excised large blocks of material, conflated, and edited his source material. Here we can see that *both* the Griesbach hypothesis *and* the two source hypothesis propose the extensive redaction and editing of sources. Nevertheless, the absence of a known, independent version of the double tradition did not decisively set the two source hypothesis aside.

In conclusion, a document like Q is corollary to the priority of Mark. It has no independent or objective reality, but this is less than critical to the question of the priority of Mark over Luke.

## 2.7 Doublets

A doublet is an event that occurs twice in a document. Mark has, or all three synoptics have, the following repetition:

- a. 'And he sat down and called the twelve; and he said to them, 'If any one would be first, he must be last of all and servant of all'' (Mk 9:35// Mt 18:4// Lk 9:48b);
- b. 'But it shall not be so among you; but whoever would be great among you must be your servant, and whoever would be first among you must be slave [δοῦλος] of all' (Mk 10:43-44// Mt 20:27// Lk 22:26).

When the repetition of an event occurs within only one source, it is a *doubling* rather than a doublet, for instance, the 'Feeding of the Five Thousand' (Mk 6:35-44) and the 'Feeding of the Four Thousand' (Mk 8:1-9).

Such duplication, or doubling, makes us suspect that the author had access to two versions of an event, and incorporated both versions rather than omitting one. The sources that are behind these doublings in Mark must have come before all three synoptics, since they appear in all three synoptics.

The doublets in Luke that are *not* in Mark suggest two sources also, one of which was Mark and the other that could be the double tradition. Here we may take note of the definition of a doublet that appears in Fitzmyer (1981:81):

By a 'doublet' in the synoptic tradition is meant a passage occurring twice within the same Gospel, but more specifically twice within the Lucan and Matthean Gospels, where:

- either they appear in *both* the Triple *and* double traditions,
- or they appear in *one* of the Triple or double traditions *and* also appear in the special source-material.

In this strict sense passages like Mk 6:35-44 and 8:1-9, the feeding of the five thousand and the four thousand, though sometimes called a doublet, are not meant, since these occur within one tradition.

The doublets which are found in the Lucan Gospel occur in the following passages:

| <i>Luke from 'Mark'</i>        | <i>Luke from the double tradition (or 'Q')</i> |
|--------------------------------|--|
| 1. 8:8c (=Mk 4:9 and 4:23)     | 14:35 (=Mt 11:15; 13:9)                        |
| 2. 8:16 (=Mk 4:21)             | 11:33 (=Mt 5:15)                               |
| 3. 8:17 (=Mk 4:22)             | 12:2 (=Mt 10:26)                               |
| 4. 8:18 (=Mk 4:25)             | 19:26 (=Mt 25:29)                              |
| 5. 9:3,4,5 (=Mk 6:8,10,11)     | 10:4,5 + 7,10,11 (=Mt 10:10,11,12,14)          |
| 6. 9:23-24 (=Mk 8:34-35)       | 14:27; 17:33 (=Mt 10:38-39)                    |
| 7. 9:26 (=Mk 8:38)             | 12:8-9 (=Mt 10:32-33)                          |
| 8. 9:48 (=Mk 9:37)             | 10:16 (=Mt 10:40?)                             |
| 9. 20:46 (=Mk 12:38-39)        | 11:43 (=Mt 23:6-7)                             |
| 10. 21:14-15 (=Mk 13:11)       | 12:11-12 (=Mt 10:19-20)                        |
| 11. 21:18 (probably from 'L')  | 12:7 (=Mt 10:30)                               |
| 12. 18:14b (probably from 'L') | 14:11 (=Mt 18:4; 23:12)                        |

Butler (1951) pointed out that if Mark was the second gospel writer, then the absence of one account in Mark could be because Mark omitted the duplicate form in Matthew (or Luke, whichever was first). That is, the hypothesis of Mark-as-middle-term would explain these doublets.

We have already concluded that Luke was unlikely to have seen Matthew (see p. 36). It is significant, then, that Luke took no interest in preserving doublets. Schürmann (1954:276-289) said, 'Luke deliberately creates no doublets, but at most permits them in a few instances to occur according to his schematic mode of composition'. Fitzmyer (1981:80-82) concurred, saying:

What was striking in the vast majority of the foregoing doublets was that they form part of a unit that was derived from the pre-Lucan sources....In some episodes or sayings...Luke and Matthew preferred to take a 'Q' passage instead of the [Markan] form of the episodes, e.g. the parable of the mustard seed (Lk 13:18-19); the parable of the yeast (Lk 13:20-21). [There are several such instances where Luke has] omitted [Markan] material because he has used something similar at an earlier occasion in the Gospel.

If Luke did not wish to preserve doublets, then there must have been two sources or written documents that Luke was using, Mark and the source of the double tradition. Butler proposed that Luke used only one, namely Matthew—a position that has difficulties we discuss elsewhere.

Kloppenborg (1987:42) said that the existence of such doublets is very persuasive evidence for the existence of a textual version of the double tradition. A second *written* source is implied when sayings exist in both a Markan setting, and in a double tradition setting, in a different form. This is particularly so when the settings are consistent with the editorial purpose or structure of Mark or the double tradition respectively (Kloppenborg 1987:50). An example was the sign of Jonah/ request for a sign Mk 8:11-12, taken over by Matthew 16:1-4, and Matthew 12.38-40//Luke 11:29-30.

The doublets, then, support the dependence of Luke at least upon a written form of the material in Mark, and probably upon a written form of the double tradition as well.

To sum up, if an author had access to two versions of an event, and assimilated both versions instead of eliminating either, then this emerges as a doublet, or else a doubling. The doublings in Mark emerge in all three synoptics. Therefore the sources so indicated must have preceded all three synoptics. Two sources are also indicated in Luke by the doublets there that are not in Mark. The idea of Mark-as-middle-term could not explain these doublets as Mark's exclusion of the repeat form in Matthew or Luke, if it is improbable that Luke saw Matthew. The doublets were from the pre-Lucan sources and suggest two written precursors, because Luke tolerated doublets, rather than creating them. The doublets, then, support the concept of Luke's dependence upon a written form of the material in Mark, and probably upon a written form of the double tradition as well.

## **2.8 Vocabulary and grammar**

Distinctive syntactical structures appear in the so-called Petrine passages in Mark, and in other passages (Taylor 1963:102, 44-66; Fitzmyer 1970:134-135, 139). First, compared with Luke, Mark has more concrete 'eyewitness' detail that cannot be later editing because it is artless and lacks a literary purpose. Farmer (1976b:170-171) maintained the opposite, and said that scribes added such detail to *later* copies in a series of copied texts. Farmer did not support his view with evidence, however. Secondly, Mark preserved more Aramaic phrases, and so was possibly closer to an Aramaic setting, or in touch with such a setting, which would root it in earlier stock. However far the

evangelists may or may not translate an Aramaic original of Jesus words, however, Sanders (1969:255) said that Aramaicisms were not decisive for which document came first. Thirdly, Mark's grammar was rougher and Mark's wording looks more like a transcription of unrehearsed speech (Streeter [1924] 1930:162-164; Butler 1951:147-156). Butler, arguing that Mark came from Matthew, admitted that this was so, but tried to preserve his position as follows. Butler said that Peter used a written form of *Matthew* as a script or prompt for what he (Peter) said, and Mark wrote down what Peter said. To allege an extra oral source like Peter may be unnecessarily complex and conjectural. It is possible, however, that a vernacular style of writing may have suited Mark's purposes better (Sanders 1969:255).

In drawing this matter to a close, we may note that on page 54 we considered some features of Luke's vocabulary and grammar. These features must have come from a situation in which the congregation had broader horizons than the congregation of Mark. The developments are not only theological, but Luke's congregation engaged more deeply with the social agenda in its environment. When we compare the features of grammatical accomplishment, and details related to 'community development' reflected in Mark and Luke respectively, then, they indicate that Luke was likely to have been later than the written form of the triple tradition in Mark.

## **2.9 When Luke and Matthew *both* omit text from Mark**

Mark itself was more extensive than the triple tradition as we have defined it—that is, as what appears in all three synoptic Gospels. More substantial materials in Mark that do not appear in either Matthew or Luke are a parable and two miracles. The parable of the seed growing secretly appears at 4:26-29. The two miracles appear at Mark 7:32-35, the healing of the deaf mute, and at 8:22-26, the healing of a blind man at Bethsaida.

There is the question as to why some material from Mark did *not* appear in Matthew and Luke, if they knew our version of Mark. Mann (1986:36, 52), in defence of the Griesbach hypothesis, queried whether the two source hypothesis could explain why Matthew and Luke should have

omitted important events from Mark. Examples include not only the miracles and the parable mentioned above, but also that Jesus shared table-fellowship with non-observant Jews (Mk 2:15-17). Fitzmyer (1981:73) added even more cases to the list: Mark 1:1, 2:27, 3:20-21, 7:2-4, 36-37, 9:29, 48-49, 13:33-37, and 14:51-52. Neiryck (Neiryck, Hen & Van Segbroeck 1974:55-195) listed 109 cases of Matthew and Luke making minor verbal omissions or alterations of Mark's text.

Streeter ([1924] 1930:298), defending the two source hypothesis, said that at least three factors could explain these omissions. First, Mark's weak Greek called for corrections. In these cases, the weaknesses of Mark's Greek were so obvious that any Greek speaker would make the same correction that Matthew and Luke both make. Matthew and Luke simply do what any prudent Greek speaker would do, so it was not necessary that they knew each other. Secondly, the double tradition material, or the 'Sayings Source,' had some parallels to Mark, and Matthew and Luke leaned toward the double tradition material. Thirdly, textual corruption: That is, later textual scribes assimilated aspects of Matthew's version when copying Luke, or vice versa.

Perhaps Luke and Matthew knew an earlier version of Mark, *Ur-Markus*, than the version we know. Then, the passages in question were inserted expansions by Mark to make a second edition of Mark. In this scenario, Matthew and Luke never saw the expansions and so, of course, they 'omitted' them. Hawkins (1968) suggested something similar, calling the document Matthew and Luke both used by the name 'Deutero-Mark.' Simpson (1965-1966:282) opposed this, however. He said that in some places 'Luke appears to conflate Matthew's improved version of Mark with the original, e.g. Luke 3:4a, 16...[so, since Luke cannot have known Matthew, as we discuss elsewhere, then Luke] must have known both [versions of Mark].' The following four points are an attempt to follow Simpson's position:

1. In Mark 1:2 there is a quotation from Malachi 3:10 ('behold I send my messenger...'). Mark 1:3 has a quotation from Isaiah 40:3 ('the voice of one crying in the wilderness...'). In 1:2, there is an attribution to Isaiah ('as it is written in Isaiah the prophet...') introducing both of these above two quotations (from Malachi and Isaiah) which followed in Mark's text. That is, as it stands in our version of Mark, the attribution is incorrect. (1a.) Taylor thought that the use of the Malachi

quotation at 1:2 in Mark was to be explained as a gloss (or an insertion) by a later hand. That is, the reason that Luke (with Matthew and John) does not have the quotation from Malachi with the quotation from Isaiah in Luke's parallel (3:4-5, as well as Matthew 3:3 and John 1:23) knew a version of Mark which did not have the Malachi quotation there, because it had not yet been inserted into the version of Mark that they knew. Therefore, Luke knew a version of Mark that was slightly different from (or earlier than) the one we know. (1b.) An alternative to the insertion posited by Taylor would be this: Both Luke and Matthew saw the Malachi quotation (in their version of Mark) at 1:2, but independently moved it later on in their respective Gospels, namely, to Matthew 11: 10 and to Luke 7:27. This is less convincing, however, because John not only lacks the connection between the quotations from Malachi and Isaiah, but lacks the Malachi quotation altogether. Taylor's explanation looks the best.

2. It might be said that perhaps Q and Mark had this material in different forms, with the implication that the similarities between Luke and Matthew arose because they both followed Q rather than Mark at this point. Let us consider the similarities and the differences between Matthew and Luke, from which we can see that it is less likely that such changes were for the above reason, and more likely that the changes were made by Luke and Matthew individually. First, the *similarities* between Matthew and Luke, and which suggest a common source other than the version of Mark that we know, includes these two features: (a) the absence of the Malachi quotation above; (b) In 1:4, Mark described the appearance of John the baptizer in the wilderness after his quotation from Isaiah, but Matthew and Luke both described John the baptizer in the wilderness before giving the quotation from Isaiah. Such similarity could be an argument some other version of this material (like Q) having had the different order, and Matthew and Luke having seen and followed the order of the other. Secondly, however, the *individuality* of Luke and Matthew appears in their independent wording. For example, Luke (3:2) said that the word came to John the son of Zachariah in the wilderness, while Matthew (3:1) said that John the Baptist was preaching in the wilderness. Although 'in the wilderness' is wording that is still shared, yet the other wording is different when we compare Matthew and Luke. The presence of such independent wording in Matthew and in Luke respectively is significant. Their independence makes it doubtful that they drew on some other version of this material (like Q) in preference to the order that we know in our version of Mark. In conclusion, it

appears that both Matthew and Luke independently thought there should be this change in Mark's order.

3. Mark 1:7 and Luke 3:16 have the historic present (or 'present reflexive action on an immediate future' (Zerwick & Grosvenor 1981:100)): '....after me comes [ἔρχεται] he who....'. Matthew 3:11 (and John 1:27) have the present participle '....after me is coming [ἐρχόμενος] he who....'. The participle is an 'improvement,' so it is likely to be the later version of the two. This later, improved version must have been circulating, and known by Luke, because the later, improved version was used not only by Matthew (which was probably completed before Luke) but also by John (which was probably completed after Luke). Out of the two versions available to Luke, he chose to use the earlier version that we see (and Luke saw) in Mark.

4. In paragraph 2, we see that Luke was acting independently in the editing work Luke carried out on the text from Mark. In paragraph 1, Luke (Matthew and John) knew a version of Mark (without the Malachi quotation) that preceded the version of Mark that we know (with the Malachi quotation). In paragraph 3, Luke (Matthew and John) knew a later, 'improved' version of the tradition, different to the one we know in Mark. This would be Simpson's case for the fact that Luke knew more than one version of Mark, and Luke drew from the different versions. There is a comparable nexus of different traditions at Mark 1:7-8 (// Mt 3:11-12// Lk 3:15-18// Jo 1:24-28).

Biggs (1980-81:23), wishing to find a test case for the Griesbach theory, used the parable of the mustard seed (Mk 4:30-32// Mk 13:21-32// Lk13:18-19). For proponents of the Griesbach hypothesis, Mark would have found the ὁμοίᾳ ἐστίν ('it is like') construction in both Matthew (13:31) and Luke (13:19). We would then have to think of Mark replacing the ὁμοίᾳ ἐστίν ('it is like') construction with his own ὡς ('as') with the dative (Mk 4:31). That construction (of ὡς ('as') with the dative) in Mark lacked a proper main verb, however. Biggs found it unreasonable to propose a step from better syntax to worse syntax. 'Insuperable difficulties lie in the way of accepting the Griesbach solutions....An independent source drawn upon by Matthew and Luke which overlapped with Mark is still the most probable explanation of the phenomena.'

We have already asked how the Griesbach hypothesis can possibly explain why Mark and his community would have John the Baptist's eschatological preaching of repentance, the temptation account, the eschatologically oriented beatitudes and the rest of 'The Sermon', the eschatologically oriented Lord's Prayer, the sending of the disciples, and all the other double tradition material (Fitzmyer 1981:66; 1970b:134-135). No congregation—especially a congregation, like that in Rome, that was suffering recurrent episodes of persecution--would have lastingly been satisfied with a gospel tradition that consciously ignored all this material.

Therefore, it must be admitted that the double omissions do present difficulties to the idea that Matthew and Luke knew and used the Gospel of Mark *in the form that we know it*. It is even more difficult, however, to think that Mark knew and used Matthew and Luke, because a Markan congregation would not omit so much widely recognised and valuable material from the Gospels of Matthew and Luke; and it would not replace better syntax with worse syntax. As a result, it must be the case that Matthew and Luke knew and used an earlier form of the tradition that exists within the Gospel of Mark.

## **2.10 When Luke and Matthew *both* insert text into Mark**

Proponents of the Griesbach hypothesis like Butler have explained the minor agreements between Matthew and Luke against Mark in the following way: He said that the minor agreements were due to Mark's own peculiar stylistic preferences in editing as *he conflated Matthew and Luke*. For Butler this represented a major argument in support of Matthean priority and against the necessity for a Q hypothesis, or even its plausibility. Neiryck (1962:845) said, 'On the hypothesis of the independent editing of Mark by Matthew and Luke, the minor agreements of these gospels against Mark, in the triple tradition, are the most serious stumbling block.'

Table 2.5: Some significant agreements of Matthew and Luke against Mark

| Mark  | Mt     | Luke     | Subject                     |
|-------|--------|----------|-----------------------------|
| 2:12  | 9:7    | 5:24     | The cure of a paralyzed man |
| 3:11  | 2:9-10 | 6:6      | Debates about the sabbath   |
| 4:10  | 13:10  | 8:9      | Why Jesus spoke in parables |
| 4:36  | 8:23   | 8:22     | The calming of the storm    |
| 8:29  | 16:16  | 9:20     | Peter's confession          |
| 13:19 | 24:21  | 21:23    | The desolation of Jerusalem |
| 14:47 | 26:51  | 22:49-50 | The arrest of Jesus         |
| 15:43 | 27:57  | 23:50    | The burial of Jesus         |
| 16:8  | 28:8   | 24:9     | The women at the empty tomb |

Proponents of the two source hypothesis have offered various explanations of such agreements of Matthew and Luke against Mark. Fitzmyer (1981:1447) said the 'minor agreements' between Matthew and Luke showed that they saw a source other than Mark with a different account of the same event. Neiryck (1962:845) said at least some of these 'minor agreements' were attributable to the influence of Q. For example, in Q (Lk 11:14-26) we have the Beelzebul accusation. 'The agreements between the Matthean and Lucan versions against the parallel [Markan] version allow the profile of the Q story to be determined' (Kloppenborg 1987:121).

Other proposals include 'coincident correction' (Neiryck 1962), or that Matthew and Luke used a Proto-Mark or Deutero-Mark source (Fitzmyer 1981:585, 1523). Mann himself discussed an evolutionary form of the gospel of Mark (1986:41). Bultmann (1934:13-14) and Bornkamm (1957-1965:756) both referred to the idea of an earlier version of Mark (but see Jülicher, page 24 above; or Feine, Behm & Kümmel 1966:46-50). Williams (1962:749) said this:

G A Barton, *JBL* 48 (1929), 239ff., follows Goodspeed in thinking that... Mark issued two editions of his Gospel, the first (a copy of which came into Luke's hands) lacking Mk. 6:48-8:26; 9:28, 29, 43 and 10:1-10, 35-41 and the ending; this edition was issued c. A.D. 46-7 while the later edition approximating to 'our' Mk appeared from Rome c. A.D. 65-70. Whereas Streeter maintained that if Ur-Markus ever existed, we have it and not the later recension, Barton suggested that Mt. and Lk. used different recensions of Mk.

Barton's view coincides quite closely (excepting the question of the ending of Mark) with the reconstruction that appears later in this chapter (page 70), and with some of the results of the stylistic experiment in chapter five.

Yet more alternatives include Kümmel, who rested his case on oral tradition, while Schmid and Neiryck (1962:845) proposed textual corruption. Textual corruption means that textual scribes may have assimilated aspects of Matthew's version when copying out Luke, or vice versa.

The 'minor, or major, agreements' represent a serious challenge to both major hypotheses: First to a simple, unqualified proposition that Mark, in the form that we know it, took priority over Matthew and Luke; and, secondly, to the Griesbach hypothesis as well. There is not yet an agreed resolution. This argument does not outweigh the other points above in support of some form of the two source hypothesis, however.

### 3 Concluding remarks

Engelbrecht (1996:91) discussed two recent commentaries based on source theories related to those of Griesbach. He pointed out that certain proposals about the evolution of the synoptic sources, like the proposal of Sanders and Davies (1989), have been quite complicated. A case in point is Robinson, who said this:

We must be open to seeing that the most primitive state of the triple...tradition was not consistently or exclusively to be found in any one gospel, to which we must then assign overall priority. Rather, I believe that there was written (as well as oral) tradition, underlying each of them, which was sometimes preserved in its original form by Matthew, sometimes by Luke, though most often I would judge by Mark. Hence the strength of the case for the priority of Mark, which was nevertheless overstated when this document was itself regarded as the foundation document of the other two. The Gospels as we have them are to be seen as parallel, though by no means isolated developments of common material for different spheres of the Christian mission, rather than a series of documents standing in simple chronological sequence.

(J A T Robinson 1976:93f)

Engelbrecht summed up the situation as follows:

Although all the activity in this field helped create doubt in the minds of many scholars about the two-source hypothesis, it did not really convince many that the Griesbach hypothesis is a better working hypothesis than the two-source

hypothesis...So today the position still remains that the two-source hypothesis is by far the most favoured solution to the synoptic problem.

(Engelbrecht 1996:90, 91)

This is a useful summary of the majority position that an 'overall priority of Mark' over Luke, and certainly the priority of a written form of the triple tradition over Luke, remains the most plausible theory. We will design of the experiment in the fifth chapter as a test against this overall priority of the written form of the triple tradition in Mark. Meanwhile, we must be conscious of the fact that there may have been a degree of parallel development among the synoptics or their sources.

#### **4 Synthesis and reconstruction: The process through which the synoptic Gospels were composed**

Downing (1992) said that it would help to clarify the feasibility of one or another source hypothesis if we could describe and visualise the physical process which the hypothesis would involve. The evidence we have considered would appear *not* to support the following scenario: that any one synoptic writer sat down to write with a finished copy of one or two of the others, as we know them, open before such a writer. There must have been a different process or scenario, which we can try to envisage as follows. This scenario will not discuss the double tradition.

The *verbal agreements* and parallels between the synoptics suggest that at least two of them and perhaps all three used one or more common sources, or at least common cycles of tradition.

#### **The earliest phase: The Passion narrative**

After the death and resurrection of Jesus, presumably the passion materials were among the first communicated to any congregation and in all of them, they were communicated orally, and they were orally rehearsed in these congregations.

An early use of urgent, 'primitive,' oral, and unordered units might account for the relative lack of coordination in what appears in the different versions of the passion in Paul and the four gospels. Since this material reached different regions first, it was developed regionally and so fairly differently.

The Hellenistic world was one in which many Jews, amongst them the first Christian Jews, spread freely through the Diaspora, that is, through Roman colonies around the Mediterranean basin. Following the executions of Stephen, and then James (the latter ca. early CE 41 (Staples 1962:604)), there was an additional impetus to the dispersion of the first Christians from Jerusalem. Where they went, surely they became part of the first congregations in the Diaspora that would come to follow 'the Way.' We see this name in Acts 9:2 'belonging to the Way (ὁδοῦ), men or women...'; that is 'Christian' congregations. We see the name also in Acts 19:9, 'Speaking evil of the Way before the congregation'; 19:23, 'No little stir concerning the Way'; 22:4, 'I persecuted this Way unto the death'; 24:14, 'According to the Way, which they call a sect'; and perhaps even in Romans 3:17 'The way of peace.'

Such congregations surely continued to have the character of synagogues. Jews who were followers of 'the Way', that is, of Jesus, were simply one of several kinds of Jews. The only difference between such congregations and 'mainstream' Jewish congregations was that they were made up of Jews and Gentiles that were followers of Jesus (Gealy 1962:441). By the early 40s, such congregations existed in major cities that were focal transportation crossroads of different regions, with Jerusalem, Antioch, Rome and Alexandria as four particularly important examples. For our purposes, we can take special note of Antioch and Rome. Antioch is mentioned in Acts 6:5; ch. 11, especially v. 26; 13:1, 14; 14:19-26; 15:22-35). Rome is mentioned in Acts 2:10, 18:2; 19:21; 23:11; Ro 1:7; 1:5; 2 Tim 1:17. In Paul's diatribe to the Romans we see the Jewish presence in the congregation was quite strong. We can call these 'cardinal congregations' for the sake of the scenario below.

In this scenario, each cardinal congregation would have used such materials or cycles of tradition when there still relatively little established grouping, order, or arrangement in the material. The ordering of the regional passion narrative, then, was mostly accomplished in various places by the

cardinal congregation for that region. The result was that the order in the passion narrative was not common between the synoptic Gospels that were later to emerge from such cardinal congregations.

### **In a subsequent phase: The triple tradition**

The doublings in Mark that emerge in all three synoptics indicate that Mark used a triple tradition source, or cycles of tradition, which preceded all three synoptics. The material that is unique (that is, without parallel) in Mark has similarities with the triple tradition in Mark, as well as differences from it. An example of a *similarity* is that the disciples were depicted as opaque in both parts of Mark.

Examples of *contrasts* between the two parts of Mark included the following: First, in the triple tradition, the important themes are the 'messianic mystery' and Galilee. Secondly, by contrast, the important theme in unique Mark is that the disciples were depicted as extremely fearful. We have already seen insofar as the triple tradition is represented in the three synoptists, the version represented in Mark appears to have the earlier wording, to have the earlier order, and to have been compiled in the earlier social and theological setting. Just at this point, we will pay attention to only the earlier (triple tradition) part of Mark. Further on, we will return to the later (and unique) part of Mark.

### **The origin, development, and circulation of the triple tradition**

The degree of *common order* in the synoptic Gospels suggests there was some degree of *arrangement* contained in the triple tradition. By the time the triple tradition circulated, it had acquired a pattern. This is by contrast with the loose arrangement in which the traditions of the passion narrative had circulated in the late 30s. This indicates that oral rehearsal of the triple tradition must have already occurred within the life of a single 'cardinal congregation' well before its circulation and so before its later inclusion in the final form that we see in the synoptics. Oral rehearsal in the congregation could be the workshop in which such a corporate process of creativity could occur. Such a process of

rehearsal might explain also how the redactional work could have become so thoroughly woven into the tradition as to make us think of the creative genius of each synoptic author. The architectonic themes within the triple tradition—like those of the messianic mystery, and of Galilee—may have developed in the process of that early oral rehearsal. Having been dispersed from Jerusalem, it is not impossible that one or more of those apostles was or were in Rome. Perhaps this is why they were more or less invisible in the pages of Acts. If they were in Rome, it is useful to remember that they were largely Galilean.

The Galilean theme in Mark's version of the triple tradition indicates that the triple tradition may have *arisen* in Galilee. We have seen that it was in the triple tradition that there were Latinisms, and that Aramaic terms were explained. If Latinisms can connect material with Rome, then the triple tradition must have not only been known in Rome, but may have also *circulated from* Rome. So we suggest that the triple tradition arose in Galilee, and circulated from Rome. The *formation and development* of the triple tradition, if it was in either of the previous two cities (Galilee or Rome), would fit better with Rome. This correlation with Rome (rather than with Galilee) is for the following reason. There is a tension inherent in the theme of the 'messianic mystery,' which would connect the triple tradition with some form of social ridicule or with persecution in its environment. The apocalyptic element that appears in the triple tradition connects it with a persecution that may have been that of Claudius (CE 49), and cannot have been later than that of Nero (CE 66). To propose the development of the triple tradition in Rome after CE 40 is not to exclude some kind of development of it in Jerusalem between the death and resurrection of Jesus and CE 40.

On the basis of oral reminiscences from inhabitants of Galilee, a Christian synagogue in Rome, then, developed the themes and so the order of the triple tradition, in circumstances of social ridicule or persecution, from CE 40 or 41 onwards. This is consistent enough with the situation in Rome around the time of Claudius' expulsion of the Jews in CE 41. Since the triple tradition absorbed into its major themes some kind of alienation with its context, the time of this alienation between Roman Christians and their context must be synchronised with the theme-development stage of the triple tradition. The theme-development stage must have been a quite plastic period—and so an oral period—in the

tradition. Therefore, the (triple) tradition must have been in a form that was still (largely) oral during the 40s.

The *close* nature of these parallels, together with the existence of doublets, suggest that the later circulation of the triple tradition (that is, its circulation in the mid-60s) was in a written form (see page 62 above), or something like a written form. This means that Mark dealt with the triple tradition in a form that was more like a well-formed source than like an oral cycle of tradition. Therefore, after CE 41 and by the mid 60s, the triple tradition (in Rome) evolved from a 'plastic' and oral form in the direction of a highly formed account, reaching a written form by that time. But the triple tradition was largely confined to Rome during these two decades, because Paul (during the 50s) showed little engagement with it, whether or not he was aware of it. Yet the sophisticated nature of the congregation at Rome is reflected in the profound and substantial quality of the diatribe that Paul addressed to that congregation in the mid-50s.

### **How Luke acquired the triple tradition**

Luke probably visited Rome at least once before the Gospel of Mark reached the form in which we know it. He probably encountered the triple tradition of the Roman congregation during the period that Paul awaited trial in Rome (Acts 28:14f). In the late 60s, the execution of Paul and Peter in Rome, combined with the outbreak of the Jewish War, would have led to the migration from Rome of many Jews, including the Christian Jews. That would have been the moment that Luke, and these migrant Christian Jews, took the quite well formed, written (see page 62 above) triple tradition with them to their various destinations. Luke was likely to have had continued contact with Mark's congregation in different ways. This contact would have been at least through the highly efficient mailing system of the Roman Empire, as well as through traveling believers.

The closeness of the parallels fluctuates in its level, and there are several agreements between Luke and Matthew against Mark. We can infer at least one of two things from this: First, there was possibly some kind of continuing progression or development in the source forming the triple tradition.

Secondly, the script-like parallels could be due to transmission through a highly rehearsed oral form or a rote form. The degree of change of order in the Gospels suggests that the arrangement in the source forming the triple tradition was still developing. We do not disregard the evidence that appears in the manuscript tradition, which indicates that the text was still 'negotiable' in some degree, or at least that the text was not completely fixed.

After Luke took the triple tradition, and before Mark used it to write his Gospel, then, the triple tradition at Rome still went through some additional changes. One example that we saw (on page 64 above) was the addition of the quote from Malachi in Mark 1:2. The Roman congregation during this later period would have been the origin of the anxiety reflected in the literary purposes, theology or philosophy of the unique part of Mark, and in the structure of his Gospel as a whole, visible particularly in the conclusion at Mark 16:1-8.

This regional capsule may have been the locus, then, in which the themes developed that were distinct to Mark or to each particular synoptic Gospel. A Gospel like that of Mark went through more than one edition, and we saw that more than one edition either of the triple tradition, or else of Mark, appears to have been known by Luke.

The fearful element, with the attack on the Herodians, that appear in unique Mark connects it with a persecution that cannot have been earlier than that of Nero (CE 66), and could even have been as late as the persecution of Domitian (CE 95). If unique Mark came this late, then the Gospel according to Luke may have already entered circulation, prior to the version of Mark that we know. This would account for certain agreements between Matthew and Luke against Mark. That is, the triple tradition in Mark was earlier than Luke. The unique parts of Mark were the latest, and the indications are that at least some elements of it (like the position of the quotation of Malachi, and perhaps 'the great omission') were not seen by Luke. If the extreme turmoil of the disciples in the unique parts of Mark (especially in 16:1-8) is to be associated with Rome and with some Caesar after Nero, then it would have to be Domitian (CE 96). Therefore, it is not beyond the bounds of possibility that the last (unique Mark) sections were actually developed after Luke's Gospel was already in circulation.

## 5 Summary

We looked at ten arguments for the fact that Luke is dependent upon Mark, or, perhaps better, upon Mark's precursor source or sources, for example upon the triple tradition in the Roman congregation:

1 *Verbal agreements, or agreements in substance:* In the choice of words, Mark does not look like a mere connecting link between Matthew and Luke, and it never looks as if Mark borrowed from either of the other two.

2 *Agreements in the order of parallel material:* The two source hypothesis observes that, in the common sections, Matthew and Luke do not usually accord against Mark. With regard to the transpositions, we saw that the explanations of why Matthew and Luke would have inverted events from the triple tradition as represented by Mark are more reasonable than explanations why Mark would have inverted events from the triple tradition as represented by Matthew. The Griesbach hypothesis involves the assertion that Luke knew Matthew as well as Mark (Farmer 1976b:69). This is improbable, since agreements in order between Matthew and Luke against Mark are meager. The Griesbach hypothesis also assumes that Mark summarised Matthew. This is possible, but doubtful, because there are no other examples. Therefore, the agreements in the order of parallel material support the fact that Luke came after Mark and that Luke was dependent upon Mark—or something very much like the triple tradition as represented by Mark.

3 *Luke accredited sources:* That Luke accredited sources makes it more likely that Luke depended upon (the triple tradition in) Mark than the other way round.

4 *The setting and purpose of Mark and Luke:* Mark: Linguistic details also make a Roman setting for this Gospel feasible. The substance of the triple tradition as represented by Mark did not emerge from something like the direct oral dictation of Peter. This version of the triple tradition is still linked with the persecution of the congregation in Rome, however, whether in the time of Claudius, or with the time of Peter's execution under Nero. Finally, there is an echo in 16:8 of the extreme

fear that links the unique parts of Mark's Gospel with Nero's Rome in the mid-60s CE or even with a later and more severe persecution.

Luke: Luke was probably a non-Jewish Semite, and a well-educated native of Antioch which he left in his adult years. Luke was possibly with Paul during the later part of his (Paul's) ministry, but does not appear to have been with Paul during the earlier part of his (Paul's) ministry. There could have been a face-to-face contact between Mark and Luke, and possibly Paul with Peter, in Rome. At that time, Luke could have acquired the Roman (or Markan) version of the triple tradition. Luke wrote to Christian readers under attack from their Jewish neighbours because of Paul's controversies. His audience was probably Gentile--Greek, urban, and diverse--and in a cosmopolitan Gentile setting for example Achaia, or Antioch. Rome seems doubtful. A likely date is after CE 70 and before CE 90. Therefore, this discussion of goals, setting, date and place of Mark and Luke supports a picture in which Luke was composed subsequent to the formation of the triple tradition as it is represented in Mark and in which Luke was, or could have been, dependent upon that version of the triple tradition, and could have been acquainted with its ongoing evolution in Rome.

5 *The contents of Mark and Luke:* Considering the scope, the contents, the linguistic changes, and theologies of Mark and Luke, then, we may reasonably suppose that Luke came after the triple tradition in Mark and was dependent upon it, rather than the other way around.

6 *The objective existence of a source supplementary to Mark, namely Q:* A source document like the material in the double tradition is suggested by the idea of Markan priority, upon which the two source hypothesis rests. The absence of an independent existence of a document similar to the double tradition is less than critical to the question of the priority of the triple tradition in Mark over the version in Luke.

7 *Doublets:* If an author had access to two versions of an event, and assimilated both versions instead of eliminating one of them, then this emerges as a doublet, or else as a doubling. The doublings in Mark emerge in all three synoptics. Therefore the sources so indicated must have preceded all three synoptics. The idea of Mark-as-middle-term could not explain these doublets as

Mark's exclusion of the repeat form in Matthew or Luke, since it is improbable that Luke saw Matthew. The doublets, then, support the concept of Luke's dependence upon a written form of the triple tradition as represented by Mark.

In addition, two sources are indicated in Luke by the doublets there that are not in Mark. The doublets were from the pre-Lucan sources and suggest two written precursors, because Luke tolerates doublets, rather than creating them. The doublets, then, make it probable that Luke also employed a written form of the double tradition.

8 *Vocabulary and grammar:* A comparison of the factual detail, the grammatical accomplishment, and the stage of community development reflected in Mark and in Luke respectively, supports the proposition that Luke's version of the triple tradition was later than the version that appears in Mark.

9 *When Luke and Matthew both omit text from Mark:* The double omissions present difficulties to a simple form of the two source hypothesis. Even more difficult, however, is the alternative, namely, to explain why Mark would drop so much of the Gospels of Matthew and Luke.

10 *When Luke and Matthew both insert text into Mark:* When Matthew and Luke agree on insertions into Mark, it forms a significant argument against a simple form of the two source hypothesis that is not yet resolved—unless the triple tradition in Mark came before Matthew and Luke, while the unique parts of Mark come after Matthew and Luke. At any rate, this argument does not outweigh the other points above in support of the two source hypothesis.

The dependence of Luke on the triple tradition material we know in Mark is plausible, but we must observe caveats about their relationship. In particular, it is possible that Luke was dependent on an early version of Mark, or on one or more of Mark's sources. There was possibly some kind of simultaneous progression or development in the two works in which highly rehearsed oral techniques may have had an important role.

Our conclusions to the thesis as a whole will include the fact that syntax analysis corresponds with such literary critical scholarly debate on important perspectives in synoptic studies. We will see, however, that our results (on page 204 below) do not entirely agree with the usual form of the two source hypothesis. Chapter two, then, has been important for delineating the main positions regarding sources in the literary critical forum.

## **Chapter Three: A review of literature on authorship with regard to style**

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### **1 Introduction**

The thesis in general is motivated by the belief that we can understand the gospels better if we are clearer about their origins. We wish to see whether style, as expressed through syntax, can help to clarify authorship and history in the synoptics. 'History,' here, emphasises the nature of dependency between one synoptic Gospel and another. The thesis intends to evaluate the capacity of syntax to contribute to the discussion on which synoptic Gospel used which material as a source.

Chapter two outlined the present state of the literary discussion on issues connected with one of the clearest sources in the synoptics, the 'triple tradition.' That chapter described the present state of the discussion on the nature of dependency between Luke and Mark. The debate was about whether Luke used Mark as a source. There are ten main issues in the literary debate over whether Luke drew his version of the 'triple tradition' from Mark, or not. The conclusion at the end of chapter two was that Luke was probably dependent upon Mark for the version of the 'triple tradition' that appears in Luke. Although that literary discussion alluded to authorship style, it did not focus on the matter and did not develop a substantial theory of, and method for investigating authorship style.

Chapter three: A more intensive consideration of authorship style through syntax may well contribute to a discussion such as the one above. An outline of the several parts of chapter three is as follows: This introduction forms the first part of chapter three, and it is followed by a reflection on the aim in part 2. Through a literature review in part 3, we aim to consider the different aspects that are involved in assessing authorship style in the synoptics, and to develop a theoretical basis for our approach (that of syntax chains) to assessing authorship style. In part 4, 'Opting for one method...', we will discuss the optimum parameters for a stylistic investigation. In the concluding part 5, based

on such optimum parameters, we will define or describe the essential features of the syntax analysis approach that we will adopt.

## **2 Aim: Consider literature on authorship style, to ground our method**

Knowing the author of a document helps us to understand the document and its context and take it seriously. Consider a play usually attributed to Shakespeare, but which was actually written by someone else, perhaps in a different situation from that of Shakespeare. If, in our day, the two different playwrights were mistakenly believed to be one and the same person, then a producer of such a play would find the play difficult to understand, and find it more difficult to present it as the writer intended. A writer's intended meaning is, of course, not the whole meaning of a document. On the other hand, it is deleterious when meanings are drawn from constitutive documents that are ignorant of, misguided about, or contrary to the intentions of the writer.

One may be confronted with a comparable situation in which there is no attestation to the authorship in other texts, and this occurs particularly in ancient texts. This situation exists at least in parts of the synoptic Gospels, if not in the whole of them. A text's original context is important to its meaning. When we teach the Gospels, however, we admit that we have little more than a general idea of the context in which any of them was written. Leading exponents of every form of synoptic criticism argue for alternative dates, places, and persons for the authorship of the synoptics or of parts of them. By our own categories, our ignorance of the context of these writings erodes our understanding of what they mean. Our uncertainty erodes our ability to present the synoptics as their writers intended. The more the synoptic Gospels can be anchored within a specific context and authorship, the more they can be understood, the better presented, and the more seriously can their own meaning and message be regarded. Here, an accurate and effective definition of authorship style becomes an important tool in the task of clarifying authorship and history, and for understanding the final form of the text.

Calling for a sound, responsible method in the analysis of authorship style, Metzger (1958:93), guided by Angus MacIntosh and Whatmough (1954:441-446), asked the following four questions:

[First,] how long must a treatise be in order to provide a sufficient sample of an author's style? [Secondly,] how *different* can the results of a particular analysis of the two texts be before they throw serious doubt upon the theory that they have a common author? That is, what facts must the statistician have before [they] can say what [the facts] mean? [Third,] what allowance should be made, in assessing specific texts, for differences in the two works as regards (a) subject matter and (b) literary form? If the subject and form are different, can the investigator devise a set of tests which are least likely to be disturbed by this? [Fourth,] the basic assumption underlying all such analysis is that the two works are necessarily more similar if they are by the same author than if they are not. Is this a correct assumption?

Questions like these make it clear that there are several factors to consider in constructing a method of stylistic analysis. We aim to appraise a series of such factors through an array of approaches to assessing authorship style in the synoptics. This will be undertaken with a view to finding a conceptual framework for our method (that of syntax chains) of assessing authorship style. By means of studying the work of those who investigated authorship style in other contexts, we will find both the principles that are useful and effective for assessing authorship style, or the practices that are not useful.

The material in this chapter is important to the conclusions of the thesis in the following ways: First, we will note that at least some stylistic studies have discovered reliable evidence for authorship in certain (long) documents. Secondly, effective though those techniques may have proved to be in longer works, such tools have had a very limited application in the synoptics. One reason was that such stylistic studies worked with materials that were both longer and more homogenous. By contrast, the synoptics are far shorter, and less homogenous with regard to the origin and literary form of their component materials. The above stylistic techniques would first have to be modified or even reconceived for the type of material in the synoptics.

Thirdly, our interest is in whether it is possible to define, measure and differentiate authorship style in the synoptic materials with a view to contributing to the discussion on their development. With the first two matters above in mind, we will gain a clearer picture of a useful definition, an appropriate

goal, relevant information, the means of acquiring and appraising the information, forming conclusions, and checking those conclusions. The importance of the following matters will become clearer: First, comparing only two authors from the same period in the same genre and form; secondly, grammar and syntax; third, word-windows; fourth, proportions; and fifth, the weighting of variables. In this way we will lay a basis for using a comprehensive assessment of syntax through short word windows as a stylistic tool in the terse, fractional elements of material that appear in the synoptics and other ancient documents.

### **3 A review of selected works that have considered authorship style**

#### **3.1 A definition of style**

Holmes (1994:97), commenting on the work of Smith (1987), called for the articulation of ‘an underlying theory’ in statistical studies of language. When we discuss the style of the authors of the synoptic Gospels, or of different sections of them, we must define what we mean by ‘style,’ define our underlying theory of stylistic analysis, and state our goals.

Our definition of style should now be further refined or substantiated. Style has been defined in many different ways. Radday and Shore (1985:15) said that ‘style finds its expression in [a writer’s] deviations from a societally conventionalised norm.’ Furthermore, they pointed out that ‘a person’s *parole* [or unique, committed personal formula] finds its expression in [their] deviations in the frequencies of certain language phenomena from those norms’ (1985:14-16, 218-19). Our working definition of style will be more circumscribed than this. Already in our discussion on pages 5, 6 and 8 above we defined style in a more limited way, that is, as the consistent manner of syntactical expression in one synoptic layer by contrast with the manner of syntactical expression in a different synoptic layer. The reasons for our more limited definition will emerge in what follows.

In terms of a definition of style, Milic (1967: 82) said this:

The fundamental assumption is that *the style of a writer is an idiosyncratic selection of the resources of the language* more or less forced on [them] by the combination of individual differences summarised under the term 'personality.' This selection might be called a set of preferences except that this term suggests that the process is mainly conscious and willed. Although it is....sure that some part of the process of composition was deliberate and conscious, especially at the level of meaning, [but] *much of it was not fully conscious* and it is this part which is of greater interest to the student of style. The reason is obvious: the unconscious stylistic decisions are less likely to be affected by the occasional and temporary character of a given composition, its subject matter, and are more likely to reveal something that the writer might deliberately wish to conceal. If we are interested in [their] personality, such information would naturally be of great interest; and if we wished to attribute a work to [them], we would place greater reliance on invisible tendencies which could not be imitated.

Two further assumptions are necessary if we are to make the fundamental one effective. We must assume, that is, that the stylistic consequences of the uniqueness of the personality are *consistent and context-free and that they are measurable....*Rhetorical devices are conscious....therefore unsuitable. Lexical choices are conscious and context-bound, and therefore unsuitable....*We are left with the grammatical or syntactical component of writing as the best source of information about a writer's style* (italics and emphasis mine).

In Radday and Shore's (1985) use of a population model, their features of grammatical accident were not searching enough. The logical next level of analysis must be the other of the two alternatives proposed by Milic, namely the level of syntax. Syntax involves neither the lexical nor the rhetorical choices against which Milic here warns.

For our purpose of examining the evolution of the layers in the synoptic Gospels, we can form a working definition of 'style' along the following lines: The style of a synoptic layer is the consistent, detectable and measurable manner of syntactical expression in that synoptic layer as differentiated from the same features in a synoptic layer of different authorship, but of the same period, genre and form.

By the word 'consistent' we mean independent of subject, of genre, of form (see below), or of the writer's mood. 'Author' is replaced with 'synoptic layer' because, for our purposes here, what is definitive is the text of the two layers or sources being compared. The authors, their other writings, or the language in general use, are all pools of information that are not readily or very clearly

available to us. By 'syntax' we mean a definite *ordering* of two or more elements of grammatical accident. By a 'layer' we mean any part of a completed document which may be separable from another part *by virtue of its origin*. Since they could or would have different origins, either a source or else the contribution of the final editor will be referred to as layers within the document.

By the word 'source' we mean, without prejudice, material—for example, quotations from the Hebrew scriptures, at least—that did have or may have had an earlier origin than the work of the final editor, and was material that was incorporated into the document by an editor or by the final editor. A source would be different from a quotation from the Hebrew scriptures, of course, insofar as a source may have been material that was perhaps several hundred words in length. If it did not have a written provenance, the span of words in a source still had a structure, at least, that was transmitted to the editor along with the source material. Finally, by the word 'block' we will mean a certain selection, for any given reason, from any layer or source.

This working definition emphasizes one layer or source (or author) by comparison with one other layer or source (or author), and not by comparison with two or more other layers, sources, or authors. This working definition rests on what Neumann (1990:19) calls a 'resemblance model.' The resemblance model, described in Wachal (1966-1967:6), and Mosteller and Wallace (1963), is when we take an unknown work X and choose the one most likely author from only two alternative authors or styles, A or B. The 'population model' of Ellegård (1962) is when we take an unknown work X, and choose the most likely author from several authors or styles, A, B, C, D, and so on. The 'consistency model' (Wachal 1966-67:4) is the most difficult of the three. This model is used when trying to establish the authenticity, or connection, of a work X that is purported to be a member of a corpus A, B, ..., N. This is a very difficult model—in the words of Francis (1966:77), 'Investigators with problems of selecting one author from many authors or of grouping a collection of essays into clumps by similar authors need all the help they can get.' Such difficulties rise up for at least two reasons. First, there are usually too few surviving documents to establish a reliable idea of the author's linguistic norms. Second, there is no clear standard by which to measure of the amount of difference that would be called 'inconsistent' due to a change of authorship, and the amount of difference that would be permitted due, say, to a change of audience. Third, there is doubt about

how far the stylistic similarities or differences involved can be associated with or separated from those of the *langue*, the genre, or the form.

Restated for the sake of a resemblance model experiment and other issues below, the definition would be this, where the words 'known' and 'unknown,' are relative: Style is the broadly based, consistent, and differentiable manner of syntactical expression in each of two synoptic layers, by comparison with one another, when they are both of a comparable literary type and situation, and each of a known but different origin. So defined, style can be used to associate a third layer or block of text, which has a comparable literary type and situation, but an unknown origin, with one of the two known layers.

### **3.2 The goal of the stylistic experiment, or the question it responds to**

In 1921 Harrison used statistical analysis on the Pastoral Epistles, but his techniques were criticised over the next decades. In 1955 Harrison again wrote on the question of the authorship of the Pastoral Epistles (:77-81). In response to that second contribution, Metzger sharply queried Harrison's silence on the critique of his (Harrison's) statistical analysis. Metzger (1958:91) said: 'Deplorable....is his neglect to examine the....[published questions regarding] the validity of [Harrison's] arguments which are based on statistical study of literary vocabulary.' These comments underscore three things: that the statistical analysis of style has interest at least in certain quarters; that the methodology entailed in it, or the conclusions from it can be controversial; and that it should be carried out in a reasonably rigorous way. Due rigour would include the consideration of the relevant issues for the study; the definition of the information that would serve the goal; and scholarly engagement with the results of statistical studies in the biblical materials, rather than turning a blind eye to them. For our examination of the synoptic Gospels, we will now discuss first, the choice of texts to compare; and, secondly, the appropriate stylistic features in them.

Radday and Shore's (1985) book *Genesis: An Authorship Study* is an important one for this thesis. This is because the source debate in Genesis is comparable, in some ways, to the source debate in

the synoptic Gospels. Their book is comprised of several papers, some of which were written by statisticians on the one hand—especially Radday and Shore themselves—, while other papers were contributed by biblical scholars. The papers reflect, and reflect on, the outcome of ‘the Genesis Project.’ While their selection of material and their selection of variables may have betrayed their goal, as we will see, yet the goal of this project was stated, and it was stated in these words: ‘A statistical evaluation of current hypotheses....to assess evidence, from the point of view of statistical linguistics, as to the validity of the Documentary hypothesis and others, concerning the composition of Genesis’ (Shore & Radday 1985:54). In Genesis, for example, there is the question as to why there were two creation accounts, one in Genesis chapter 1 and the other in Genesis chapter 2. When we pay attention to two such accounts, we wonder why they were so different. The Documentary hypothesis says that such phenomena are to be explained by the fact that in compiling Genesis, an editor incorporated more than one document.

Radday and Shore divided Genesis three different ways: First (1985:4, 21), into the documents of Genesis, namely, the Jahwist (*J*), the Elohist (*E*), and the Priestly (*P*) writer. Secondly (:21), into three main divisions of the Prologue or *Urgeschichte* (chs. 1-11), the patriarchal history (chs. 12-36), and the Joseph cycle (chs. 37-50). Third (:21), into three ‘sorts of discourse,’ namely, the narrator, human speech, or divine speech. They isolated (:30) a ‘criteria set’ of fifty-four grammatical features, or variables, from the Hebrew language. From these fifty-four they later removed eleven that did not discriminate between their divisions of Genesis. One of the component papers (by Wickmann 1985:50) concluded that ‘*P*....has its origin neither in the population where *E*, nor in the one where *J* came from.” More than this, they concluded that the distinction between the ‘sorts of discourse’ was greater than the distinction between the purported sources (:211). At this point, a problematic step occurred: they inferred from their data, or interpreted their results to indicate that Genesis was ‘a unity’ (:190).

This last inference went further than the data warranted. Looking at their studies, it would be better to say that while their specific set of features of grammatical accident did appear at different rates in the different documents in Genesis, the set was far more affected by factors connected with literary genre or form. Their conclusion, as they stated it, ran against norms of literary critical scholarship

regarding Genesis. It also ran against comparable statistical linguistic studies like that of Chenique (1967) in Genesis 1-11, which had supported the Documentary Hypothesis. The conclusions of Radday and Shore's study were dramatic and disconcerting, but they have not been convincing. As one reads their work, by comparison with the work of scholars of the Hebrew scriptures, like Gottwald (1985:137-178), one is aware of a substantial gap between the depth of textual analysis and appreciation in Radday and Shore, on the one hand, and Gottwald on the other. In the style of *P*, as one small example among many, Gottwald (:158) addresses much more than grammatical accident. He discusses the stylistic phenomena of 'echo,' of inverse correspondences, and of palistrophe (or chiasm, a b c/c' b' a'). Such features are not evaluated by Radday and Shore.

Questions about Radday's approach have been expressed in the following way, though the questions regarded Radday and Wickmann's (1975) paper on Zechariah:

Radday's paper on Zechariah is strongly criticised by Portnoy and Petersen (1984a) for interpreting statistically significant differences between the values of certain measures of linguistic behaviour as differences between authors....Portnoy (1988) notes the strong agreement by almost all biblical scholars that there are multiple sources in Genesis....given the enormous diversity and limited quantity of biblical writings it is difficult to imagine how any measurements can be sufficiently calibrated to distinguish authorship.

(Holmes 1994:102)

Certainly, the techniques in Radday and Shore (1985) are impressive in their statistical knowledge and skill. A particularly instructive feature is their use of the Sichel distribution, which could be very important in bringing Bayesian concepts to bear in biblical-linguistic studies. Yet there is a divergence between their conclusions, on the one hand, and the consensus of Genesis scholarship, on the other.

At least one feature that is *comparable* between the study of Radday and Shore on the one hand, and the (acclaimed) study of Mosteller and Wallace on the other (whether in the Bayesian study of the latter, or in their weight-rate study), is the feature of the number and nature of their variables.

What *differences* are there between the Mosteller and Wallace study and the Radday-Shore study? First, a critical difference is that Mosteller and Wallace were quite clear about their 'resemblance model' approach (see page 85 below). They began with two sets of known papers, analysed these,

and then brought the analysis to bear on the unknown papers. Radday and Shore were comparing the documents of Genesis to see whether they were of the same origin as one another on the one hand, or whether they were of a different origin from one another, on the other hand. For Radday and Shore, there was no basic pool of two 'known' pools in order to assess one 'unknown' pool. They appear to have adopted a 'consistency' model study, which has a series of difficulties (see page 85 above), none of which Radday and Shore have addressed.

For the above reasons, it was then *de rigueur* for Radday and Shore to address the question of characterisation through style, since they used a consistency model. It was not necessary for Mosteller and Wallace to do so, since they used a resemblance model. As a result, it suddenly becomes very important that Radday and Shore's assessment of style rests on a limited range of linguistic meaning--that of forty-three features of grammatical accident. That, as a stylistic analysis, forms a significant contrast with the scholarly discussion of style in the documentary hypothesis regarding Genesis, which has a linguistically nuanced depth. Radday and Shore (1985:11) appear to be impatient of such considerations. The stylistic challenge in Genesis is surely greater than can be adequately addressed by forty-three features of grammatical accident.

Secondly, there is a difference in the size, or population, of the materials involved. In Mosteller and Wallace, the known papers of Madison and Hamilton provided around seventy thousand words of evidence (Francis 1966:51), which was considered small for statistical purposes. Genesis is a document that is circumscribed in size as a whole, and more so if one wishes to examine it along the lines of the documentary hypothesis. Radday and Shore (1985:24) assessed *P* at three thousand four hundred words, *E* at six thousand six hundred words, and *J* at nine thousand two hundred words. This is less than 30% of the size of the materials with which Mosteller and Wallace worked. Furthermore, there were quite possibly additional further influences in the origin and development of Genesis, which may require the divisions to be yet smaller.

Thirdly, we will see below that there are differences in style with a change of form or genre. Burrows (1987) is one example of many who have showed that 'within each of three formal divisions--pure narrative, character narrative and dialogue--[Jane Austen's] novels show roughly similar frequency

patterns. This pattern is disrupted, however, when comparisons are made between these different categories.' Radday and Shore have said that their study shows that the distinctions between 'divine speech,' 'human speech,' and narrative are greater than between *E*, *P*, and *J*. Burrows' work shows that this is not an appropriate comparison, and is likely to overwhelm Radday and Shore's evaluation of the evidence for or against the documentary hypothesis. On the one hand, we expect the significant stylistic distinctions in formal literary elements that they found. On the other hand, their evidence did indicate stylistic distinctions in the respective purported sources or documents. The latter should neither have been compared with stylistic distinctions in formal literary elements, and nor should they have been dismissed if they were less prominent.

Therefore, at least two things emerge as important: first, where possible, a resemblance model should be employed, as we will do in this thesis. Otherwise, where a consistency or a population model is employed, the definition of style should be not only clear, but also far deeper, more complex or more nuanced than appears in Radday and Shore. Such a definition of style, to be effective and convincing, must reflect literary-critical concerns and concepts, and not dismiss or ignore them. Kenny (1986) 'emphasises that any stylometric analysis must simply be regarded as new evidence which must be weighed in the balance along with the more traditional criteria applied by the biblical scholar' (Holmes 1994:102). Secondly, the small size of the biblical materials must be addressed. Thirdly, as we will see below, only materials of the same formal literary type should be compared with one another.

### **3.2.1 Form and genre in, and time period of, the texts compared**

We expect a difference between stylistic features connected with the individual, and those arising from the norms and forms of written language in their culture. Nevertheless, it is also true that the boundary between the two is not obvious to readers from another time and place. Normal or cultural expectations of structures of linguistic communication change in different settings and as time passes by. Burrows (1992) showed that 'authors tend to group by era....Language, as measured by the ratio of occurrence of non-contextual function words, appears to have undergone a steady

process of change, and gender analysis shows that clear differences between male and female authors during the eighteenth century become obliterated by the twentieth century' (Holmes 1994:99). Metzger (1958:94) said, 'We must take into account not only the amount of time that may have elapsed between the composition of two works, but also whether we are dealing with an author whose ways of writing fluctuate.' As would seem reasonable, even the author's age *may* be a factor in such fluctuations, but some studies (Tallentire 1976; Wachal 1966: 122, 127, 178) indicate that it is not certainly so. In this section, we discuss the factors involved in the form, genre, period and situation of the works compared.

### **Considerations associated with literary form**

Bultmann (1934:32-35) described how the application of form criticism moved from studies in the Hebrew scriptures—for example, the forms of psalm, prayer, prophetic address, fable, story and narrative--into synoptic studies. As defined by Gunkel (1967), Dibelius (1919), and Bultmann ([1921] 1963), form criticism emphasizes the 'smaller units comprising the Gospels' (Carlston 1962:345). 'Form,' by contrast with 'genre,' for instance, refers to the shape or structure of small units of writing (say, up to a hundred words). It also refers to the manner or style in which the units were written. It is distinct, however, from the substance of the text or what the text is about. This term describes materials that are now written but which are said to have originated, separately, as oral folk products.

The situations in which such forms arose, or *Sitz-im-Leben*, could be those of worship, instruction, missionary preaching, weddings or funerals. From there the forms became linguistic moulds for communication in the culture, 'more or less fixed forms *which have their own laws of style* [italics mine]' (Bultmann 1934:28), with a recognizable structure, length or tendency. Since a form would have its own style, Greek grammatical structures would appear in one or another form more or less often than elsewhere.

Dibelius ([1934] 1965:246) listed five forms in the Gospels: 1. paradigm, linked to a saying, of Jesus, like Bultmann's ([1921] 1931) apothegm; 2. parenesis, or exhortation; 3. *Novelle*, what may be a historical wonder but which has attracted other reminiscences, like Bultmann's wonder tale; 4. legend, a revered leader in a devout scene; and 5. myth, a theological idea in narrative form. Any of these forms may carry varying subject matter.

Carlston (1962:347) pointed out that these categories were neither very pure, nor very widespread, however. This is not a critical problem for us for the following reason: For our comparison, we seek those words of the synoptic writers that are as homogeneous as possible. To have a homogeneous layer of what is most likely to be the contribution of the gospel writers themselves, we intend simply to set on one side all material that may have an earlier or different origin. Bultmann, Dibelius et al could be 'wrong,' 'right' or something between. In any of these cases, our separation of the material could not reduce the homogeneity of what remains. If they are anything like 'right,' on the other hand, such a separation would provide an important enhancement of the homogeneity of the material we intend to examine and compare. To separate the purported layers does less potential harm than not to separate them. To distinguish such material that is possibly of earlier or different origin from the editorial contribution of Mark and of Luke respectively, we will follow Gaston's (1973) rendering of Dibelius' forms. Gaston (1973:6f) coded the synoptics by the forms that appear in Dibelius, or that appear in subsequent extensions to the work of Dibelius.

This underscores the impression of a richness or density that emerges from the synoptic documents, a richness surely attributable to the fact that they drew on or grew out of communities over a period of time. In this they can be contrasted with certain other New Testament documents—say, *Philemon*, or *Galatians*--that were written by one individual, in a short time, in response to one person or community. Bultmann (1934:32-35) traced how these forms preceded the cycles of tradition and the written forms of materials which were to be sources for the synoptics. Not only that, but the forms themselves, as they are represented in one synoptic Gospel by comparison with another, went through stages of evolution. As a result, one can speak of 'form history.' A later version reflected more detail like the names of the *dramatis personae*.

There are some characteristics that are connected with the subject, form or genre in the text. We noted above Bultmann's comment that various forms may have their own characteristic stylistic features. If so, such stylistic features would clearly be bound to, or affected by the changing form of the text. One example is that Mendenhall (1901) noticed stylistic differences in Shakespeare's prose and poetry. Another example is that we might have two examples of a single ancient writer's work: first, a court report; and secondly, a love poem. The modern reader might assume that these two items were written by two different writers, while their differences in style were due not to a change of authorship but only to a change of form or genre. Morton (1965:217), for example, found that certain changes in Paul's literary form and subject matter constantly skewed the results of his stylistic examination.

Form is not the only issue in terms of evaluating the possibility for, and demarcating, antecedent information that may have been assimilated into the text. There is also a slightly different, though closely related challenge in the amount of divergent stylistic information that appears in the synoptics in a quotation. Such a quotation can be more or less explicit. It would most often be from the Hebrew scriptures, but could also be from Qumran or even from elsewhere. An example is the saying in Luke 4:23, where Luke quotes Jesus as alluding to the proverb, 'Physician heal yourself.' This proverb was alluded to in Euripides *Frag.* 1086 or with *Genesis Rabbah* 23 [15c]. Quotations, then, constitute the clearest example of such antecedent information. Quotations and any other antecedent information has to be set aside if we wish to assess an authors stylistic characteristics.

Where text includes undetected quotations from other sources, it can seriously interfere with the process of assessing style. Before Neumann (1990:197) examined Galatians, he achieved '100% success on Pauline reference samples (5 of 5) and a general reliability for all four authors of 92.3% (12 of 13)'. The first time Neumann analysed Galatians, his results showed that the sample from Galatians was *not* part of the Pauline corpus, in conflict with literary analysis. He removed two parts: first, Gal 4:4ff the Christological 'sending formula'; and secondly, the catalogue of virtues and vices (5:19-23). He removed these two sections on the basis that they were 'regarded by many scholars as pre-Pauline tradition' (1990:196). Having removed those sections, his analysis then categorised the remainder of Galatians with the Pauline letters, in harmony with literary analysis.

This shows how complicating it can be to have antecedent information in a text. The quotation may lack a distinct citation, form, and not be known to us through an earlier document. In this case, we could possibly detect antecedent material or attribute it to an origin other than the writer by means of a technique akin to one of these: First, by maintaining a 'moving average' of multiple grammatical constructions. Here, if there is a sudden change in the rate of appearance of a certain percentage of the constructions concerned, there may be a change in the origin of the material. The second technique could be to use variables which show a consistent spread through the material concerned. Here, if the percentage of variables with a statistically predictable spread is very low, then there may be an indication that there is more than one origin for material within the block that is being examined.

In different ways, New Testament authors took in, and possibly modified, such genres, forms, quotations, and perhaps other information. This occurred, for example, through contemporary norms of communication, by explicit quotation, implicit allusion, or more subtle pathways of social discourse. Surely the congregation played a greater part in the formation of the synoptics than, for example, in the formation of the epistles. As a result, the synoptics are a particularly prominent case of documents that absorbed a wide range of materials that originated from somewhere other than the synoptic writer or editor.

It is at least possible, then, that the synoptics were not homogeneous (by comparison, say, with the epistles). In the context of stylistic studies, Gagnon (1993:712) referred to the possibility of different recensions even of Mark, a matter we have already discussed in chapter two. If there were stages of development between an original oral form and their connection into the written form of the synoptics as complete documents, then there were different stylistic norms operating at an earlier stage and at a later stage. Of course, we cannot be sure about this. On the one hand, to act as if the possibility were correct, while we were mistaken in thinking this, could lead only to the type of error that would be connected with abbreviated materials. On the other hand, to ignore the possibility, while we were mistaken in so doing, could lead to confused results, which would be a greater error than the first. The correct approach to such diverse materials—even when they are only suspected of

existing--is not to mix them together. When they are mixed, they will confuse a stylistic examination, whether it is one of vocabulary, of grammar, syntax, or of only one or more such stylistic features.

M P Brown (1963:x) said, 'Within the group of writings there should be a certain degree of homogeneity in form and content....The material should be of sufficient quantity, however, to allow to each test a fair and adequate demonstration.' Separating forms while keeping a 'sufficient quantity' can be a difficult challenge. Brown (1963:122) found this out: 'This test....expressed....[an] uneven or inconsistent distribution of peculiar words within [the] relatively small volume of writing.'

All this is to say that the standard of comparison should be similar in the materials we examine, whether in time, place, or literary type and structure. For these reasons, we will compare the editorial layer of Mark with that of Luke, and focus on their compositional contribution alone. First, in all probability, they were written within forty years of each other, and therefore at a comparable time. Secondly, they shared the Graeco-Roman cultural matrix that was spread around the Mediterranean, and so in a comparable place. Third, the comparison of them cannot be queried on form critical grounds. There we will also see, however, that the syntax chain method can deal with at least a *certain degree* of form shift, and still successfully identify the relevant author.

comparable

Therefore we face two challenges: first, of isolating text that is attributable to each of Mark and Luke respectively, as opposed to text which may be source material in either of their gospels. Secondly, to isolate their style of writing between Mark and Luke respectively, using the layer that best represents their own contribution to their works, not their source material.

It is possible that a substantial amount of this source material reached Mark and Luke in an oral form rather than in a written form (Gerhardsson 1961). In relation to stylistic studies, Gagnon (1993:112) also expressed concern about the unknown influence of oral tradition. What if the editor modified their source extensively and put a far-reaching stylistic stamp on their version of such an oral source? During the Tanaaitic period the Tanaaim knew vast quantities of the Hebrew scriptures by heart. Even today, most rabbis know the Psalter, and even the Pentateuch, word for word. Perhaps such an oral source was tenable. In this case, it can be argued that because of its oral nature, it could have

been modified by Mark or Luke, or another intermediary, and yet could still have retained its themes and structure, owing to the rigour of such oral customs.

We may make three responses to such considerations. First, in the basic analysis (in chapter four), we will not be using source material at all, but only the compositional work in the editorial material—the final layer—of Mark and of Luke. That is, this material should be purely the product of the final editor. Therefore, the question of whether source material was modified by the editor will not come into play, at least in the basic analysis. Secondly, let us assume that the whole of Mark or Luke's gospels were composed by them, and none of the wording was attributable to any other source. Now, for certain reasons, we will extract some material from their respective gospels, and call it their editorial layer. Even if they composed their whole gospels, it is quite clear that such a situation would still not exclude their stylistic syntax appearing in the extracts we call their editorial layer, even if we are wrong. Such extracts should still reflect the characteristic syntax of Mark or Luke respectively.

Thirdly, let us assume that there were sources but they reached Mark or Luke through an oral transmission. If 'oral tradition' is understood in the rote way described above, then it must be at the same time rote *enough* to convey *some* different syntax from that of the editor. The Tanaaim certainly learned the text of the Hebrew scriptures by heart—but they did not change it. One could not hope to find the personal style of the ancient Tanaaim in their oral version of the Hebrew scriptures. If modern rabbis know the Psalter, and even the Pentateuch, by heart, then they do not change it. One should not find the personal style of the modern rabbis in their oral version of the Hebrew scriptures. Even if one learns a song, one does so not to change the song. Rather, one's own odd changes would be small compared to the syntax of the original composer. For something to be oral, especially in an oral society, there must be the corollary of less rather than more personal modification of the tradition. At the outset, oral tradition (if it existed) should be thought of as rather more similar to written source material on the one hand, and as rather less like the personal syntax of the final editor on the other hand. Or the other way around, oral tradition should not be thought of, *a priori*, as far different from written source material in the distinction of both from the compositional syntax of the editor. A stylistic study can and ought to consider such alleged source material separately from a layer that is alleged to be the later contribution of an editor.

We will not need to define an *author's* style, but only the syntactical character of a *layer*, because we will focus first on a layer from one author; and secondly, on a layer from another author. The first text will be the editorial layer in Mark and the second text will be that of Luke. That is, there will be no attempt to look at one author across more than one document or layer.

Once again, let us say it is only *possible* that there was a volume of source material in the synoptics, whether it was of oral or of written provenance. In this case, there is a *possible* challenge through what would have to be the brevity and fragmentary nature of such layers of one or another synoptic Gospel. The form of stylistic analysis must set out with a design that does not ignore this possibility, but rather, with a design that takes this possibility seriously.

### **Writing in character**

Certain Greek writers, like Greek orators, and like Luke, strove to adapt their writing to the circumstances of their exemplar. That is, they strove to adapt their writing to the style of a particular source, which is a practice called writing 'in character.' Their deliberate attempt to change their style may inhibit our ability to discern normal features of the author's style. As a result, authors who write 'in character,' are another challenge to stylistic studies. An example appears in the change from Luke 1:1-4 to 1:5. Luke wrote the first four verses in classical style, but there is a sudden change to Septuagintal language in verse 5. Perhaps Luke composed this genealogy 'in character,' that is, following the style of other genealogies. Or perhaps Luke acquired the genealogy from some other place, and then modified it for his purposes. J A T Robinson (1976:255) noticed that while the language of the apocalypse is apparently pidgin Greek, yet it is not the Greek of a beginner, raising the question whether John wrote his Semitising Greek on purpose. If an editor wrote 'in character' in a pervasive way, then that would or could tend to obliterate any idea of where their sources may have begun and ended. We will find a certain amount of our own evidence relating to this matter in chapter five.

M P Brown (1963:141) discussed this matter in the context of the writings of Ignatius and Pseudo-Ignatius:

This analysis would lead us to be alert to the possibility—even probability—of borrowed phrases and catchwords by which the pseudonymous writer makes good [their] disguise....Our findings show that [Pseudo-Ignatius] made certain deliberate efforts to conform his own language and style to that of his model, if only by the occasional insertion of some striking word borrowed from the original writing, e.g. ὀναίμην and ἀντίψυχος. It would appear, further, that the oft-repeated phrases, figures of speech, and especially the recurrent exhortations are the most likely sources of disguising expressions. As a rule, we may say, the pseudonymous writer tends to borrow that expression which most readily strikes [them] as being typical of [their] model and to use it, if not promiscuously, at least frequently. Thus a possible clue to such instances of imitation would be that the expression appears over-worked, forced, or inappropriate to its context.

That is, it would appear that a writer attempting to emulate another may be subject to three factors. First, they consciously change only some particulars of vocabulary. Secondly, they are given to exaggerate those particulars. Third, they cannot copy all of the particulars of vocabulary in their appropriate proportions. If vocabulary is difficult to emulate, then it is surely much more difficult, for an editor, or an author, to consistently modify a wide range of grammatical structures, whether their own or those that exist in their source material.

Although it would be extremely difficult to imitate the original's proportions of a wide or comprehensive range of syntax, it may be said that it is still possible. Mendenhall (1901:105, Francis 1966:46) reported a case in which an intentional close emulation of style had occurred. Samuel Clemens may have intentionally achieved the same effect in the opposite direction in writing in two entirely different styles (Wachal 1966:71). By definition, a highly accomplished work of emulation must be almost indistinguishable from an original, at least at whatever level or several levels of linguistic style such emulation is posited.

In response to this concern, we may make the following notes. Assume that there is a block in Luke that came from elsewhere, but Luke rewrote it thoroughly in his own style. Assume, further, that not only every aspect of language (vocabulary, syntax, metaphor, form, and so on), but also that every form of internal and external evidence for such a block of writing was consistent with Luke. The

effect would probably be its acceptance as Luke's composition, without the awareness of its foreign origin. In that case, there is probably little harm that would be done, at least in terms of a stylistic study, if the study did make such a mistake. Yet what follows will indicate that the synoptic Gospels and their preceding source materials have not been so thoroughly compromised. For passages that *would* affect a stylistic study one way or the other, M P Brown's work in Pseudo-Ignatius indicates that there would be clues in the text that the author could be 'writing in character.' Luke's genealogy is a case in point not only of the problem, but also of its solution.

## **Period**

Greek was used in different ways during different periods of Greek history, even if some of these differences were only slight ones. Greek 'had been developing since the days of the Attic orators and Plato, as any living language must' (Bauer et al 1979:xi). For example, the Doric Greek of Herodotus was different from Attic Greek, even if only in a few words. Attic Greek was replaced by Demotic or 'Koine' Greek during the Hellenistic period. 'This 'common language' was formed from the old dialects (Ionic, Attic, Doric, Aeolic)' (:xii). By the 3<sup>rd</sup> century CE, Greek authors had reverted to Attic. Bauer described what period or places certain Greek words and syntactical structures were used. This locates the period, *to an accuracy of at least within a few centuries*, for certain forms of Greek. On the other hand, there was, apparently, a remarkable agreement in at least the pool of Greek words employed during the Hellenistic period (Koine Greek).

Nevertheless, Bauer (:xxiv-xxv) pointed out that, because of the different cultural backgrounds of those who used Koine Greek, there was an ongoing process of resolving what such words meant. Even if a given word appeared in the same form over several centuries, such a process would give rise to a 'trajectory' of the evolving meaning of the word. The distinct meaning with which a word was used can emerge from its context in a given document. Therefore, even if a word had a long and stable form, if one knows its trajectory of meaning, then the particular meaning of a word within a given document can help to date that document.

In addition, certain New Testament documents like Revelation (notwithstanding our discussion of Robinson on page 97) draw heavily on the colloquial use of the language, a use that is surely more subject to change and development.

M P Brown (1963) gave several instances of language that he relied on for dating, that is, that were specific to the period of the writings of the New Testament. For example,  $\sigma\upsilon\nu$ -compounds with substantive and verb (:17), paratactic style (:81), and a scarcity of the optative mode (:86). Therefore, there are at least some indications that language, including the language of the New Testament, has a capacity to be specific to a certain period. It is for this reason that Moerk (1969:225), speaking of the authors he was comparing, said: 'To avoid that danger of measuring differences which are caused by changes in language rules over time, authors writing....at approximately the same time or during the same century were chosen.'

One would not want two or more effects to be confused in the data. The goals of the study should either directly address genre, form or subject, or else minimize their effects. Studies that have a clear goal and an appropriate means of gathering relevant information will either minimize other unexpected influences on the one hand, or on the other hand, suggest their presence. That is, a sufficiently neutral investigation could indicate unexpected influences and factors if they are at work in the comparison.

The discussions above show how important it is that statistical stylistics follow behind literary studies and engage in dialogue with them. Although naming conventions vary, when one wants to understand a text, its meaning and its authorship, there are several steps that take precedence over that of the measurement of style. These steps can be gathered under the name 'literary critical studies.' Among other things, literary critical study includes the following: It establishes the quality of the text, and distinguishes the genre and the form. In other stages of its task, it embraces the subject and the content of the text as a whole, and in its separate parts. It pays attention to the historical, geographical and biographical detail in the text, and what is known about the history of the circulation of the text. Such a study also takes note of the background of particular words; quotations, parallels, or other allusions in the text; and of literary devices. Literary critical analysis

includes the question of responses to the text, whether such responses appear in the text itself, in the relevant historical period, or since then. Finally, it studies not only these features, but also any other features of the text that bear upon the meaning of the text.

Of course, matters as these must take priority over measures of the proportion of certain 'objective' linguistic phenomena. The various authorship hypotheses that arise at the end of such literary studies are what guide the formation of the goal of a stylistic examination. For example: 'We would like to evaluate whether the hypothesis of a given scholar is correct or incorrect. What range of linguistic or stylistic information could help to indicate the answer?' Given a broadly based, open-minded and mutually respectful dialogue, that would begin a recurring cycle of experimentation, trial, and discussion that could provide steady progress.

Therefore we will compare only material that is similar in period and in situation, and material that is comparable form or genre. Our initial study focuses on aspects of the Gospels of Mark and Luke. From these, we propose to extract and use only material that is unanimously attributed to their respective composition. We will not risk involving material from one of their gospels which may have a different origin. These materials were homogeneous, assembled within a matching interval and environment, and their editorial layers are within a comparable (gospel) genre and of a comparable (editorial) form.

### **3.2.2 The size, content and measurement of the materials compared**

It seems at least possible from the previous section that the synoptic documents may be complex. If so, such diverse materials may exist in very small sections, and so the size of these materials becomes important. We must ask in what way the experiment is affected by the length of the text, by the number of the variables, or by the number of samples in which they are assessed.

## Population size

As appears in the Mosteller and Wallace study, certain features of language can distinguish between the writing habits, or style, of one author and another author, but they require tens of thousands of words of text to do so. The population of the known papers in the Mosteller and Wallace study was seventy thousand words for Hamilton and Madison, while the samples, or reference samples, were two hundred words in length. The work of Ellegård (1962) on the Junius letters used about one hundred and fifty thousand words of text. He measured 'distinctiveness' for a particular word by the ratio of its relative frequency (or proportion) in Junius to its proportion in a million word sample of non-Junian writings. That is, he relied on large volumes of words in the population of two bodies of material compared (Holmes 1994:90). Lauter and Wickmann's reference sample length was ten thousand words, a size mooted earlier by Yule (1944:281).

In some cases one does not have such a quantity of material. Let us assume that one was an in-transit passenger at a strange airport, and one wished to ascertain what kind of product to market to the kind of people that live in that city. One would need more than a handful of human encounters around the airport to form an opinion about the people who live in the city around the airport. Rather, one would study a representative set of people from the population of the city. Similarly, if a text sample is short, or if the linguistic features are selective and few, then the study will yield information that does not have a clear, strong expression of the author's style.

For statistical analysis, there is a problem of population size in various parts of the Bible. We have already noted that the largest of the purported sources of the documentary hypothesis in Genesis is less than ten thousand words. In the Pauline literature, Morton's (1965:228) method suffered from insufficient data. O'Rourke's critique of Herdan's study of vocabulary (some details of which appear on page 119 below) in Ephesians, in Colossians, in Galatians, and in Romans shows that the short textual lengths of the New Testament can quite frustrate attempts at linguistic studies. The alleged sources in the synoptics would be of comparable length to a Pauline epistle, however, and so they are subject to this same challenge. In Neumann's (1990:137-138) work in the Pauline epistles, he could find population sizes of 67 221 words of undisputed New Testament texts, and 21 408 of

Pauline texts. The population of the Pauline material has presented problems to the linguistic analyst, so there is little surprise that the Gospels should also do so.

The ten thousand words in some of the above studies is far longer than full length (that is, the population) of the purported layers of the synoptic Gospels, which we may think of as about two thousand words in length. Several, or many samples would need to be drawn from such a synoptic population. Thus the sample lengths in the synoptics would have to be extremely small, in statistical terms. 'The reliability of the method is far from certain when applied to relatively brief treatises' (Metzger 1958:94). Ancient composite texts have a small population, and secondly will have a small sample length. Therefore, the statistical challenge in the synoptics is daunting. Neumann (1990:163) said 'to secure a maximal solution, one would have to test all possible combinations.' The brevity of the populations available in the synoptic gospels can only be counteracted by an extensive range in the stylistic features that we measure, and a careful selection of appropriate features from that range.

It is worth noting that this concern about textual size, and each concern or caveat presented with regard to formal statistical analysis, applies equally to less formal studies of vocabulary. That is, the brevity of the textual lengths in biblical and other ancient documents render not only statistical studies, but all stylistic studies in the New Testament ambiguous. Gagnon (1993:712) said that 'One has to treat with a certain caution the evidence drawn from statistical analysis....One may underestimate the extent of redaction because of the relatively small base of assured redactional passages from which to assess claims for redaction elsewhere.' Cautious treatment should be applied with respect to the selection of variables, quantities and analysis in informal word studies as to the same factors in more formal statistical studies. Some examples appear in Hawkins (1968) *et al*, on page 110f below.

The question is not whether there is ambiguity or not—we know that there is. Rather, the question is 'In which direction is there least ambiguity, and for what reason?' Notably, Gagnon (1993:712f) continued with a careful analysis of several Lucan passages, specifically in a non-statistical sense (formally speaking). In his analysis, he repeatedly referred to word frequencies in Acts, which may be affected by the following results of a statistical study of style: Greenwood (1993:185-186) indicated

that certain sections of Acts are more closely related to the Gospel of Luke than other sections, particularly the first six chapters. On the other hand, Greenwood said that the last sixteen chapters of Acts appear, more strongly even than the first six chapters, to be a distinct unit. Greenwood attributed the latter to a distinct stylistic trend in the account of Paul's mission journeys. Rather than such a direct appeal to a new narrative theme as a sign of a change in authorship, perhaps it would be better to think first about the (purported) 'we-sections' source there. At any rate, Acts can surely not be seen as a pure example of Lucan style. An appeal to Acts should refer to its composition, whether the appeal is by Gagnon, perhaps a little too secure in his informal stylistic work, or by Greenwood in a more formal statistical analysis of style.

A particular advantage of less mechanistic approaches is that the *context* of each occurrence of the stylistic feature may well be closer to hand, and more readily and fully consulted by the analyst. Whatever method we use, we can hardly escape the necessity of balancing probabilities rather than certainties, at least because the available text, and so the available evidence, is so little. There are two ways: First, we can notice such questions of probability, and address them. Secondly, we can simply abandon ourselves to one or another assumption about the makeup of the document, wittingly or unwittingly, correctly or mistakenly. The first is clearly the better route.

The definition of the experiment, and the definition of the appropriate kind of data must be appropriate to the size of these synoptic layers. As a result, it is important to declare the best possible estimation of the contents of the synoptic layers, their population or full size, and the size of the samples within which variables or stylistic features would be counted. It is also important to express the level of error that is likely to arise because of the limited size of the population, of the sample size, or of the limited number of variables.

### **Sample size**

Radday and Shore used two hundred word samples in Genesis. Neumann (1990:137-138) uses 'two 375 word cuts' as his sample size. The fragments of the synoptic sources are almost always of a far

smaller size than this, so Neumann's sample size was too large for the small fragments that make up the synoptic layers. This idea of a fixed, consecutive (or side-by-side) samples is also reflected in Wachal (1966), Carpenter (1968), and Moerk (1969). Their sample lengths were two hundred words or more.

As we have noted, a fairly short synoptic source, such as the double tradition in Luke, may be around two thousand words in total content. Assume we had two thousand Greek words, and that we placed such two-hundred-word samples, or windows, over these two thousand words in a side-by-side manner. We would then get ten windows ( $10=2000/200$ ). Such a small number as only ten windows would be very little for us to work with in terms of averages and probabilities.

At any rate, the synoptic sources and layers exist, possibly, in fragments that may be as little as only several words long. Two hundred word samples would simply exclude most of these fragments, if they indeed exist. Rather than pages of text, verses, sentences, or lines of text, Morton (1965:184) suggested the use of 'small reference samples, in extent about the reciprocal of the rate of occurrence of each word, which are, in effect, artificial sentences all of equal length.' The possible fragments in the synoptics mean that we would be restricted to sentence-length samples of, say, ten words in length. That is, rather than sentences, we propose to use fixed-size windows. Rather than the two hundred word windows that Radday and Shore used in Genesis, or that Neumann spoke of in Pauline studies, we are limited to samples, or what we can call windows, *small enough for synoptic source fragments*. It is only possible to deal with such short fragments because we are using short word windows.

Let us return to our two-thousand-word source. With this concept of a small sample, or window, we can start by incorporating word one to ten with a ten-word-window. Then we can push the window along to make a 'side-by-side' window, to embrace words number eleven to twenty. In such a way, we would get two hundred windows out of those two thousand words. Two hundred windows are an improved pool of data over the ten windows represented in the previous paragraph. Such a short, fixed-size-window of ten words creating many 'side-by-side' windows cover more of the fragmentary material found in the synoptics and yield an improved idea of average use of any stylistic

feature in the windows. That would give us an improved idea of whether any change from the average could be attributed to chance variations from the average, or whether such a change was a distinctive stylistic element.

Ten-word-windows of a side-by-side nature, like tiles on a wall, will minimize interdependence among the variables (see 'Working Definitions,' p.245). Therefore, each window should be separate from the other during the controlled investigation phase at least.

So the possible editorial layers of Mark and Luke may exist in small populations. They would require small sample sizes not only for that reason, but also because of the fragmentary nature of the small layers involved. This is one reason that we will break the material up into side-by-side 'windows,' that compare, in length, with sentences. The uniformity of these window sizes contributes to various processes of comparing them with one another.

However, we have already seen that certain characteristics of style (like chiasm) occur across several sentences. Therefore, the small size of these windows means that they preclude such structures of style. For example, they would preclude the features of "echo", inverse correspondences, and palistrophe that we referred to above. Yet, as we saw above (page 88), the absence of such larger structures from the study of Radday and Shore may have been one factor, if a secondary factor, that prevented them from finding characteristics for the hypothetical source documents of Genesis. The primary factor that flawed their results was probably that they adopted a consistency model.

At least for the present, by virtue of these ten word windows, we will limit our study to the technical-linguistic aspects of style that emerge within the space of ten words. Further study can consider the possibilities for extending the windows, and analysing larger stylistic structures or the polysemic (multiple signalling) properties of the (syntax in the) text.

Based on the definition in the previous section, we may draw the following implications for the method we will adopt: In our approach, we intend to use a resemblance model to assess the syntax

in two layers—and only two layers--, from the same period, and using the same genre and form. The syntax will be assessed through the use of short word windows.

These conditions will be satisfied by using the compositional contribution in the editorial form from the Gospels of Mark and Luke respectively. The question will be whether a block taken from half of one of them—Mark—, designated as ‘unknown,’ can be associated with the other half of Mark, designated as one definite or known author, rather than with a layer representing another definite or known author—Luke.

### **3.3 The kind and quality of stylistic variables required**

The statistically disciplined examination of texts and style has a long record in biblical studies, with varying effect. Apart from the statistical work of the scribes of the Masoretic Text, at least as early as 1807 Schleiermacher used the counting of words and phrases in biblical studies. In 1859 Augustus de Morgan argued that word length, the number of letters in words, could indicate authorship in Greek prose—specifically, in the book of Hebrews. Then, in 1893 Sherman discussed sentence length as a style characteristic. Hawkins compiled his authoritative listing of stylistic features in 1899. The unfolding work of textual criticism during that (nineteenth) century, characterizing the style of the different families of manuscripts, could be included in this kind of careful assessment of the New Testament language.

#### **The approach of New Testament literary critics**

New Testament literary critics have some customary forms of stylistic analysis, or *stylo-statistics*, of their own. First, there is the use of vocabulary listings in various kinds of concordances. These are employed to count words, topics, emphases, characteristics, or expressions of the style of a given author. When one is interested in grammar, however, one finds that New Testament grammars give only a few examples from biblical books, rather than representative or exhaustive listings of grammar

by book. It is even more difficult—but not impossible—to find indices of vocabulary or of grammar by *source*, or by *form*. Tallentire (1973) noted that it was the wide availability of resources at the *lexical level* (like concordances) that led to the predominance of vocabulary studies (Holmes 1994:91).

Secondly, there is the 'intuition' (Metzger 1958:93) and the experience of the New Testament critic. Thirdly, textual analysis of the New Testament indicates some formal but intuitive ways in which the uncertainty of significant information in the New Testament is recognised and assessed. Textual analysis works with ancient manuscripts to establish the best, or most original, text. Metzger said the following about the manuscript evidence, where the italics are mine:

Although at first it may seem to be a hopeless task amid so many thousands of variant readings to sort out those that should be regarded as original, textual scholars have developed certain generally acknowledged *criteria of evaluation*. These considerations depend, it will be seen, upon *probabilities*, and sometimes the textual critic must *weigh one set of probabilities against another....*The range and complexity of textual data are so great that no neatly arranged or mechanically contrived set of rules can be applied with mathematical precision. Each and every variant reading needs to be considered in itself, and not judged merely according to a rule-of-thumb.  
(Metzger 1971:xxiv)

Furthermore, the external evidence and the internal probabilities must be weighed in a task that is 'both an art and a science' (:xxxi). Notably, the author's *style, vocabulary and usage of language* elsewhere are among the probabilities that the textual critic must weigh up (:xxvii). Metzger's commentary was an elegant demonstration of how textual critics accomplish this. The significance of such work is unavoidable in that such methods help to give us the version of the Greek New Testament that we all use. On page 113 below there are several more examples of such informal or intuitive techniques, in the synoptics and elsewhere in the New Testament. Notwithstanding the enormous contributions of such authorities, we will discuss some of the weaknesses of the approach in that section. Such an approach would be stronger and more convincing if we could have a comment about the proportions involved, the sources, the choice of the variable, and the consistency of the variable through the material concerned. These customary 'tools,' for example, word studies, must be reevaluated in terms of the considerations below.

If we are to undertake such stylistic studies, then there is the question of what meaning can be drawn from a difference in any given set of stylistic criteria. We must address the issues of what kind of stylistic criteria can be linked to an author, and what degree of change in such stylistic criteria can be said to indicate a change in authorship. In 1995 Ledger critiqued Neumann's (1990) work, if he did not make a caricature of it. He (Ledger) then carried out what he was sure would be a more effective multivariate approach of his own on various New Testament documents. In the end, Ledger (1995:86, 88) did exactly what he here queried in Neumann. Nevertheless, we take his point in the following caution:

There then arises the....problem of deciding what degree of difference between two styles justifies the inference that two works are not by the same author. It is not simply a statistical problem, for it is frequently possible to show that any two texts, irrespective of their origin, come from a different population. We are not at liberty to deduce that difference of population equals difference of authorship....[In a multivariate analysis,] Neumann measures 617 variables....[from which] he selects only four....by implication, the remaining 613 are not very good discriminators.

(Ledger 1995:85)

Now we can consider the question of criteria or variables that we compare, and how we choose the linguistic features, or syntactical structures that we will examine. For example, the features must not be affected by changes in subject. First, however, it would be useful to address a more fundamental issue, namely, whether the parallels and the contrasts we draw are really about comparable things.

## **Proportions**

A certain amount of quantifying, whether informal or formal, is present in most biblical research. Milic (1967: 67-68, 70) critiqued New Testament scholarship, and pointed out that proper care must be taken to observe statistical standards, and not merely to enumerate linguistic features in the ancient text. The difficulty to which he refers can be illustrated in the following two statements regarding representation. Both statements enumerate the number of women in certain groups, but the statements are not comparable: First, 'The cabinet has three women in it.' Secondly, 'The parliament has three women in it.' Before one could compare the two statements, one would have to know the membership, that is, the population, of each of the two bodies, and then calculate and

express the *proportions* of women in each of the two. Then one could have a more meaningful discussion. If there is no definite idea of the whole population, then there can be no clear idea of the proportion, and so any comparison becomes meaningless. It is for reasons like this, then, that a statement like 'This word appears ten times in Mark, and five times in Luke's version of the triple tradition' can be misguided or misleading.

Furthermore, there is seldom a discussion of why a particular feature has been selected rather than other possibilities, whether the feature could be connected with specific subject matter, or with different literary forms rather than with the author, and how consistent it is in the writings of the particular author concerned. We have seen, or will see, that each one of these factors severely affected one or another study. For such reasons, intuitive, instinctive or 'obvious' variables, methods and conclusions can be deceiving. Moerk (1969:223) said,

Scientists have tried to differentiate between the styles of different authors and have often been quite successful with it. But this differentiation was reached by intuitive methods....Since the method was intuitive, we find contradictions between different philologists in their attempts at matching writings whose origin was unsure with specific authors; and no one could adduce criteria to exactly verify [their] opinion and falsify the opinion of [their] opponent.

Here are a few examples of studies that have perhaps fallen foul of Milic's critique, having 'merely enumerated.'

Hawkins ([1899] 1909:15) discussed Luke's style through Luke's diverse, and exclusive vocabulary list. He quoted many instances, including *πρός* with a verb of speaking (99 times); *εἶπεν δέ* (59); and *καί αὐτός* (41). When Hawkins said '99 times,' he was merely enumerating and so falling foul of Milic's warning. He ought to have told us the size of the text in which this vocabulary was used, and he ought to have given us a proportion in a layer of Luke, by comparison with the proportion in another text.

Hawkins (*ibid.*) also said that *ἅγιος* (73), *ἀνάγειν* (39) and *ἰκανός* (27) occur at least four times in Luke, but not twice as often as in Matthew and Mark. He said that they are found in Luke-Acts together four times as frequently as in Matthew and Mark. Here Hawkins did allude to proportions

in words like 'four times as frequently.' Hawkins did not tell us how he was defining 'Luke,' or the other gospels, however. He evidently means the whole of Luke's Gospel. It is doubtful, however, as to how useful it was to consider the whole Gospel without including an assessment of these words in the sources that Luke used, by contrast with sections that Luke composed. For example, we can ask whether most of the occurrences were grouped in triple tradition material, double tradition material, or elsewhere. The task of separating the proportion *by source* must also be qualified by a discussion of how he was measuring the limits, e.g. in terms of sections, verses, or words, of the set, the source, that he was analysing. His arguments were based on incomplete information and were likely to be only partially correct. To support his point, Hawkins ought to have differentiated Luke, and the other synoptic Gospels, into different layers. He should have given us the size of each, and should then have told us the proportion of each word in the relevant layers.

The best *literary* studies of style reflect great erudition, with a detailed examination of various Greek and Semitic structures of language. Examples of the latter include the work of Cadbury (1920) in Luke and Taylor ([1937] 1948:44-54) in Mark. Such analyses also consider the appearance of these linguistic structures in different layers of the synoptic Gospels. A flaw in their work, however, was the lack of the definition of the contents of the different layers, or the lack of calculation of the *proportion* of such linguistic features in each of the different layers.

Howard ([1908] 1929:452) discussed the use of εἰμί, 'I am,' followed by a participle. He cited sixteen instances in Mark, three in Matthew, twenty-eight in Luke, ten in John, twenty-four in Acts, four in Paul, and one in 1 Peter. As with Hawkins, Howard did not give us the size of these various documents. He did not separate these documents into sources or layers. He was 'merely enumerating' and not giving us the proportions of this construction in the relevant blocks of material. As a result, it was not clear whether this construction was characteristic of Mark or not.

Fucks (1952, Neumann 1990:28) did not allow for the difference in the length of the texts when he tested his 'V-index,' or vocabulary index, in texts. Taylor (1959:44-54) discussed Mark's vocabulary, syntax and style. On page 48 he discussed the use of ἤρξα(ν)το as an auxiliary verb. He said: 'There can be no doubt that its use is characteristic of Mark's style. It is found in Mark no less than

26 times...cf. Matt[hew] 9+2..., Luke 19+5..., Acts 5, John 1.’ This is another example of ‘merely enumerating.’ It is not sufficient to say that Taylor is probably correct because Mark, anyway, is shorter than Matthew, Luke and John. Before knowing whether Taylor was correct, one would want evidence as to what proportion of these occurrences arose in one or another section, layer, form, or possible source material. For example:

| Table 3.1: One way of displaying stylistic evidence: In Mark |   |   |
|--|---|---|
| Form   | Amount, or frequency of appearances of ἤρξα(v)το as an auxiliary verb | Proportion  |
| Editorial  | (A given number in editorial)   | Proportion in editorial=(A given number in editorial)/(Total number of appearances)                         |
| Parable  | (A given number in parables)  | Proportion in parables=(A given number in parables)/(Total number of appearances)                           |
| ...  | ...   | ...   |
| Passion narrative  | (A given number in the Passion narrative)                             | Proportion in the passion narrative=(A given number in the Passion narrative)/(Total number of appearances) |
| Total:   | (Total number of appearances)   | 1   |

| Table 3.2: One way of displaying stylistic evidence: In Luke |   |   |
|--|---|---|
| Form   | Amount, or frequency of appearances of ἤρξα(v)το as an auxiliary verb | Proportion  |
| Editorial  | (A given number in editorial)   | Proportion in editorial=(A given number in editorial)/(Total number of appearances)                         |
| Parable  | (A given number in parables)  | Proportion in parables=(A given number in parables)/(Total number of appearances)                           |
| ...  | ...   | ...   |
| Passion narrative  | (A given number in the Passion narrative)                             | Proportion in the passion narrative=(A given number in the Passion narrative)/(Total number of appearances) |
| Total:   | (Total number of appearances)   | 1   |

With such a pair of tables, if most of the Lukan references to ἤρξα(v)το as an auxiliary verb were concentrated in a particular form or layer, for example, then the argument suddenly changes around completely. This would be because that form or layer could then have a higher proportion than

Mark would. Taylor, or any of these writers, may well be correct in their final conclusions, but their methods of defining their 'population'—the outline and contents of the synoptic layers—, of presenting their stylistic evidence, and of calculating their statistics, could all be far stronger. Of course this critique is anachronistic. The point is not to detract from their contribution, however, but to clarify what would be beneficial in our current practice. If a linguistic point we seek to make has importance, then our method has a comparable importance.

Fitzmyer (1981: 111) cited Hawkins in including 'προς with a verb of speaking' as a Lucan characteristic. O'Rourke's (1974) statistical study had already shown, however, that such a construction appeared with a similar frequency in all the sources of the synoptic Gospels.

Kloppenborg (1987 :43 n. 7; 44 n. 8) recognised and incorporated the work of Carlston and Norlin (1971:59-78). Kloppenborg quoted their statistical critique of the position of Rosché (1960:210-20), who had said that the double tradition was oral. Kloppenborg was not thorough or consistent in applying such statistical discipline as that of Carlston and Norlin, however. In several places Kloppenborg conducted an argument on the basis of 'enumeration.' There is an example in his (1987:139 n.161) discussion on whether Luke 11:37-39 was from Luke or from Q, in which he defended the former position. In support of his position, he listed various Lucanisms in these verses. Even so, he acknowledged that some syntax was inconsistent with his position. He said, 'A few peculiarities are present: the historic present (although it occurs 18x in Acts with verbs of speaking); (and) ἄριστον (2x in Luke)...' Once again, Kloppenborg should have defined whether his evidence refers to the whole of Acts, and Luke, or certain parts of them. He should have told us the number of words in the relevant parts, and should then have given us a proportion rather than a simple frequency.

A final example appears in the work of Catchpole (1993:168), when he opposed the suggestion that Matthew 10:5b is MattR, or redactional Matthew. As a part of his argument he said: 'MattR ἔθνη-sayings are positive and inclusive in spirit (4:15; 12:18, 21; 21:43; 25:32; 28:19). Negative or exclusive sayings [like Matt 10:5b] derive either from Mark (10:18; 20:19, 25; 24:7, 9), or from Q (6:32a;...5:47; 6:7; 18:17).' Catchpole addressed the layers involved in an impressive way. He did

not comment on the proportion of these stylistic features in the layers to which he referred, however. Attention to this kind of proportional precision would assist us all to appreciate his argument more than we are able to do at present.

When Milic expressed his reservations about enumeration, these are examples of ways in which this has taken place. To recapitulate, it would be helpful to have a describing of the population or size of the text, layer, or block involved. If we think of a financial analogy, we can appreciate the serious statistical problems that they thereby incorporate in their work.

Consider the difference between a bookkeeper and an accountant. The bookkeeping function focuses on complete records. The accounting function, however, categorises the many individual figures into groups that are relevant to those who must make decisions about the future of the organisation. As a result, the accountant must show the *proportion* of income coming from various *categories*. Such categories could be fees, rental income, donations, and advertising income. The accountant must also show the *proportion* of expenditure going to various *categories*. Such categories of expenditure could be salaries, taxes, advertising, and maintenance. A simple list that enumerated the income items and the expenditure items alone, without further categorization, would not be helpful to a decision-making board.

The layers or sources in the synoptics are like the various accounting categories. It is not enough if stylistic researchers work like bookkeepers and merely present lists of stylistic occurrences. This will simply hamper or even incapacitate the endeavour to resolve the issues involved and the endeavour to discern the way forward. Instead, stylistic researchers must be like accountants, and provide their readers with *proportions* of stylistic features in the *layers or sources*.

Having recorded his concern about the disarray of authorship studies in the canonical epistles due to widely varying quantitative approaches or interpretations, M P Brown (1963:ix, 4) said this about vocabulary studies of all kinds:

Vocabulary analysis seems to many critics one of the surest, most objective tests for appraising a writer's literary position in relation to that of others. Given the necessary lexical tools, and given a sufficient volume of writing by the same author, one can

soon discern (or so it is claimed) the writer's peculiarities of phrasing, [their] pet expressions, [and their] distinctive connotation in an otherwise common and widely used word. These characteristic usages—literary fingerprints, as it were—supposedly serve to classify the author as to [their] general historical period and, in cases of disputed authenticity, may provide the tell-tale clue that distinguishes the forgery from the real thing. But just how effective or positively determinative is this test? This is what we seek to learn through its application to the Ignatian and the Pseudo-Ignatian letters.

M P Brown's (1963) particular concern was to evaluate to what degree vocabulary, grammar, syntax, or imagery and figures of speech were reliable indications of authorship. His analysis of the Ignatian and Pseudo-Ignatian letters in each of the above categories—vocabulary, syntax (especially the articular infinitive), and imagery—is impressive in its detail and erudition. His (1963:140) conclusions were that a single phenomenon—'any given item'—from one of the three fields of vocabulary, syntax or imagery was not reliable alone, but that the task required the critic to assess several phenomena. Despite his warning above, however, it is not clear that he was able to go much further than this. At the end he (1963:141) simply suggested that we select multiple stylistic features. Admittedly, he found a number of specific stylistic features that were distinctive, across the fields of vocabulary, syntax, and imagery. There is no indication, however, whether that set of features was of 'export grade'—whether the set would have had a comparable effect in other writings. Take, for example, the case of imagery, his strongest category. First, images would be difficult to define. Metaphorical language can vary from a short, simple simile through to extended and extremely subtle allusions. Secondly, it would be difficult to link an image exclusively with a particular author. We would need to establish whether an image that occurs in their text is their own image, or whether it is the image of some group to which they belong. Third, it is clear that the nature of such images would change a great deal from one work to another.

If we can agree, then, on the need to make statements about language that are really comparable with one another, then we can go on to consider features that do not distinguish style, and those that do.

### 3.3.1 Variables that do not discriminate: General vocabulary, or a specific list of criteria are among the stylistic 'variables' that do not actually distinguish between authors

Let us assume that we accept that it is more or less essential to contrast only two comparable works at a time, and to compare proportions of features rather than enumerations. The next point to consider is that there are many variables or features of language in which there is little to distinguish between one writer and another.

#### A standard list of criteria

Admittedly, some features do distinguish between the style of certain authors or layers. Even so, it is difficult if not impossible to make up a standard list of discriminating variables, because the contents of the set of such discriminators is not consistent between various experiments. Damerau (1975) evaluated many words that might be:

....Independent of context (and therefore a function word) if its occurrences follow a Poisson distribution [that is, a predictable arrangement]. He found considerable diversity among his authors, words having a Poisson distribution for one author are widely divergent from such a distribution in another. For some authors many words are distributed according to a Poisson distribution, while for other authors only a few are so distributed....for authorship word studies in general: particular words may work for specific cases....but cannot be counted on for other analyses.

(Holmes 1994:91)

Another example is that in some comparisons, adverbs seem to discriminate, while in others they do not (Wachal 1966:138, 139, 151, 173). Yet another example is that in some comparisons sentence lengths—a linguistic element that is very difficult to define—seem to discriminate, while in others they do not (Wachal 1966:98, 120, 126). This is because of changes in various factors that are compared in one or another experiment, factors other than those connected with the authors involved. Such factors include the text's population (or whole) size, genre, form, or subject matter. One or more of these affect the analysis.

Ledger (1995:85) said, 'It is important to choose at the outset variables which will give a sensitive and robust description of style.' Surely there is no such a list that one can possibly know at the outset, however. Notably, having no sooner said this, Ledger found himself (:86) trimming his list of twenty-nine variables to a few that were more 'salient.' The list in hand, he boldly applied it across the New Testament, and found, for example (:89), 'The three synoptic gospels are inextricably linked....as indeed we would expect, since they are thought to derive from a common source.' First, his diagram or plot of his evidence does show overlaps among the three synoptics. The long debate in chapter two above makes it clear that his last quoted statement reduces the issue to terms that are too simple to be useful, however. Furthermore, Ledger all too readily attributed the overlapping parts of his evidence to the common *source*. Even if the linkage is there, could one not argue that the link is attributable to a common *genre*? This question might be asked of the entire range of information about other books of the New Testament that he presented. Ledger did not offer a basis for believing that the information he presented reflected various authors, rather than different genres. Ledger's conclusions, therefore, are doubtful for comparable reasons to those for which we doubt the conclusions of Radday and Shore.

Secondly, the word 'inextricably linked' in his statement is excessive. His own evidence in the diagram does indicate that there are some kind of distinctions between the three synoptics, whatever the reason. Therefore, there are generalisations involved in Ledger's standardised list of variables. Also, he used a consistency model, which has generic problems that we have noted above. As a result, his selected list is not very 'sensitive or robust,' and it does not take us any further. We can see this in his conclusion (:95): 'Our final conclusion must therefore be that 1 and 2 Cor., Gal., Phil., 2 Thess., and Rom. seem to form a core Pauline group, but that the authenticity of all the remaining Epistles as Pauline works must remain doubtful.'

The problem with a standard list of features of stylistic criteria for a given author like Mark or Luke, is not only the question of whether or not they are consistent in discriminating. As emerged in Ledger (above), in the Radday and Shore study, and in Wachal (1966-67:4) there is a possibly even greater problem. That is, a standard list is partial and it inappropriately includes or neglects potentially significant features of a comparison between particular authors, of the genre, of the form involved, or

the *langue* itself. In chapter four, we can see that the results arising from ineffective—or even, as found in Wachal (1966:286), reversing—variables can mask effective variables. This also occurred in the Radday and Shore experiment, as well as in Ledger's (1995:88) results.

Notably, both of the two studies of Mosteller and Wallace selected a group of variables based on the discriminating power of those variables. The power of discrimination, however, was specifically between the two known sets of papers, and only after careful comparison of the two sets. There was no expectation that the specific variables they selected for those two sets, would or should discriminate in any other experiment.

Finally, when we formulate questions about ancient Greek language structures and style, circumspection is called for in terms of the relevance of the structures and style that we seek in a particular ancient Greek author, or of our assumptions in selecting them and in measuring them. An example can be seen in the work of Hobart, who (in 1882) looked for medical language and style in Luke, based on the self-fulfilling supposition that Luke was a doctor. Cadbury used the language of Josephus and the Septuagint to argue against this. The debate was dubious from both sides. Hobart used words that were not strictly medical, and Cadbury compared Luke to material which was seven or eight times the length of Luke (Morton & MacGregor 1964:2-3).

We have already seen the following in Mosteller and Wallace, in M P Brown (page 114 above), in Radday and Shore (page 86 above), and we will again see aspects of what follows in our readings in Moerk and Wachal below: *If an external listing of criteria or variables is to be used*, then there are four key factors to observe. These key factors circumscribe the idea of a 'standard' list quite strictly. First, the experiment ought to address only two pools of language which are of similar genre and form, and of 'known' and different authorship from one another; and a third pool of language which is of 'unknown' authorship. The purpose of the experiment would be to connect the 'unknown' pool with either one of two 'known' pools of language. Secondly, the stylistic criteria or variables should be multiple (see 'Multivariate' under 'Working Definitions,' p.241). Third, the several criteria or variables that will be applied to the 'unknown' pool need each to be shown to be effective

discriminators between the two 'known' pools in the particular experiment. Fourth, no variables should be included other than those in the third point.

## Vocabulary

Grayston and Herdan's (1959-1960) study on the pastorals included the measurement of the 'random partitioning of vocabulary,' based on the assumption that a first work copied from a second work. For example, assume that Colossians copied from or drew heavily on Ephesians. In that case, there should be a *less* random distribution of vocabulary in the first work, Colossians, than if that first work had *not* copied from another, second document, Ephesians. O'Rourke (1964:18) pointed out a problem with the analysis of vocabulary in the study above. The problem in Herdan was the ratio of vocabulary to text length. The problematic nature of using vocabulary emerges in the work of Herdan himself. Herdan finds that the difference between the *undisputed* Pauline letters was *greater* than the difference between the *disputed* letters!

By means of what looks like a consistency study, with all its problems, Herdan (1959:108) showed that the vocabulary of Galatians is significantly different from that of Romans: 'The two epistles [of Galatians and Romans] are....different in style, though much less than Romans and the Pastorals. But it also shows that style difference and different authorship must not be taken as tantamount or identical concepts.' Of course, it may be that Romans should go into the genre of a diatribe rather than into the category of an epistle, so what may be emerging is the difference in style between two genres.

At any rate, Grayston and Herdan's study suggests something quite reasonable: that a change in at least some aspects of *vocabulary* is possible between one document and another without the change being necessarily being due to a change in author. Although 'a change in vocabulary,' and 'a change in author' *can* be the same thing, yet it is *not necessarily* the same thing. Herdan's study may be critically flawed by the problems attendant on a population or a consistency model, and by insufficient attention to genre. Nevertheless, if it is not critically flawed, then it seems to show that a

general evaluation of vocabulary is not decisive for a person's style. By contrast, the effectiveness of the vocabulary study of Mosteller and Wallace's in their weight-rate study appears to be for the following reasons: First, they used a resemblance model as opposed to Herdan's consistency model. Secondly, they compared texts of the same genre. Thirdly, the vocabulary they used was made up of 'function words' like 'also.' Such words are closer to grammar, perhaps, than to vocabulary. Fourth, the words they used were carefully selected according to weight-rate study techniques. The vocabulary that Mosteller and Wallace used, then, is very specific, and far from a general list of interesting vocabulary items.

Another example of researchers who have used vocabulary are Harrison ([1921] 1964:18) and Carpenter (1968:17-19, 21). They discussed the effectiveness of *hapax legomena* (the single appearance of a word) by contrast with the whole amount of vocabulary. Carpenter reported an eighty percent success rate. Holmes (1994:98) said that there was a 'near constancy of the proportion of hapax legomena for a writer, whatever the number of tokens [total words or total linguistic features being examined in the text] counted.' Several scholars opposed, or were wary of this technique, however. Cadbury (1920:6, 25-26) warned that *hapax legomena* are 'often merely an accident' and, most importantly, that they lack completeness. Andersen and O'Rourke said *hapax legomena* depend too much on the subject. Grayston and Herdan (1959-1960:5) said that the ratio of *hapax legomena* to the text changes with changing text length, and Neumann (1990) found it statistically insignificant, saying: 'Arguments have been presented against the use of *hapax legomena*. They, as well as 'peculiar words,' are not necessarily 'characteristic of or typical of the writer.'

The question of *hapax legomena* are an extreme case of a stylistic problem which arises from two issues. The first issue is the use of vocabulary, rather than grammar. Although a 'function word' could be equivalent to grammar, yet then such a function word would not be *hapax legomena*. The second issue is that of employing a short selection of language—a single word--, by contrast with employing an extended selection of language.

## **Propositional reduction**

One could also try to understand an ancient author through a taxonomy of the ideas contained in their sentences. One approach here is to break down the sentences of their writing into 'basic minimum forms,' or the simplest statements possible. This is known as 'propositional reduction.' A 'propositional reduction' system for New Testament language has been applied to Biblical studies in the work of Cotterell and Turner (1989). Such an endeavour is problematic, however, for different reasons. First, there is the problem of defining a standardised way of going about this task (Spencer 1984:51-53, 164-69, 264-69). Secondly, there is the question of the skill of the analyst in carrying this out (Neumann 1990:113).

Thirdly, there is the problem that 'propositional reduction' inserts someone else's interpretation of the 'author's intentions.' Language and philosophy cannot be separated. Therefore, when the researcher selects 'a basic minimum form' then they lay their own philosophy on the text. An example can be seen in the parables. The parables are sometimes given different interpretations in the text itself, like Mark 4:13-20, the Interpretation of the Parable of the Sower. These different levels of interpretation (as well as their different styles), suggest internal layers of development. At least one interpretation must come from a source other than the parable itself. In such a case, there are various levels of interpretation that could control the propositional reduction. Therefore, 'propositional reduction' or sentence-level analysis is a dubious guide in authorship issues, at least in documents that draw on multiple sources.

## **Conceptual analysis**

One level at which one may try to understand an ancient author could be at the level of the conceptual structure of the document as a whole. Terry (1996) in *A Discourse Analysis of First Corinthians*, provides us with a discourse analysis of grammatical, and some conceptual, areas of I Corinthians. His (1996:17-36) study includes an excellent survey of certain aspects of culture at Corinth. This work sought to discover the discourse-level of linguistic features that Paul used, making use of statistics and the 'tagmemic' approach of Pike (1993) and Longacre. Terry divided I Corinthians into Paul's response into two parts: his response to the *oral reports* from Corinth; and his

response to the Corinthians' letter to Paul. Terry detected a change in style between these two sections of I Corinthians.

An author, whether speaking or writing, is constrained by the rhetorical situation. While there are many ways to express an idea, not all of them may be appropriate for a given situation. This explains why Paul adopted a more direct style to answer the Corinthian's questions from their letter than he used in addressing matters of which he had only heard reports.

(Terry 1996:166)

One implication of Terry's study, for our purposes, was this. It is too simplistic to say that a change in rhetorical style (for example from a more direct style of rhetoric to a less direct one) meant that there was a change in authorship. Therefore, conceptual analysis in its present form would not be of great service in associating one block of unknown writing with either of two known blocks of writing.

### **Sentences**

There are difficulties inherent in analysing sentences. This emerges in the analysis of sentence length, or periods, colons and questions. Furthermore, sentence length, and, most likely, sentence depth, prove among the least reliable variables for discriminating between authors (Sanday & Headlam 1902; Yule 1938-1939; Wake 1957; Morton 1965; and Carpenter 1968).

In the light of the difficulty with so many variables, we are aware of the caution necessary in selecting variables for the sake of comparing one book with another. We can proceed to discuss the variables that could assist us in this task.

### 3.3.1.1 Variables that do discriminate

#### Grammatical constructions

The properties Mosteller and Wallace selected were thirty 'function words,' for example, the word 'also.' Such 'function' words occur at a fairly typical rate in an author, regardless of the kind of writing. They did not claim that these words in any way helped one to know the persons, or the literary style, either of Hamilton or of Madison. Mosteller and Wallace simply said that these two writers, specifically, were distinguished by usage of these particular words, without reference to any other writers (Francis 1966:72). Therefore, they were careful that the thirty words they selected appeared at widely different (but typical) rates in the known papers of Hamilton on the one hand, and in those of Madison on the other. That is, the thirty function words had to have, first, *discriminating power*; and, secondly, be *predictable in their distribution* throughout the text. (We will return to these two important features further on.) Mosteller and Wallace divided the known and the disputed works of Hamilton and Madison into 247 blocks of two hundred words each, and counted the frequency of the function words in each block.

In their 'known' blocks, Mosteller and Wallace found that the actual numbers of blocks with the respective amount of words followed a probability distribution curve based on observations. One could expect a certain number of blocks to have none of a given word like 'also,' a certain number of blocks to have one, two, and so on. More particularly, the counts followed or fit a certain kind of probability distribution shape known as the negative binomial distribution. (A better distribution for at least some aspects of language has since been developed by Sichel, and applied in biblical materials by Radday (1985:200).) Furthermore, they found that each of the thirty words followed such a curve in terms of the blocks from the 'known' papers.

While such words, at first blush, should be considered as in the section on vocabulary, it is clear that the words they carefully selected have not only a grammatical character, but also a structuring character. That is, while they are only thirty single words, there is a certain syntactic dimension in the thirty words. They are not simple vocabulary or lexical items. When combined with the additional

criteria of needing to be spread through the author's work, and needing to appear at a different level in each of the two authors being compared, the thirty words become brightly gleaming arrows in the quiver of the stylistic researcher.

'Grammar deals with the general fact of language and lexicography [or the dictionary] with special facts' (Herdan 1956:101). Therefore grammatical features seem more promising than vocabulary because they are present in a more pervasive, and hence measurable, way. In quite the larger part, since the mid-1960's, stylistic studies have emphasised grammar, or at least words which are more grammatical than lexical in their function. One example is Moerk (1969:226), and we have discussed several others.

Wachal (1966-1967:308-309) said, 'Grammatical and rhetorical features are superior in discriminating powers to word frequencies.' A long time before, Dionysius (see page 10 above) had made the same point with regard to the book of Revelation. Milic (1967:90) concurred:

Whatever the degree of consciousness involved in Swift's habits of seriation and connection, the fact remains that these have a high degree of visibility and therefore may possibly be subject to the deliberate will. The same is not true for the grammatical substructure of any writer's prose....Hardly anyone will quarrel with the contention that it is a rare writer who knows what percentage of the words he, or she, uses consists of nouns, adjectives, and so on. Swift himself considered the idea...preposterous.

On the other hand, Wachal discovered—or, perhaps, rediscovered, that grammar *in general* was weak in its ability to discriminate between two authors (Hamilton and Madison). In his resemblance study, Wachal found that *some* grammatical constructions discriminate style better, for example, than vocabulary. Others, initially promising, were later found to be influenced by genre. On the other hand, Wachal found that *patterns* of grammar were, after the vowel period, the most powerful discriminators between his two authors.

With regard to grammatical constructions, one quickly finds that a given author cannot be differentiated from another on the basis of every grammatical construction. For example, Thörnell (1931), Brown (1963) and McArthur (1964-1965) found that conjunctives, including negatives and

adversatives were among the least discriminant variables in grammar. Only some grammatical constructions are used in notably different, or discriminant, proportions between one author and another.

In 1990 Neumann published an outstanding examination of which grammatical measures were effective. He started with over six hundred possible variables, and, using regression analysis, reduced their number to those that had the greatest discriminant capacity. He found several grammatical or syntactical features that appeared in quite distinct proportions in different writings. These features included the initial tau; the position of the first noun in the sentence; and the indefinite, relative and demonstrative pronoun. There were also word length, *articular participles or verbs*; and the number of dependent genitives after their substantives by comparison with the total number of dependent genitives. Finally, there were the choice of synonyms, and *three word sequences*. Even then, Neumann (1990:184) found that his set of leading variables were 'not as strong as originally thought...'. We cannot apply the work of Neumann directly to the synoptics because of issues under point two above. Nevertheless, the variables that are emphasised above will prove to be important in our analysis of the synoptic layers, or in our results from such analysis.

One wants to find those grammatical constructions which are used in different proportions by the (two) different writers that one is considering. Finding these constructions is difficult, for the following reasons, at least: Firstly, if one uses a consistency or a population model, rather than a resemblance model, the above examples suggest that the search for a standard list of discriminating variables, if not futile, is at least a hit-and-miss affair. One has the impression that the researchers are trying to guess the code for the locks on a bank vault. Yet there may be no such code, precisely because what they want is one code which would apply to several bank vaults. They want one set of stylistic features which would separate any writer from another writer, which is what a population or a consistency model aspires to. We have already noted that using a population model, as Neumann does, rather than using a resemblance model, is subject to just such problems.

Secondly, many analysts evaluated one grammatical construction at a time, that is, separately, in the sense that they did not evaluate the selected constructions in combination with one another. One

useful thing that can come from this is in terms of information about correlation. More than one variable on the list of variables could be a necessary companion of another, and so be redundant. On the other hand, if two variables seem to be significant for some reason, they could be even more significant when they appear together. Other variables may have no discriminant capacity or no significance. The following four studies did not work on a resemblance model, which is a critical issue all on its own, and they also examined grammatical features only one at a time, rather than in various combinations: Wachal (1966) used more than twenty discriminating variables. Moerk (1969:226) used nineteen, but examined them one at a time, noting difficulties in his results (:228, 229), and suggesting the need for correlational and factor analytical methods. Adams and Rencher (1973) examined more than seventy, one at a time, in Isaiah. Radday and Shore (1985) examined their variables one at a time when they did their analysis of variance for the *Genesis Project*. In all these situations, they also undertook discriminant analysis, however. Although such a form of analysis should have had the effect of combining the variables together, yet discriminant analysis does not analyse every combination of the variables involved, but only the more likely looking ones.

As we discuss elsewhere, for example the comment from Cox (below, page 127), it may well be that there is not one grammatical construction, but some combination of constructions that appear at markedly different proportions in two different writers. From these two writers, it would be better to look at a *range* of potential grammatical variables, in various permutations—that is, syntax. Such a range of syntax should be as wide as possible.

Perhaps high-frequency grammatical features could overcome the question of form and content. Morton (1965) thought so. He examined frequently occurring parts of speech, namely, the definite article and connectives. He thought these might be independent of the subject (1965:184-85) and perhaps of the form. There are at least four concerns about such high frequency grammatical frequencies, however. First, Brown (1963) and McArthur (1964-1965) found that some high frequency grammatical frequencies, including conjunctives, negatives and adversatives were among the least discriminant variables. Secondly, Morton found another problem with his own method. Even with such high-frequency grammatical constructions, Morton (1965:232) found that 'there are not enough occurrences....Perhaps some groupings....might be effective'. Morton said that the rate

of occurrence of the few most frequent features of the Greek language in Greek prose may be binomial, and the distribution in small reference samples could fit a Poisson distribution. When examining distribution, we must take account not only of 'the rate of occurrence,' or proportion, but also of the spacing between occurrences (Morton 1965:232). Radday and Shore met the same problem twenty years later, and Neumann twenty five years later. This issue of the brevity of materials recurs again and again in New Testament studies. Third, once again, the general case appears to be that the characteristics of the genre or the form are more prominent than the characteristics of the author. Even the best of Neumann's (1990:184) single discriminant variables 'really separate types of writing more than authors.' Therefore, if one wished to use this (or any other) feature, the methodology should ensure that the feature was connected with the author rather than with the genre or with the form. Fourth, not even a multivariate study overcomes this issue of the prominence of the genre and the form. Cox, in his response to Morton (1965:225), had earlier pointed out that a study of multivariate distributions was necessary. Multilevel, multivariate analysis was examined by O'Donnell ([1963] 1970), Wachal, and Moerk, among others. However, Neumann's study (see his comment above) concludes that multivariate analysis alone is not sufficient to set aside the prominence of the characteristics of genre and form.

Therefore, grammatical constructions do convey stylistic characteristics better than vocabulary, but, when used without regard to changing genre and form, or when treated separately and individually, they are not very informative of style. Only some grammatical constructions are discriminant. As much as other 'discriminant variables,' several grammatical features can still be influenced by genre or the particular situation, whether of the writer, the recipient, or the modern reader. A very wide net of grammatical constructions in various permutations is important in the approach to a stylistic examination or experiment.

There has been a certain amount of formal stylistic work (e.g. Wegner 1985:91-225, Gagnon 1993) on the synoptic Gospels and the (purported) layers within them. Greenwood (1995) is another such study that is informative for the range of issues that we have to keep in mind. To examine whether parts of Acts were by Luke or not, he analysed common word frequencies within Luke and Acts. He began by using, or testing, his set of common word variables—a strangely small and homogeneous,

though surely also an ubiquitous, group--on the letters of James, Peter, John, Jude and the 'authentic' epistles of Paul to the Romans, Corinthians I and II, and Galatians. There, he found that the variables distinguished between the recognised authors--or, just as likely, only the generic features--of each. He understood that differences in common word usage could imply separate authorship, a view we have found reason to doubt (on page 126 above). He took this to be evidence that comparable results in a similar analysis of Luke and Acts also reflect variation in authorship, at least in parts of Acts. He thought that was especially true of the final 16 chapters of the Acts that report the journeys of St. Paul. A more nuanced attention to the forms and literary layers of Luke would be particularly useful. These forms and literary layers are not only diverse, but also interwoven, and their appearance in the synoptics is quite different to their appearance in the more homogeneous epistles on Greenwood's list.

The brevity of the samples available in the synoptic gospels can only be counteracted by an extensive range in the stylistic features that we measure. Since we will be relying on categories of syntax we need not make the adjustments for a limited vocabulary that troubled Radday and Shore. This is because syntactical features occur far more often than particular words do. Corresponding with the strength of this index in Wachal, the stylistic criteria we will investigate or employ are those of patterns of grammar, or syntax. They will be drawn directly from language in the text of a comprehensive set of small reference samples as opposed to being drawn from a standard external list. Those criteria are compared to a word-window (see 'Working Definitions,' p. 245) in the whole population of possible host text ('Working Definitions,' p. 240). Accordingly, we will rely on the style in text from beginning to end, and we do not need to make up some authoritative list of the *author's* stylistic features.

Our assessment of syntax will be from comparable genres, forms, and periods, and drawn from short word windows. The assessment intends to be a fully inclusive one, rather than seeking a standard list of 'discriminating variables.' Such a list of syntax chains can produce a quantity of information that is sufficient to form distributions, at least in some cases. It will minimise the necessity for 'discriminating' variables by rating a wide or comprehensive range of syntactical features, and then weighting the more effective of them.

### 3.4 The means of acquiring such information

Example: The synoptics incorporate preceding tradition and quotations in various ways. An authorship study must deal only with material by a particular author, however. Therefore an effective authorship study in the synoptics must select material which contains as little preceding tradition as possible.

Our method of acquiring data in a neutral way will involve (a) an exhaustive evaluation, of (b) side-by-side windows of short, uniform length. In this section, we will discuss the following features of the way that we acquire the data: The shortness of such windows make it possible to assess the authorship of material of a fragmentary kind, so providing access to significant information for authorship through style in the synoptics. The separation of the windows will provide a reasonably low level of interdependence among the variables. The uniformity of these windows will contribute to various processes of comparing the data from them. On the other hand, the smallness of the windows will exclude larger (or 'deeper') stylistic structures like chiasm. This is problematic when the purpose is to assess larger blocks of materials—possible sources—with a view to evaluating whether they are of separate origin or not. There are indications that larger stylistic structures may well be quite important for such purposes. Further study could address these larger structures through a study of the nexus and interactions between the syntactical contents of various windows.

Some examples of a 'sample size' for expressing proportion can be a whole book (for example, a grammatical construction appears four times in Luke), a layer, a chapter, or a line. In M P Brown's (1963:4) study he selected the line as a 'uniform standard....unit of measurement.' It is in this vein that we select not a line, but a unit of ten-words, or a ten-word window, as our basic unit of uniform measurement.

### 3.5 Methods of analysing and interpreting the data

We want a true, unconscious, stylistic characteristic of the text or the writer, by comparison with one other. Linguistic features that occur several times in one text or another could be for one of the following reasons: First, a deliberate and conscious selection of wording, literary concepts, and arrangement by the writer, which could be quite closely connected with factors like the subject, or the intended recipients. *Secondly, a true, unconscious, stylistic characteristic of the text or the writer.* Thirdly, a characteristic of something other than the writer, for instance, an effect arising from certain prevailing circumstances, a characteristic of the *usual use* in the written language, or of the form or of the genre within which we find it. Fourth, an occurrence due to chance. An occurrence, or a deviation, is due to chance if it is quite close to an average use or expectancy.

It is really the second of these four that we are most interested in. By this point we should have come a long way in the direction of a true, unconscious, stylistic characteristic of the text or the writer through the following steps: First, through the structure of the experiment, that is, one that use a resemblance model. Secondly, through the definition of appropriate data, namely syntactical features in material of a shared period, genre and form. Third, through the means of collection of the data, by counting a comprehensive or an exhaustive listing or 'net' of features, through small windows.

#### **The role of the analysis with regard to the information we have gathered**

Stylistic researchers have used a substantial catalogue of methods used for analysing data. It would be rather bewildering to list these methods, and even more bewildering to discuss the derivation and application of each. What would be more useful is to consider, first, those that have had the best effect; and, secondly, those that have been applied in materials like the synoptic layers.

One of the first steps in analysis of stylistic features is to count, classify, and arrange relevant information. It may be useful to consider an analogue of classification, for the sake of analysing

differentiable authorship information. In one sports team by contrast with another, uniform is always quite visibly and constantly different. No player can wear the uniform of the opposite side for a moment. Authorship style, of course, is less visibly, and less constantly different in one writer by contrast with another. Authors are not uniformly different on every stylistic measure. For example, they are not uniformly different in every form of syntax. Drawing a contrast between two authors, using style, is not so visible as drawing a contrast between the uniforms of two sports teams.

Instead, contrasting authors is more like comparing similarities between two different human population groups, or drawing a contrast between them, with the purpose of selling some luxury food product. Although one group may have many tall people, it can have some short people. Although another group has many short people, it can have some tall people. Furthermore, the criterion of height may not be very relevant to the marketing of the particular food product we have in mind. Criteria connected with dietary habits, or with response to certain forms of advertising, may be far more revealing for the purpose. This points towards the importance of relevant criteria, of a means of finding a 'central tendency' amidst information that is not completely consistent, and of a means of assessing more than one variable.

Classifying information in the synoptics: In our own study, the problem was that we had a block of material that was unknown, but that probably belonged to either Mark on the one hand, or to Luke on the other. For the sake of argument, let all three blocks be exactly the same size. The experiment would be to see whether a reliable feature of grammar or syntax would connect the unknown block to either Mark on the one hand, or to Luke on the other.

The first task would be the question of the relevance of the information, because not all information in the text is relevant to the attempt to establish an author's 'consistent manner of expression.' A reason that we might use a given feature would be that it is quite distinctive in its difference when the total in each of the two blocks are compared with one another—at a total of sixty, Luke has five times Mark's total of twelve. Distinctiveness, then, is a feature that we could weight positively, or heavily. We will return to the matter of 'weighting' in chapter four (see 'Remark on weighting,' page 152).

Mosteller and Wallace analysed their results with a Fisher-type 'weight-rate' study. In the weight-rate study, they began by taking one half of the known papers as the screening set. From this material they selected a set of words (not necessarily function words) that were distinctive in their rate of appearance in one author by contrast with the other author. These distinctive words were given special attention, or special weighting, from that point on. To get an idea of what the rate in the known papers was, Mosteller and Wallace first tested the weighted words on the remaining half of the known materials, called the calibrating set. Then, finally, the appearance of the weighted words was counted in the unknown materials. A comparison of the results showed the correct identity for the unknown papers (Francis 1966:71).

The next task would be to find a central tendency among information that is not entirely consistent. Let us assume that in a short subsection of the unknown block there were five articular infinitives. We could form an immediate impression that this was a construction of major importance to the unknown block. Rather than making a broad generalisation from this short section, it would be better to take some other steps. First, to classify the information. Say that we found eighty occurrences in total in this block. This would be a frequency of eighty. In order to form a single, clear idea about one variable, we can express its usual or likely occurrence in terms of an average. We could then say that since there were 160 verses in the unknown block, that represented an average or relative proportion of one occurrence in two verses. Secondly, we could look at the same word in some part of Mark's Gospel, and in some part of Luke's Gospel, and find that there was an average or relative proportion of one occurrence in two-and-a-half verses in the first, and one occurrence in seven verses in the second. The proportion of this feature, or its relative frequency is closer to that of Mark than it is to Luke. We would be ready to decide, or infer, that the unknown block belongs to Mark. Such a relative frequency represents a 'central tendency' that gives us guidance with the decision we must make.

There is a third task, because the articular infinitive is only one feature. The breadth of the information at the base or foundation of the likelihood, or the quality of the data base, can increase our confidence in the likelihood itself. We can expand the breadth of the information at the base or foundation of the likelihood, or the quality of the data base, and so can increase our confidence in

the likelihood itself. The way of doing this, in our case, is by taking as many features of syntax as possible. It would help to indicate the origin of given material if this one syntactical indicator is combined with several others. We assumed that we had found only one variable above. In the case of many variables, we must find a way of considering all their evidence together. There would be the challenge that the relative frequency in the 'unknown' block would not be consistently closer to, or further from Mark on the one hand, or Luke on the other.

There are, however, distance measures that can be defined to measure the 'distance' between two (or more) sets of numbers (data), and these will be discussed in more detail in chapter four (on page 149). One such measure that is quite well known is the so-called 'chi-squared' measure. For our problem it will work as follows: We have available three sets of numbers, emanating from Unknown, Mark and Luke respectively. From these sets, form two quantities, one from Unknown and Mark and one from Unknown and Luke in the following fashion:

$$\text{Chi-squared1} = \sum \text{weight (Unknown - Mark)}^2$$

and

$$\text{Chi-squared2} = \sum \text{weight (Unknown - Luke)}^2$$

Here 'weight' is some set (or sets) of weights chosen appropriately (see 'Remark on weighting,' page 152).

Comparing chi-squared1 to chi-squared2 would then 'show' whether Unknown is 'closer' to Mark than to Luke. (The smaller, the closer.)

Several forms of analysis appear in Radday and Shore (1985). From the field of 'Pattern Recognition,' they applied various forms of multivariate statistical analysis to 'vectors' (the graphical representation of a variable's direction and magnitude; :55) of their (remaining) forty-three variables, within their respective divisions of Genesis. The forms of analysis included (:73) multivariate analysis of variance, factor analysis in the orthogonal (independent variable) mode, and discriminant analysis. They also include an application of the Sichel Distribution—which is a linguistically oriented

'descendent' of the Poisson and the negative binomial distributions--to biblical materials (:200).

Discriminant analysis was undertaken not only by Neumann and Wachal, as we have already seen, but also by O'Donnell ([1963] 1970); Somers (1966:128-140) and others.

Yet another form of analysis appears in Mosteller and Wallace (1964), which was:

A systematic comparison of two general methods of attack.... First, the main study exhibits the so-called Bayesian approach, and the second, the weight-rate study, follows [Fisher's] so-called classical tradition of statistical inference...

From the point of view of statistical methods, authorship problems fall into a general area called discrimination or classification problems.... We reduce our uncertainty about the authorship of an 'unknown' essay by comparing its properties with information obtained from essays whose authorship is known.

This *Federalist* project [is famous for the fact that it was] one of the first published large-scale statistical studies that involve substantial analyses of data by Bayesian methods.

(Francis 1966:41-2, 70).

Their Bayesian results were consistent with their weight-rate results, namely, that almost all the unknown material came from Madison.

From this section, there is the following implication for the method we will adopt: The variables ought to be weighted for their ability to discriminate between one author and another. The list of syntax features can be analysed using different distance measures such as chi-squared, geodesic distance, and the weighted sum of the logs of the ratios. We will find that the sum of the logs of the ratios, and the weighted sums of logs of ratios are both quite successful, if the variables are weighted 'correctly.'

#### **4 Opting for one method--The principles or theoretical considerations underlying the syntax chain method**

In the consideration of the above range of studies, six principles were observed. The principles for a well-constructed experiment in authorship and style were these:

- 4.1 As unambiguously as possible, to form goals, to state the question, and to describe the experiment that would resolve that question. A suitable authorship question would be to compare a disputed text against known, well defined, and comparable works from the two most likely authors of such a text, and from no more than two such authors.
- 4.2 Secondly, we should define what kind and quality of information would help to resolve the problem or question one way or the other. A broad range of syntax appeared to contain information that could characterise an author's style.
- 4.3 Third, we ought to acquire the appropriate data. The gospels and their constituent elements are among the shortest, most fragmentary and most involuted of any materials that appeared in other authorship studies. For this reason, it would be most appropriate to the materials concerned to acquire as much information as possible, that is, to adopt an exhaustive (rather than a random sample) approach in acquiring information.
- 4.4 The fourth principle was to adopt useful methods of analysing the data. A multivariate approach would be most useful. This would be especially true if the approach was linked with some means of emphasising (or weighting) those variables with the best capacity to discriminate between the two authors involved.
- 4.5 Fifth, to interpret or infer the meaning or implications of the data. It was noted that studies which lacked one or more of the four previous principles produced results whose interpretation was open to other alternatives. Given our limited familiarity with the circumstances of ancient texts, it is reasonable to take for granted a substantial level of uncertainty in any interpretation of such texts. It would therefore be useful to try to imagine other possible interpretations of the results of the analysis, and indicate how a different experiment could assess such alternatives.
- 4.6 Sixth, it is necessary to estimate how reliable the results were likely to be, in view of the kind, amount, or quality of information that was actually acquired. It was helpful when studies

incorporated different approaches with regard to one or more of the previous five principles, and when the studies provided sufficient information for the repetition of the experiment, or for its adaption to other contexts.

## 5 Conclusions

An effective study of authorship style in the synoptics does appear to be a possibility. However, the results can be significantly affected by the six principles listed above. In brief, the method that we can expect to be effective, and that we propose to test and apply will be defined by the following characteristics: The method will (a) compare only two authors from the same period who employ the same genre and form; (b) begin with a broad range of syntax acquired from short windows; (c) be applied to samples such that each sample, respectively, will originate with the composition of only one author, and will contain a minimum of preceding material; (d) assess and prioritise variables in terms of their discriminating power; (e) attempt to consider alternatives in the interpretation, or in the implications of the results; and (f) provide a description of the experiment that is full, clear and concise.

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The next chapter, chapter four, will discuss the execution of such a quantitative analysis of syntax for source analysis. It will apply and test this theory on texts of the most indisputable and homogeneous authorship available (and not, at this point, on possible source material). The text will be confined to work that Mark and Luke, respectively, are most likely to have composed themselves. (This would be text with *both* of the following two characteristics. First, text that appears in uniquely in each text respectively, *without parallel*. Secondly, text that is consistent with the *editorial form*—for example, text that is describing a transition from one scene to another.) We may note that it is in chapter four that a close attention to statistical methodology will be particularly useful to us.

Chapter five will make a small advance on chapter four by applying the theory to a source that is as well known as possible—the triple tradition as represented in Luke. There will still be a strong element of trial in such an application of the method to source material, because the results ought to correlate with the literary debate in chapter two.

Chapter six will contain our conclusions: This will entail a review of those things that we set out to do; of the conclusions; of the limitations; of the applications; and of suggestions for future work.

## Chapter Four: Using syntax chains to discern the author of a block

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### 1 Introduction

To recap, the thesis in general is that style, as expressed through syntax, can provide clues regarding authorship and history in the synoptics. 'History,' here, accentuates as specific an idea as possible about the nature of the relationship between one synoptic Gospel and another, or the kind of reliance that one synoptic Gospel had upon another. The thesis intends to evaluate the capacity of syntax to contribute to the debate over which synoptic Gospel used which material as a source. If the origins of the gospels are more distinct and less vague, we will surely better comprehend the intentions of the gospel writers.

Chapter two outlined the present state of the debate on issues connected with one of the clearest sources. The debate is a literary examination of authorship, focused on an examination of the parallels that exist between Luke and Mark.

Chapter three turned to examine more closely the possibilities for an examination of authorship through style. A review of the literature suggested that an assessment of authorship style did appear to be a possibility, especially if the assessment had the following characteristics: The method should (a) compare only two authors from the same time who employ the same genre and form; (b) begin with a broad range of syntax acquired from short windows; (c) not use a sample composed by more than one author, and set aside text that is likely to have come from somewhere other than the author concerned; (d) assess and prioritise variables in terms of their discriminating power; (e) attempt to consider alternatives to the principle interpretation offered with regard to the results, or alternatives to the suggested implications of the results; and (f) provide a description of the experiment that is full, clear and concise.

Chapter four: Following the introduction in section one, the aim of the chapter appears in section two—which is to test and apply the syntax chain method. Section three will deal with methodology, section four with the process, sections five and six with the results and the discussion of them, and section six with the conclusions.

Section three, the methodology (page 140), will briefly address the reasons for which syntax is used to measure authorship style, and is used to classify an 'unknown' block of writing with a block to which it is related by a common author, rather than classifying it with a block which is by a different author. The process of doing this is the focus of section four (page 153). The method numbers the words of the synoptic text, morphologically tags them, separates out the editorial layers, forms 'ten word windows,' finds all the syntax chains, and calculates the list of proportions of them in each block of text. There are statistical measures that exist for the relative distances between a pair of lists. The measures will be applied to these lists, or distributions, of the stylistic features of syntax that exist in each of the blocks respectively.

In section five (page 176), the results, with the subsequent discussion of the results, we will see that when we compare two blocks from the compositional contribution of Mark, and then compare one with a third block from the composition of Luke, the results of different distance measures are mixed, with two distance measures discriminating correctly. In the conclusions (page 183), we will note that the method has discriminating power in the case considered, at least in the range of the highest and in that of the lowest proportions. Finally, we will note certain characteristics of style in each layer: Characteristics of the final editor of Mark included the accumulation of plurals, and of nominative nouns; while Luke emphasised the singular. A summary of the chapter appears on page 183.

## **2 Aim: To quantify, measure and assess the discriminating power of syntax**

In chapter four, the aim is to test the proposition that syntax can be quantified, measured and used as a characteristic to distinguish one writer from another writer from the same period, when they use the same genre and form. In this chapter the proposition is grounded with regard to the

compositional work of Mark and Luke. It can be so grounded for two reasons: First, Mark and Luke are known to be two different writers. Secondly, we have distinct examples of their writing. These examples are in the compositional work of each of them respectively, especially in the 'framing' material that appears in each of their gospels and not in the other, nor in any other work. In this chapter we will investigate whether there is a characteristic pool or set of syntax in one block of material (Mark) on the one hand, and a notably different pool in another block of material (Luke) on the other.

### 3 Methodology

If a broad generalisation or a summary statement of the review in chapter three can be entertained, then we can say the following. The review suggested that synoptic commentators have used syntax to good effect, while they lacked comprehensiveness. Then again, stylistic researchers have been more comprehensive in the features that they studied, but needed a more sophisticated evaluation of syntax, and needed a greater sensitivity to the different literary considerations that ran through the very small texts that they examined.

Our approach will be a synthesis and an extension of such widely used practices. Now we may begin to be more specific about our method. A concise statement of the distinguishing features of our method of stylistic analysis is this: First, the method is a comparison of only two writers from one period, genre and form, rather than embracing a greater range with regard to any of these four factors. Secondly, the method employs stylistic features made up of syntax chains, by contrast with idioms, with vocabulary, or with lexical selections. Third, the method evaluates a comprehensive list or set of such stylistic features from the text in question, as opposed to a limited list of features, or as opposed to a list acquired from outside the text in question. Fourth, the method assesses these features in short word-windows as a unit of measure, by contrast with, for example, samples made up of sentences, lines, or hundreds of words of Greek text. This is because (from page 92 above) it is at least possible that any such layer is made up of small and fragmentary parts.

Chapter three gave the reasons for which a comprehensive assessment of syntax chains is likely to be more fruitful than other methods using style as a measure of authorship. Those reasons also, then, constitute a motivation for using a comprehensive assessment of syntax chains in measuring authorship through style. Here in chapter four, we intend to more clearly describe 'a comprehensive assessment of syntax chains,' and to elaborate and test a method for examining style through such a comprehensive assessment of syntax chains .

We have available two blocks of writing, known to belong to these two different authors respectively. The two blocks are the composition or editorial contribution of Mark and Luke. A third block can be drawn from one of these two blocks, namely, from Mark. The method of syntax chains is then used to classify the third block as coming from the first or second block. If the method has discriminating power, it would classify the third block "correctly," that is, it would classify the third block with Mark. This general description is now discussed in more detail.

Before discussing the method (on page 149 below), we describe the construction of syntax chains. We use a computer based system of morphological tagging on synoptic materials to do statistical calculations to determine if we can detect sources in the New Testament. 'Morphological tagging' refers to the way in which each word in Greek can be annotated by a list of fifty-four grammatical features. It is important to realise that what will be distinctive of the author is not these grammatical features individually, but rather various structures of them, through the syntax chains that we will discuss below. In Greek, there are a number of grammatical features that exist, which are also called parts of speech, morphological possibilities, or possibilities of linguistic change. The fifty-four items in the list below are intended to cover every grammatical possibility in a single Greek word. We may also note that the items on this list do involve a certain level of redundancy or repetition in covering every possibility. (The list also appears in an appendix on page 247.)

We will not be satisfied with accident, that is, with the consideration of rudimentary, single aspects of grammatical inflexion alone. There are, in Greek, certain grammatical structures like adverbial participles, adjectival participles, and articular infinitives. One can think of attributive or predicative adjectives, cognate accusatives and genitive absolutes, and many more besides. These all involve a

certain set of grammatical features that arch across more than one word. We will take these into consideration in the following way: These fifty-four features listed below will be combined together across more than one word to embrace such grammatical structures. The syntax chains described further on will cover all the grammatical possibilities contained in three words, even if those words are not immediate neighbours to one another. In that way, we will address all those grammatical constructions to which we have just referred, and numerous others, whether they have a formal name or not.

We may discuss the adjectival and the adverbial use of the participle as a particular instance of this question of grammatical features that arch across more than one word in our method. This instance shows some aspects of the possibilities and of the limitations of the method. With regard to the adjectival and the adverbial use of participles, Nunn ([1938] 1973:122) said this:

A participle may be used either adjectivally or adverbially. When it is used adjectivally it limits the noun with which it agrees, just like an adjective. It is generally best translated into English by a relative clause, especially when it is preceded by an article.... When a participle is used adverbially it is equivalent to an adverbial clause modifying some other verb in the sentence. Such participles are generally best translated into English by a suitable adverbial clause. The context must decide which kind of adverbial clause the participle in question is equivalent to: the participle does not in itself denote purpose, condition, concession or time, etc., but the context implies some such idea and the participle admits it.

The adjectival use of a participle should be captured or reflected in at least one syntax chain by virtue of there being a noun close by with which the participle agrees in case. The adverbial participle should be reflected by virtue of the absence of a noun close by that is in the same case as the participle. Notably, side-by-side windows, such as we use in this initial exploration of the method, would interfere with a certain amount of adjectival participles if they have the participle in one window with the noun in the same case in the neighbouring window. In further research or the further application of the method it will be necessary to adopt windows which advance only one word at a time. That would far reduce this particular problem. Another problem, of course, is when the grammatical construction arches across a set of words that are further apart than the whole size of the word window. These problems are not critical to the study, however. This is because the same limitations (of side-by-side windows, and of the same size of word window) apply to all the materials

concerned. Therefore, a comparable percentage of constructions should be included on the one hand, or excluded on the other.

| Table 4.1: The fifty-four grammatical features available for each word in the synoptic Gospels   |
|--|
| 1=Descriptive adjective; 2=Adverb; 3=Conjunction; 4=Correlative or functional adverb, pronoun or word often used with or for another; 5=Personal Pronoun; 6=Definite Article; 7=Demonstrative Pronoun; 8=Relative Pronoun; 9=Feminine, Any; 10=Masculine, Any; 11=Neuter, Any; 12=Nominative, Any; 13=Vocative, Any; 14=Accusative, Any; 15=Genitive, Any; 16=Dative, Any; 17=Noun, Any; 18=Noun: Nominative; 19=Noun: Vocative; 20=Noun: Accusative; 21=Noun: Genitive; 22=Noun: Dative; 23=Particle; 24=Singular; 25=Plural; 26=Preposition; 27=Verb: Any; 28=Verb: Pres.; 29=Verb: Imperfect tense; 30=Verb: Future; 31=Verb: Aorist; 32=Verb: Perfect; 33=Verb: Pluperfect; 34=Verb: Indicative Mood; 35=Verb: Imperative; 36=Verb: Infinitive ; 37=Verb: Subjunctive; 38=Verb: Optative; 39=Verb: Participle (any case); 40=Verb: Participle Accusative; 41=Verb: Participle Dative; 42=Verb: Participle Genitive; 43=Verb: Participle Nominative; 44=Verb: Participle Vocative; 45=Verb: Active Voice; 46=Verb: Middle; 47=Verb: Passive; 48=Verb: 1st Person; 49=Verb: 2nd; 50=Verb: 3rd; 51=Exclamation or ejaculative particle; 52=Number: Ordinal; 53=Noun: Proper; 54=Pronoun, Interrogative. |

The process of annotating all the Greek words in this way, then, is called ‘morphological tagging.’ The task of tagging the words of the synoptic Gospels in this way, is based on the computer coding work done by two organisations. The first, is *Thesaurus Linguae Graeca* of the University of California; and, secondly, by the CCAT coding of the Biblical materials by the Packard Humanities Institute at the University of Pennsylvania (1987) (Friberg & Friberg 1981a, 1981b). Our number of grammatical categories is fifty-four. This compares with the number of morphological categories that appear in other works engaged in Biblical linguistics, for example, Neumann (1990:146f), and Radday (1985:30).

Thus, for each word we have a morphological tag of dimension 54. This will be the basis of our calculations. Conceptually, let  $w_i$  represent the  $i$ -th word and

$$mf_{ij} = I(\text{word 'i' has morphological tag 'j'})$$

where  $I(.)$  denotes the so called indicator function, that is,  $I(A)=1$  if event  $A$  is true, and  $I(A)=0$  otherwise.

This notation results in the following matrix of morphological indicators for the 49050 words of the synoptic Gospels:

| Word        | Morphological tag 1 | Tag 2          | Tag j      | Tag 54          |
|-------------|---------------------|----------------|------------|-----------------|
| $w_1$       | $mf_{1,1}$          | $mf_{1,2}$     | ...        | $mf_{1,54}$     |
| $w_2$       | $mf_{2,1}$          | $mf_{2,2}$     | ...        | $mf_{2,54}$     |
| $w_3$       | $mf_{3,1}$          | $mf_{3,2}$     | ...        | $mf_{3,54}$     |
| ...         | ...                 | ...            | ...        | ...             |
| $w_i$       | $mf_{i,1}$          | $mf_{i,2}$     | $mf_{i,j}$ | $mf_{i,54}$     |
| ...         | ...                 | ...            | ...        | ...             |
| $w_{49050}$ | $mf_{49050,1}$      | $mf_{49050,2}$ | ...        | $mf_{49050,54}$ |

Now, following the grammatical numbering in the table above, the first and last few morphological tags on a word listing of the synoptic Gospels, in the order of Mark, Matthew, and Luke, are:

|  |
|--|
| Word 1. Mark 1:1 Ἄρχῃ, ARCHE ('The beginning') will be designated as (17) noun; (9) feminine; (12, 18) nominative case; (24) singular. |
| Word 2. Mark 1:1 τοῦ, ΤΟΥ ('of the'): (6) definite article; (11) neuter; (15) genitive case; (24) singular.                            |
| Word 3. Mark 1:1 εὐαγγελίου, EUAGGELIOU ('gospel'): (17) noun; (11) neuter; (15, 21) genitive case; (24) singular.                     |
| ...  |
| Word 49049. Luke 24:53 τὸν, ΤΟΝ (English: 'the'): (6) definite article; (10) masculine; (14) accusative case; (24) singular.           |
| Word 49050. Luke 24:53 θεῶν, ΘΕΟΝ (English: 'God'): (17) noun; (10) masculine; (14, 20) accusative case; (24) singular.                |

—or,

| Word        | Gospel     | Actual words: Greek, transliteration (English) | Morphological tags |
|-------------|------------|--|--------------------|
| $w_1$       | Mark 1:1   | Ἄρχῃ, ARCHE ('The beginning')                  | 9, 12, 17, 18, 24  |
| $w_2$       | Mark 1:1   | τοῦ, ΤΟΥ ('of the')                            | 6, 11, 15, 24      |
| $w_3$       | Mark 1:1   | εὐαγγελίου, EUAGGELIOU ('gospel')              | 11, 15, 17, 21, 24 |
| ...         | ...        | ...  | ...                |
| $w_{49049}$ | Luke 24:53 | τὸν, ΤΟΝ ('the')                               | 6, 10, 14, 24      |
| $w_{49050}$ | Luke 24:53 | θεῶν, ΘΕΟΝ ('God')                             | 10, 14, 17, 20, 24 |

(There are some moot points concerning textual and morphological issues, and regarding the Greek language database, which we will discuss on page 163 below.) The key variables we will use in making up the syntax chains in the next part of this chapter will be these: First, we will use one grammatical feature per word in a particular chain. Other grammatical features of the one word will appear in other chains. Secondly, we will use a set of three grammatical features over three words that specifically retains the order in which they appear. Third, the three words will fall within the

boundaries of a ten word window. Any one of these three variables could be changed to obtain a different—a less, or a more detailed-- profile of one or another linguistic pool.

The idea behind our calculations is to go to the  $t^{\text{th}}$  word,  $w_t$  say, and there put a window,  $window_h(t)$  say, of width  $h$ , over the matrix of morphological tags. Inside the window we compute the distribution  $D_{h,k}(t)$  say, of  $k$  morphological items that make up each syntax chain, ignoring the distance between words or such morphological items. The notation

$$t \rightarrow window_h(t) \rightarrow X_h(t) \rightarrow D_{h,k}(t)$$

is meant to convey the following: At  $t$  we put a window,  $window_h(t)$  say, of width  $h$ . The matrix of morphological tags inside the  $window_h(t)$  will be denoted by  $X_h(t)$ . The distribution of frequency of occurrence of chains of length  $k$  in  $X_h(t)$  will be denoted by  $D_{h,k}(t)$ . Combining these distributions over the whole block gives a distribution of frequencies of occurrence of syntax chains of length  $k$  from word windows of length  $h$ . For a generic block  $x$ , we denote this distribution by  $D_{h,k}(x)$ . In the table below,  $x$  takes on the values  $A$ ,  $B$ , and  $C$ .

Table 4.4: A symbolic list of the syntax chains that exist in three blocks:  
(An example of specific figures in a table similar to this appears on page 178.)

| Block A is the unknown block. Block B is a first block of known authorship. Block C is a second of known (and different) authorship. |   |   |   |   |   |   |   |
|--|---|---|---|---|---|---|---|
| Chain number   | Syntax chains (SC, here). At least one was found in each of the blocks compared | Frequency, or total of this syntax chain in block A | Proportion of each syntax chain in block A. Frequency, or amount $f_{x,1}$ , divided by the column total $F_{N,1}$ makes up list or distribution $D_{h,k}(A)$ | Frequency, or total of this syntax chain in block B | Proportion of each syntax chain in block B. Frequency, or amount $f_{x,2}$ , divided by the column total $F_{N,2}$ makes up list or distribution $D_{h,k}(B)$ | Frequency, or total of this syntax chain in block C | Proportion of each syntax chain in block C. Frequency, or amount $f_{x,3}$ , divided by the column total $F_{N,3}$ makes up list or distribution $D_{h,k}(C)$ |
| 1  | SC <sub>1</sub>   | $f_{1,1}$   | $p_{1,1}$   | $f_{1,2}$   | $p_{1,2}$   | $f_{1,3}$   | $p_{1,3}$   |
| 2  | SC <sub>2</sub>   | $f_{2,1}$   | $p_{2,1}$   | $f_{2,2}$   | $p_{2,2}$   | $f_{2,3}$   | $p_{2,3}$   |
| 3  | SC <sub>3</sub>   | $f_{3,1}$   | $p_{3,1}$   | $f_{3,2}$   | $p_{3,2}$   | $f_{3,3}$   | $p_{3,3}$   |
|  | ...   | ...   | ...   | ...   | ...   | ...   | ...   |
| $m$  | SC <sub><math>m</math></sub>  | $f_{m,1}$   | $p_{m,1}$   | $f_{m,2}$   | $p_{m,2}$   | $f_{m,3}$   | $p_{m,3}$   |
|  | ...   | ...   | ...   | ...   | ...   | ...   | ...   |
| $N$  | SC <sub><math>N</math></sub>  | $f_{N,1}$   | $p_{N,1}$   | $f_{N,2}$   | $p_{N,2}$   | $f_{N,3}$   | $p_{N,3}$   |
|  | TOTAL ( $f$ )   | $F_{N,1}$   | 1   | $F_{N,2}$   | 1   | $F_{N,3}$   | 1   |

The  $m$  in the formulae that follow refers to any particular syntax chain, and  $m$  is of the same value as the row number in the list above. The frequency is the count of occurrences of a particular syntax chain, and is represented by  $f$ , so that  $f_{m,1}$  is the frequency in block A for one syntax chain or for one  $m$ -row number. The proportion for that chain or row number is represented by  $p$ , so that  $p_{m,1}$  is the proportion for that chain in block A. The value  $p_i$  will represent the average of  $p_{i,1}$  and  $p_{i,2}$ , or of  $p_{i,1}$  and  $p_{i,3}$ , respectively.

Then we compare the columns in pairs, twice. The first pair is  $D_{h,k}(A)$  with  $D_{h,k}(B)$ , or the proportion for a given chain in the columns for the A block, with proportion for that chain in the columns for the B block. The second pair is  $D_{h,k}(A)$  with  $D_{h,k}(C)$ , or the proportion for a given chain in the columns for the A block, with proportion for that chain in the columns for the C block. The

comparison is to measure the distance between the two columns that make up the pair, in each case respectively. This distance measure, say  $d$ , is thus defined on distributions:

$$d[D_{h,k}(A), D_{h,k}(B)] \quad (1)$$

$$d[D_{h,k}(A), D_{h,k}(C)] \quad (2)$$

There are several possible choices of difference measures, as we will see on page 149 below. Using some of these measures, we establish which is smaller out of (1) and (2).

The calculations below have been based on non-overlapping windows, for the sake of minimising or eliminating correlation between the chains. Further study could compute the distribution  $D_{h,k}(t)$  for every  $t$ , so making overlapping windows. If the method is effective, then the purpose of overlapping windows would be a more accurate assessment of change points from one source to another.

For example, using the table "Morphological tags on a word listing of the synoptic Gospels" (page 144) to form chains of length  $k=3$  (3-chains) using a window width of  $h=10$  words (a 10-word window), we could start as follows:

09, 06, 11  
 09, 06, 15  
 09, 06, 17  
 09, 06, 21  
 09, 06, 24

09, 11, 11  
 09, 11, 15  
 09, 11, 17  
 09, 11, 21  
 09, 11, 24

09, 15, 11  
 09, 15, 15  
 09, 15, 17  
 09, 15, 21  
 09, 15, 24

Since we ignore the distance between words,

$(w_1, w_2, w_3) = (09, 06, 11)$  would be the same as

$(w_1, w_2, w_3) = (09, 06, 11) = (w_4, w_7, w_9)$

There are 9003 '3-chains' in the first 10-word window, leading to the distribution  $D_{10,3}(1)$ . The annotation indicates that the distribution (of 9003) in this window is ten words, the chain is of three elements, and the window is the first. On average there are approximately 5500 3-chains in a 10-word window.

### 3.1 The application of the generic method to a particular case

The primary question that lies before us in this chapter can be stated like this: If we split the editorial layer of Mark into two halves, would the methodology recognise that we are dealing with the same author in those two halves, by contrast with the author of the editorial layer of Luke? This would require that the distributions would be more homogeneous *inside* the editorial layer of each of the synoptic gospels, relative to a comparison of distributions *across* two different editorial layers. The following diagram shows two blocks (block A and block B) made up of two halves of the editorial layer of Mark ( $Mark_1$  and  $Mark_2$ ), and a third block (block C) made up of the editorial layer of Luke. Note that these blocks are made up of the same genre, the same form, and that they come from a comparable period of time.

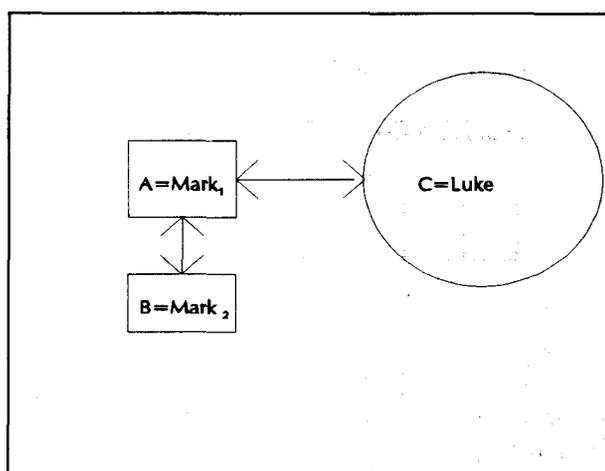


Figure 3.1: The three blocks to be compared in this chapter

Let there be three blocks of writing, then, namely A, B, and C. Let two of these blocks (A and B, say) be two halves of one author which can now be  $M_1$  and  $M_2$ . Block C is from a different author, which can now be L. We want to compare  $M_1$  with  $M_2$ , versus  $M_1$  with L. The question is this: is  $M_1$  'closer' to  $M_2$  than  $M_1$  is to L? For this we need a distance measure or measures between distributions. For each block and all syntax chains, develop a frequency distribution of occurrence (in the way indicated above). We end up with three distributions over the list of syntax chains and want to compare these three distributions with each other.

As mentioned before, we will denote a distance function between two distributions by  $d$ . We can now get the 'distances' between  $M_1$  and  $M_2$ , namely,  $d_1 = d(D_{h,k}(M_1), D_{h,k}(M_2))$ , and between  $M_1$  and L, namely,  $d_2 = d(D_{h,k}(M_1), D_{h,k}(L))$ . Is  $d_1$  'less than'  $d_2$ ? From a number of distance measures that are available, we selected the 'geodesic distance'; the sum of the logs of the ratios; a weighted sum of the logs of the ratios; and Chi-squared. The comparisons will be made with regard to all of these distance measures. (A table of results appears on page 182.) Here is a brief description of each of these, and the way in which they are calculated.

### 3.2 Distance measures

#### 3.2.1 The 'geodesic distance'

The geodesic distance treats each distribution as if it is arranged around a sphere, and then measures the distance between the two spheres. If one distribution is close to the other distribution, the result will be near zero. If one is far from the other, the result will be near the value of one.

Referring to the table on page 146 above, we define the geodesic distance between  $D_{h,k}(A)$  and  $D_{h,k}(B)$  as:

$$\frac{2}{\pi} \text{Arccos} \left\{ \frac{\sum_m p_{m,1} p_{m,2}}{\sqrt{\sum_m p_{m,1}^2 \sum_m p_{m,2}^2}} \right\}$$

Similarly, the geodesic distance between  $D_{h,k}(A)$  and  $D_{h,k}(C)$  is given by:

$$\frac{2}{\pi} \text{Arccos} \left\{ \frac{\sum_m \rho_{m,1} \rho_{m,3}}{\sqrt{\sum_m \rho_{m,1}^2 \sum_m \rho_{m,3}^2}} \right\}$$

### 3.2.2 The sum of the logs of the ratios

The sum of the logs of the ratios is a scaled measure of the distance, with a small constant  $e$ . The smaller the result of the sum of the logs of the ratios, the closer is the distance between the two lists of information. The larger the result, the further is the distance between them. When comparing  $D_{h,k}(A)$  with  $D_{h,k}(B)$ , we use:

$$\text{Sum of the logs of the ratios} = \sum_{m=1}^N \log \left( \frac{\rho_{m,1} + e}{\rho_{m,2} + e} \right)$$

When comparing  $D_{h,k}(A)$  with  $D_{h,k}(C)$ , we use:

$$\text{Sum of the logs of the ratios} = \sum_{m=1}^N \log \left( \frac{\rho_{m,1} + e}{\rho_{m,3} + e} \right)$$

When comparing  $D_{h,k}(A)$ ,  $D_{h,k}(B)$ , and  $D_{h,k}(C)$ , simultaneously we use:

$$\text{Sum of the logs of the ratios for 3 blocks} = \sum_{m=1}^N \log \left( \frac{|\rho_{m,1} - \rho_{m,2}| + e}{|\rho_{m,1} - \rho_{m,3}| + e} \right)$$

### 3.2.3 Weighted sum of the logs of the ratios

A variation of the above (3.2.2), is to use a weighted sum of logs, that is, respectively:

Comparing  $D_{h,k}(A)$  with  $D_{h,k}(B)$ :

$$\sum_{m=1}^N w_m \log \left( \frac{\rho_{m,1} + e}{\rho_{m,2} + e} \right)$$

Comparing  $D_{h,k}(A)$  with  $D_{h,k}(C)$ :

$$\sum_{m=1}^N w_m \log\left(\frac{p_{m,1} + e}{p_{m,3} + e}\right)$$

Comparing  $D_{h,k}(A)$  with  $D_{h,k}(B)$ ,  $D_{h,k}(C)$  simultaneously:

$$\sum_{m=1}^N w_m \log\left(\frac{|p_{m,1} - p_{m,2}| + e}{|p_{m,1} - p_{m,3}| + e}\right)$$

where  $\{w_m\}$  is a set of weights.

### 3.2.4 Chi-squared

The chi-squared measure deals with a sum of squares of weighted differences between two distributions. When comparing  $D_{h,k}(A)$  with  $D_{h,k}(B)$ , the chi-squared measure is given by

$$X^2 = \sum_{m=1}^N \frac{(p_{m,1} - p_{m,2})^2}{p_m}$$

where  $p_m = (p_{m,1} + p_{m,2})/2$  are weights (actually the reciprocal of weights).

In a similar fashion, when comparing  $D_{h,k}(A)$  with  $D_{h,k}(C)$ , the chi-square measure is given by

$$X^2 = \sum_{m=1}^N \frac{(p_{m,1} - p_{m,3})^2}{p_m}$$

where, in this case,  $p_m = (p_{m,1} + p_{m,3})/2$ .

More generally, for a set of weights  $\{w_m\}$ , we could use

$$X^2 = \sum_{m=1}^N w_m (p_{m,1} - p_{m,2})^2$$

and

$$X^2 = \sum_{m=1}^N w_m (p_{m,1} - p_{m,3})^2$$

respectively.

### Remark on Weighting

Our use of weights in the distance measures is a very natural way of emphasising some variables (syntax chains) more than others.

In some of the distance measures above we have already introduced weights. Over and above the fact that they can be used to place emphasis on different variables, they can also be used to place emphasis on different parts of the distributions, for example, the central part or the tails.

Furthermore, we may wish to weight the distance measures on the basis of the 'distinguishing features' of the 'known' distributions from block B and block C. A syntax chain is more significant for distinguishing one author from the other if the distance between their proportions of using the chain is greater. Conversely, the chain is less significant if the distance is smaller. We define the weight  $w_m$  by feature  $p_m$  as

$$w_m = \frac{|p_{m,2} - p_{m,3}|}{\left(\frac{p_{m,2} + p_{m,3}}{2}\right)}$$

or even some other alternative. Features which have a large value of  $w_m$  are those which distinguish strongly between authors, and should therefore be heavily weighted. Features which have a value of  $w_m$  close to zero do not distinguish between authors and are not important in our comparison. Such a weighting effect can be applied to any of the above distance measures.

#### **4 The process of constructing syntax chain distributions (details and data)**

This section contains detailed information connected with the data involved in the process of forming distributions in the three blocks, for the sake of comparing these three distributions. The three blocks involved are all compositional work from, first, block A=Mark (odd half) or  $M_1$  (page 153); secondly, block B=Mark (even half), or  $M_2$  (page 167); and, third, block C=Luke, or L (page 168). This is followed (on page 176) by the details of evaluating and comparing the three distributions.

##### **4.1 Distribution A: First block—the editorial layer of Mark (odd half):**

Here we form a distribution in block A, the odd half of the editorial layer of Mark. There are two main parts in the process of forming a distribution in the first block of material. First, to ensure that the selected material is appropriate for comparison; and secondly, to form a distribution of the syntax chains in A, the block under examination.

##### **4.1.1 Part one—select appropriate material for comparison**

From the layer to be examined, we select sections for block A that compare in form to the material against which the comparison will be made—blocks B, and C. We must do our best to ensure two things: First, that in A and B we are dealing with one writer in the layer to be examined. In A and B, this was Mark, the final editor and so the writer of the editorial form in Mark. (The results will indicate that a further division is required. It will be necessary to divide the editorial form that

appears in the triple tradition from the editorial form that appears in Mark alone.) At the same time, we need to know that block C represents the writing of a different author. We have every reason to think that the final editor of Luke (block C) is different to the final editor of Mark (block A and block B).

Secondly, we must ensure that we have a form of writing that is similar within all three of the blocks—A, B and C—that we will compare. Here we want to ensure that we are dealing with one literary form, to minimize the effect any syntax that may be specific to that *form* rather than to the *writer*. To ensure such a consistency, we will select those sections of Mark and Luke that belong to the editorial layers of each of those two gospels. Therefore, all three (A, B, and C) will be of the editorial form of writing, and so they will be of a comparable form. In this task, we follow the lead of Gaston, Dibelius and Bultmann. Following such a selection, we find that there are more than fifteen hundred words in the editorial form in Mark’s Gospel. When we consider the block of material concerned, it is clearly necessary to present the contents of the blocks of writing that we intend to compare, and to declare its population size as accurately as possible. That is, we ought to list our view of the contents of each block, or layer, and to state the amount of words in them, which is what we will now do.

Table 4.5: The editorial form or layer in Mark

| The fragment represented in this row begins from: |     |     |                 | The fragment represented in this row ends with: |     |     |                 |
|---|-----|-----|-----------------|---|-----|-----|-----------------|
| serial no.:                                       | ch: | vs: | the Greek word: | serial no.:                                     | ch: | vs: | the Greek word: |
| 1   | 1   | 1   | ARXH\           | 14  | 1   | 2   | PROFH/TH        |
| 214   | 1   | 14  | META\           | 230   | 1   | 14  | QEOU=           |
| 330   | 1   | 21  | KAI\            | 360   | 1   | 22  | GRAMMATEI=S     |
| 428   | 1   | 27  | DIDAXH\         | 431   | 1   | 27  | ECOUSI/AN       |
| 441   | 1   | 28  | KAI\            | 453   | 1   | 28  | GALILAI/AS      |
| 498   | 1   | 32  | OYI/AS          | 543   | 1   | 34  | AUTO/N          |
| 575   | 1   | 38  | KAI\            | 578   | 1   | 38  | /AGWMEN         |
| 580   | 1   | 38  | EIS             | 582   | 1   | 38  | EXOME/NAS       |
| 584   | 1   | 38  | /NA             | 606   | 1   | 39  | EKBA/LLWN       |
| 627   | 1   | 41  | EKTEI/NAS       | 631   | 1   | 41  | H/YATO          |
| 646   | 1   | 43  | KAI\            | 646   | 1   | 43  | KAI\            |
| 648   | 1   | 43  | AUTW=           | 651   | 1   | 43  | AUTO/N          |
| 655   | 1   | 44  | /ORA            | 659   | 1   | 44  | ALLA\           |

Table 4.5: The editorial form or layer in Mark

| The fragment represented in this row begins from: |     |     |                 | The fragment represented in this row ends with: |     |     |                 |
|---|-----|-----|-----------------|---|-----|-----|-----------------|
| serial<br>no.:                                    | ch: | vs: | the Greek word: | serial<br>no.:                                  | ch: | vs: | the Greek word: |
| 661   | 1   | 44  | SEAUTO\N        | 670   | 1   | 44  | SOU             |
| 677   | 1   | 45  | O               | 683   | 1   | 45  | KAI\            |
| 685   | 1   | 45  | TO\N            | 690   | 1   | 45  | DU/NASQAI       |
| 692   | 1   | 45  | EIS             | 733   | 2   | 2   | LO/GON          |
| 783   | 2   | 6   | TW=N            | 784   | 2   | 6   | GRAMMATE/WN     |
| 902   | 2   | 13  | KAI\            | 917   | 2   | 13  | AUTOU/S         |
| 966   | 2   | 16  | GRAMMATEI=S     | 968   | 2   | 16  | FARISAI/WN      |
| 1005  | 2   | 17  | OUK             | 1010  | 2   | 17  | AMARTWLOU/S     |
| 1061  | 2   | 19  | O/SON           | 1086  | 2   | 20  | HME/RA          |
| 1222  | 2   | 27  | KAI\            | 1224  | 2   | 27  | AUTOI=S         |
| 1250  | 3   | 1   | PA/LIN          | 1250  | 3   | 1   | PA/LIN          |
| 1328  | 3   | 6   | KAI\            | 1370  | 3   | 8   | TH=S            |
| 1372  | 3   | 8   | KAI\            | 1394  | 3   | 9   | I/NA            |
| 1397  | 3   | 9   | AUTW=           | 1491  | 3   | 16  | PE/TRON         |
| 1544  | 3   | 20  | KAI\            | 1555  | 3   | 20  | FAGEI=N         |
| 1568  | 3   | 22  | KAI\            | 1574  | 3   | 22  | KATABA/NTES     |
| 1666  | 3   | 28  | AMH\N           | 1668  | 3   | 28  | UMI=N           |
| 1704  | 3   | 30  | O/TI            | 1708  | 3   | 30  | E/XEI           |
| 1794  | 4   | 1   | KAI\            | 1840  | 4   | 3   | AKOU/ETE        |
| 1945  | 4   | 10  | KAI\            | 2015  | 4   | 14  | SPEI/REI        |
| 2142  | 4   | 21  | KAI\            | 2144  | 4   | 21  | AUTOI=S         |
| 2186  | 4   | 24  | KAI\            | 2191  | 4   | 24  | AKOU/ETE        |
| 2216  | 4   | 26  | KAI\            | 2218  | 4   | 26  | OU/TWS          |
| 2276  | 4   | 30  | KAI\            | 2277  | 4   | 30  | E/LEGEN         |
| 2333  | 4   | 33  | KAI\            | 2355  | 4   | 34  | MAQHTAI=S       |
| 2357  | 4   | 34  | PA/NTA          | 2387  | 4   | 36  | AUTOU=          |
| 2475  | 5   | 1   | KAI\            | 2486  | 5   | 1   | GERASHNW=N      |
| 2592  | 5   | 8   | E/LEGEN         | 2602  | 5   | 8   | ANQRW/POU       |
| 3158  | 5   | 43  | KAI\            | 3165  | 5   | 43  | TOU=TO          |
| 3171  | 6   | 1   | KAI\            | 3185  | 6   | 1   | AUTOU=          |
| 3296  | 6   | 6   | KAI\            | 3323  | 6   | 8   | I/NA            |
| 3349  | 6   | 10  | KAI\            | 3351  | 6   | 10  | AUTOI=S         |
| 3386  | 6   | 12  | KAI\            | 3401  | 6   | 13  | EQERA/PEUON     |
| 3704  | 6   | 30  | KAI\            | 3744  | 6   | 31  | FAGEI=N         |
| 3746  | 6   | 32  | KAI\            | 3768  | 6   | 33  | PO/LEWN         |
| 3770  | 6   | 33  | EKEI=           | 3794  | 6   | 34  | POLLA/          |
| 3941  | 6   | 45  | KAI\            | 3970  | 6   | 46  | PROSEU/CASQAI   |
| 4068  | 6   | 52  | OU              | 4088  | 6   | 53  | KAI\            |
| 4090  | 6   | 54  | KAI\            | 4098  | 6   | 54  | AUTO\N          |
| 4100  | 6   | 55  | O/LHN           | 4111  | 6   | 55  | E/XONTAS        |

Table 4.5: The editorial form or layer in Mark

| The fragment represented in this row begins from: |     |     |                 | The fragment represented in this row ends with: |     |     |                 |
|---|-----|-----|-----------------|---|-----|-----|-----------------|
| serial no.:                                       | ch: | vs: | the Greek word: | serial no.:                                     | ch: | vs: | the Greek word: |
| 4113  | 6   | 55  | O/POU           | 4151  | 6   | 56  | ESW//ZONTO      |
| 4158  | 7   | 1   | KAI\            | 4161  | 7   | 1   | GRAMMATE/WN     |
| 4180  | 7   | 3   | OI              | 4188  | 7   | 3   | MH\             |
| 4190  | 7   | 3   | NI/YWNTAI       | 4217  | 7   | 4   | KAI\            |
| 4219  | 7   | 4   | KAI\            | 4219  | 7   | 4   | KAI\            |
| 4221  | 7   | 4   | KAI\            | 4222  | 7   | 4   | KLINW=N         |
| 4228  | 7   | 5   | KAI\            | 4230  | 7   | 5   | GRAMMATEI=S     |
| 4374  | 7   | 14  | KAI\            | 4385  | 7   | 14  | SU/NETE         |
| 4409  | 7   | 17  | O/TE            | 4428  | 7   | 18  | UMEI=S          |
| 4430  | 7   | 18  | ESTE            | 4432  | 7   | 18  | NOEI=TE         |
| 4465  | 7   | 20  | E/LEGEN         | 4495  | 7   | 22  | DO/LOS          |
| 4497  | 7   | 22  | OFQALMO\S       | 4499  | 7   | 22  | BLASFHM//A      |
| 4502  | 7   | 23  | PA/NTA          | 4530  | 7   | 24  | LAQEI=N         |
| 4573  | 7   | 27  | PRW=TON         | 4573  | 7   | 27  | PRW=TON         |
| 4641  | 7   | 31  | KAI\            | 4660  | 7   | 31  | DEKAPO/LEWS     |
| 4683  | 7   | 33  | E/BALEN         | 4695  | 7   | 33  | GLW/SSHS        |
| 4703  | 7   | 34  | KAI\            | 4705  | 7   | 34  | AUTW=           |
| 4707  | 7   | 34  | O/              | 4709  | 7   | 34  | DIANOI/XQHTI    |
| 4726  | 7   | 36  | KAI\            | 4739  | 7   | 36  | EKH/RUSSON      |
| 4756  | 8   | 1   | EN              | 4773  | 8   | 1   | AUTOI=S         |
| 4902  | 8   | 11  | KAI\            | 4903  | 8   | 11  | ECH=LQON        |
| 4906  | 8   | 11  | KAI\            | 4919  | 8   | 12  | KAI\            |
| 4921  | 8   | 12  | TW=             | 4924  | 8   | 12  | LE/GEI          |
| 4940  | 8   | 13  | KAI\            | 4949  | 8   | 14  | KAI\            |
| 4951  | 8   | 14  | LABEI=N         | 4968  | 8   | 15  | LE/GWN          |
| 4980  | 8   | 16  | KAI\            | 5025  | 8   | 19  | TOU\S           |
| 5027  | 8   | 19  | PO/SOUS         | 5058  | 8   | 22  | BHQSAI+DA/N     |
| 5129  | 8   | 26  | LE/GWN          | 5145  | 8   | 27  | KW/MAS          |
| 5147  | 8   | 27  | TH=S            | 5148  | 8   | 27  | FILI/PPOU       |
| 5210  | 8   | 31  | KAI\            | 5214  | 8   | 31  | O/TI            |
| 5216  | 8   | 31  | TO/N            | 5240  | 8   | 32  | KAI\            |
| 5242  | 8   | 32  | TO/N            | 5287  | 8   | 34  | EI=PEN          |
| 5321  | 8   | 35  | E/NEKEN         | 5325  | 8   | 35  | EUAGGELI/OU     |
| 5386  | 9   | 1   | KAI\            | 5388  | 9   | 1   | AUTOI=S         |
| 5534  | 9   | 9   | KAI\            | 5582  | 9   | 11  | PRW=TON         |
| 5622  | 9   | 14  | KAI\            | 5645  | 9   | 15  | KAI\            |
| 5647  | 9   | 15  | HSPA/ZONTO      | 5648  | 9   | 15  | AUTO/N          |
| 5860  | 9   | 28  | KAI\            | 5931  | 9   | 32  | DE\             |
| 5933  | 9   | 32  | TO\             | 5960  | 9   | 34  | GA\R            |
| 5962  | 9   | 34  | EN              | 5966  | 9   | 34  | MEI/ZWN         |

Table 4.5: The editorial form or layer in Mark

| The fragment represented in this row begins from: |     |     |                 | The fragment represented in this row ends with: |     |     |                 |
|---|-----|-----|-----------------|---|-----|-----|-----------------|
| serial no.:                                       | ch: | vs: | the Greek word: | serial no.:                                     | ch: | vs: | the Greek word: |
| 6208  | 9   | 48  | O/POU           | 6209  | 9   | 48  | O               |
| 6211  | 9   | 48  | AUTW=N          | 6220  | 9   | 49  | GAI\R           |
| 6223  | 9   | 50  | KALO\N          | 6227  | 9   | 50  | DE\             |
| 6244  | 10  | 1   | KAI\            | 6268  | 10  | 1   | AUTOU/S         |
| 6361  | 10  | 10  | KAI\            | 6370  | 10  | 10  | AUTO/N          |
| 6396  | 10  | 13  | KAI\            | 6407  | 10  | 13  | AUTOI=S         |
| 6433  | 10  | 15  | AMH\N           | 6435  | 10  | 15  | UMI=N           |
| 6460  | 10  | 17  | KAI\            | 6466  | 10  | 17  | EI=S            |
| 6570  | 10  | 23  | KAI\            | 6577  | 10  | 23  | AUTOU=          |
| 6590  | 10  | 24  | OI              | 6604  | 10  | 24  | AUTOI=S         |
| 6632  | 10  | 26  | OI              | 6647  | 10  | 27  | LE/GEI          |
| 6661  | 10  | 28  | /HRCATO         | 6672  | 10  | 28  | SOI             |
| 6733  | 10  | 31  | DE\             | 6733  | 10  | 31  | DE\             |
| 6741  | 10  | 32  | =HSAN           | 6813  | 10  | 34  | ANASTH/SETAI    |
| 6925  | 10  | 41  | KAI\            | 6941  | 10  | 42  | AUTOI=S         |
| 6957  | 10  | 43  | OUX             | 6962  | 10  | 43  | UMI=N           |
| 6985  | 10  | 45  | KAI\            | 7007  | 10  | 46  | IERIXW/         |
| 7291  | 11  | 11  | KAI\            | 7319  | 11  | 12  | EPEI/NASEN      |
| 7367  | 11  | 15  | KAI\            | 7370  | 11  | 15  | IEROSO/LUMA     |
| 7432  | 11  | 18  | KAI\            | 7463  | 11  | 19  | PO/LEWS         |
| 7492  | 11  | 22  | /EXETE          | 7498  | 11  | 23  | O/TI            |
| 7511  | 11  | 23  | KAI\            | 7522  | 11  | 23  | LALEI=          |
| 7526  | 11  | 24  | DIA\            | 7529  | 11  | 24  | UMI=N           |
| 7565  | 11  | 27  | E/RXONTAI       | 7568  | 11  | 27  | IEROSO/LUMA     |
| 7580  | 11  | 27  | KAI\            | 7582  | 11  | 27  | GRAMMATEI=S     |
| 7689  | 12  | 1   | KAI\            | 7694  | 12  | 1   | LALEI=N         |
| 7816  | 12  | 9   | ELEU/SETAI      | 7830  | 12  | 10  | ANE/GNWTE       |
| 7851  | 12  | 12  | KAI\            | 7884  | 12  | 13  | LO/GW           |
| 8148  | 12  | 28  | KAI\            | 8152  | 12  | 28  | GRAMMATE/WN     |
| 8295  | 12  | 34  | KAI\            | 8300  | 12  | 34  | EPERWTH=SAI     |
| 8312  | 12  | 35  | OI              | 8313  | 12  | 35  | GRAMMATEI=S     |
| 8364  | 12  | 38  | KAI\            | 8369  | 12  | 38  | E/LEGEN         |
| 8371  | 12  | 38  | APO\            | 8373  | 12  | 38  | GRAMMATE/WN     |
| 8521  | 13  | 3   | KAI\            | 8556  | 13  | 4   | PA/NTA          |
| 8858  | 13  | 23  | UMEI=S          | 8863  | 13  | 23  | PA/NTA          |
| 8970  | 13  | 30  | AMH\N           | 8972  | 13  | 30  | UMI=N           |
| 9020  | 13  | 33  | BLE/PETE        | 9052  | 13  | 34  | GRHGORH=        |
| 9078  | 13  | 37  | O\              | 9084  | 13  | 37  | GRHGOREI=TE     |
| 9099  | 14  | 1   | KAI\            | 9101  | 14  | 1   | GRAMMATEI=S     |
| 9222  | 14  | 9   | AMH\N           | 9242  | 14  | 9   | AUTH=S          |

Table 4.5: The editorial form or layer in Mark

| The fragment represented in this row begins from: |     |     |                 | The fragment represented in this row ends with: |     |     |                 |
|---|-----|-----|-----------------|---|-----|-----|-----------------|
| serial no.:                                       | ch: | vs: | the Greek word: | serial no.:                                     | ch: | vs: | the Greek word: |
| 9813  | 14  | 43  | KAI             | 9815  | 14  | 43  | GRAMMATE/WN     |
| 9947  | 14  | 53  | KAI             | 9949  | 14  | 53  | GRAMMATEI=S     |

#### 4.1.2 Part two

Here we form a distribution in block A, the 'odd' numbered windows that will form half of the windows in the editorial form that appear in Mark's Gospel. Block A will be designated as the 'unknown' material, or material of debated authorship. During or after the evaluation and comparison, we will ask the trial question, does the outcome associate this 'unknown' block A with distribution B more closely than with distribution C? If it does so, then we have a way of determining the author of a block of writing.

Forming a distribution in block A has five parts to it, or five tasks. Task one (A2.1) is to divide block A into windows (page 158); task two (A2.2) is to list all the syntax chains in one window (page 160); task three (A2.3) is to repeat the process from one window with the remaining windows in block A; task four (A2.4) is to accumulate the results from all the windows into frequencies (page 164); and task five (A2.5) is to calculate the distribution of proportions in this block from the frequencies in task four (page 165).

#### 4.1.3 Part two, task one—Divide block A into windows:

Divide the material to be examined, block A, or the odd half of the windows that will be found in the editorial form in the Gospel of Mark, into 'ten-word-windows.' Draw a rectangle around each ten-word unit from the selection that we made in the previous step, and call this rectangle a 'ten-

word-window.’ This can also be called the ‘step size.’ We use the odd numbered windows as block A, and the even numbered windows as block B. The purpose is to have two blocks (A and B) that are as similar to one another as possible.

There are two reasons for selecting a size of ten words in a window: First, ten words is a useful number because it is long enough to cover grammatical structures that operate at the sentence level. As the size of such a word window grew smaller, we would omit increasing numbers of grammatical structures that operate at the sentence level. Secondly, ten words is short enough to preserve an adequate number of reference samples. As the size of such a word window grew larger, the resulting windows would omit an increasing percentage of the short fragments of writing that make up the synoptics. An informal battery of tests indicated that this window length served the purpose. Nevertheless, it would be helpful to have a further study on the effects of changing the window length.

The starting point of the ten-word window can make a difference to the outcome. The first window that we will consider, in Mark 1:1, for example, is problematic. It is problematic first, because Mark 1:1 contains wording which may be a title. If so, a window which included such a title would be atypical of Mark’s syntax. Secondly, if Mark 1:1 contains a title, such a title was possibly not even written by Mark at all (Metzger [1971] 1975:73). Third, Mark 1:1 contains text that is uncertain from a text critical point of view. The words υἱοῦ θεοῦ, ‘son of God,’ are missing in the manuscripts  $\aleph^*$ ,  $\Theta$ , 28<sup>c</sup> and others. They are represented in the manuscripts B, D, W, and others. The absence in the first group may have been due to scribal oversight. Or else, the words, when present in the second group, may have been due to the expansion of the *nomina sacra* (or the holy name, Χριστοῦ, Christ). Each of these two explanations is just as possible as the other one, so the text is uncertain. The indications are that this first word window should not be associated with Mark. Nevertheless, we will include it for the sake of completion.

We are using ‘side-by-side’ windows. That is, the first window would be from word one to word ten. The second window would be from word eleven to word twenty, and so on. This is to minimise any correlation or untoward involvement that might arise from using ‘overlapping’ windows.

Overlapping windows would be formed in the following way: The first window would be from word one to word ten. The second window would be from word two to word eleven, and so on.

Further on, in chapter five, it can be seen that this side-by-side approach results in ‘losing’ more than a quarter of the words in the triple tradition of Luke (in the editorial form). This is because the fragments are of word numbers that do not coincide with the round number of ten words that would match our windows. The overlapping window approach would include more of the words in the layer. The overlapping window approach would also lessen the effect of problems like those in Mark 1:1. A basic battery of tests—although in another context—did not immediately indicate that it would make a critical difference in the negative direction, however. As already suggested with window length, a further study of the effect of overlapping windows could also be helpful, at least in terms of covering more—actually, all—of the words in each layer.

Table 4.6: The first three windows in Mark (unique or triple)

| The first three complete 10-word windows (in Greek words) that can be formed at the beginning of the editorial strand of Mark. These first three windows are not consecutive. The gap between each of these windows is caused by a break in the editorial strand at or just after the end of each of these 10-word windows. ... |   |   |     |  |
|---|---|---|-----|--|
| The first window: 10 Words with the serial numbers 1-10. It is not altogether sure that this window is a normal part of the Gospel of Mark (see above).   | The second window: 10 Words with the serial numbers 214-223.          | The third window: 10 Words with the serial numbers 330-339.                     | ... |  |
| Mk 1:1-2 Ἄρχῃ...ἐν<br>The beginning of the gospel of Jesus Christ, Son of God. As it has been written in...   | Mk 1:14 μετὰ...εἰς<br>After John was delivered up, Jesus came into... | Mk 1:21 καὶ...εἰς<br>And they passed along into Capernaum. And entering into... | ... |  |

#### 4.1.4 Part two, task two—list the syntax chains in one window

In each window of block A, the odd half of the editorial layer of Mark, we list all the syntax chains. Look at the ten-word windows that we formed in the previous task, and take each ten-word window just one at a time. We want to find all the syntax chains that exist in the ten-word window. We can do that in the following way: Start with the first window, a window which contains the Greek words

with the serial numbers one to ten, in Mark 1:1-2. That window is between the following Greek words: Ἀρχῆ...ἐν. The English translation would be 'The beginning of the gospel of Jesus Christ, Son of God. As it has been written in....'

Within this ten-word-window, let us deal with the first, the second and third words, and take a close look at the grammar and syntax in these three words. They will be words with the serial numbers one, two and three.

The reason for using three grammatical features over three words is guided by the precedent of writers like Fitzmyer (1981) and Taylor ([1952] 1969:45). When they discuss common grammatical constructions in Mark and Luke, they often use a Greek word (a lexeme) with one or two other grammatical categories. As an example, Taylor ([1952] 1969:45) listed, as the first in his list, 'The use of εἰμί followed by a participle.' We will shortly be able to define Mark's characteristics a little more sharply than this. Arguably, such a grammatical construction is comparable to the level of syntactical definition that we are using in our syntax chains.

Practical limitations confine us to three grammatical features in total, but this is a difficulty we can surmount. This is because a repetitive series of syntactical chains, involving three grammatical elements, within one window, probably performs the same way as a long chain of syntactical structures by a process of 'triangulating.' For example, a chain of twelve grammatical features in a sample can be expressed as the joining together of four or more smaller sections. The four component sections would each have three grammatical features. Four sections with three grammatical features in each add up to twelve, of course.

It should also be noted that the three grammatical features are taken *in order*. In this way, we include the important feature of *syntax*, or grammatical structures taken with regard to order. This is by contrast to *single grammatical features*—which would be *accidence*—or by contrast to *combinations of grammatical features*, which would be *without* regard to order.

Here are some additional examples of the method involved in, and of issues connected with the formation of syntax chains:

Table 4.7: Syntax chains in the first window of the editorial form in Mark (unique or triple)

| <b>The first and last of all the syntax chains in the first window—the first ten words—of the editorial layer of Mark.</b><br>The number in brackets is the word serial number followed by the grammatical feature number. The summary code is made up of the three grammatical feature numbers, in order.   |              |
|--|--------------|
| The first three syntax chains. We have discussed these three above.  | Summary code |
| (1.9) <u>Feminine (Any)</u> ; + (2.6) <u>definite article</u> ; + (3.11) <u>neuter (any)</u>   | 9 + 6 + 11   |
| (1.9) <u>Feminine (Any)</u> ; + (2.6) <u>definite article</u> ; + (3.15) <u>genitive (any)</u>   | 9 + 6 + 15   |
| (1.9) <u>Feminine (Any)</u> ; + (2.6) <u>definite article</u> ; + (3.17) <u>noun (any)</u>   | 9 + 6 + 17   |
| The middle three syntax chains. These middle three are different from both the first three chains above, and the last three chains below in two ways.  |              |
| □The first difference is this: The first two rows of these three rows is different from the third row. The first two rows of these three syntax chains from Mark 1:1-2 are made up of words 2, 6, and 9. That is, 2-τοῦ (of the), 6-υἱοῦ (son) and 9-γέγραπται.(it is written). The second of these three chains exhausts the last of all the possibilities, in terms of 3-element grammatical features, for those three words (2, 6, and 9). The next chain of three words, in the third line of these three lines, is then made up of words 2, 6, and 10. That is, 2-τοῦ (of the), 6-υἱοῦ (son) and 10-ἐν (in).  |              |
| □The second difference is that the three words concerned—number 2, 6, and 9; or 2, 6, and 10, have spaces between them. There are no such spaces in the three chains above (at the start of the window) and below (at the end of the window). Above and below, the three words in the chains concerned are all consecutive. The reason that the words in the three chains above and below are all consecutive is that those chains are at the beginning and at the end of the window, respectively.  |              |
| (2.15) <u>genitive (any)</u> ; + (6.10) <u>masculine (any)</u> ; + (9.47) <u>verb: passive</u>   | 15 + 10 + 47 |
| (2.15) <u>genitive (any)</u> ; + (6.10) <u>masculine (any)</u> ; + (9.50) <u>verb: 3<sup>rd</sup> person</u>   | 15 + 10 + 50 |
| (2.15) <u>genitive (any)</u> ; + (6.10) <u>masculine (any)</u> ; + (10.26) <u>preposition</u>  | 15 + 10 + 26 |
| The last three of the 9003 syntax chains in the first ten word window. These three chains are drawn from words 8--καθώς (just as); 9-γέγραπται.(it is written); and 10- ἐν (in). There are two points to note:   |              |
| □ The first matter to notice is that here, the first and last words, or 'links' in the chain, are steady. It is the middle word or link that is 'rotating' in its grammatical feature.   |              |
| □ The second note relates to morphological tagging. Although καθώς (just as) is normally or basically an adverb, it is marked here (8.3) as a conjunction. Blass Debrunner Funk ([BDF] 1961:236#453) categorise καθώς as a comparative conjunction, but note the diversity of use of words in this category. Bauer (Bauer et al 1979:391#1) list this use of καθώς in Mark 1:2 under the heading of comparatives—that is, in an adverbial sense. Nevertheless, they (:391#3) go on further to describe its use as a <i>conjunction especially at the beginning of a sentence</i> . BDF (1961:236#453) says that in this sentence position its meaning may be: 'because.' It is used at the beginning of the sentence in Mark 1:2. Therefore, this word has both possibilities within it. On the one hand, it has the possibility of being a conjunction. On the other hand, it has the possibility of being a comparative, that is, of having an adverbial sense. In the event, apparently CATT morphologically tagged it only as a conjunction, and did not tag it as an adverb. It should be tagged as both, at least in Mark 1:2. This must serve as a caution that, while the morphological tagging employed in this study is substantially correct, yet there is a certain level of inaccuracy, however small, when there are a diverse meanings with which a certain word was used. We need a definitive computer version of the Greek New Testament, marked in at least two ways. The first is a marking with an agreed and carefully checked set of morphological tags, especially for words with diverse meanings. The second marking we need is one of textual concerns such as those referred to above for Mark 1:1. These matters, however, must be assigned to a list of matters 'for further study.' |              |
| (8.3) <u>conjunction</u> + (9.34) <u>verb: indicative mood</u> + (10.26) <u>preposition</u> .  | 3 + 34 + 26  |
| (8.3) <u>conjunction</u> + (9.47) <u>verb: passive</u> + (10.26) <u>preposition</u> .  | 3 + 47 + 26  |
| (8.3) <u>conjunction</u> + (9.50) <u>verb: 3<sup>rd</sup> person</u> + (10.26) <u>preposition</u> .  | 3 + 50 + 26  |

#### **4.1.5 Part two, task three—form syntax chains in the rest of the windows of this block**

Part two, task two contained a description of the process by which we could describe all the syntax chains—9003 of them—that appear in *one* window, the first one, from block A. We then repeat that process with *all* the windows that exist in block A. At the end of task three, we have an exhaustive list of all the syntax chains in A.

There are 158 windows, each of ten words, in the editorial layer of Mark. Accordingly, there are seventy-nine windows, each of ten words, in the odd half of the editorial layer of Mark. When the previous step is done with each one of the seventy-nine windows, and the results all added together into a long list, then there turn out to be over four hundred thousand syntax chains—or more exactly, 432174—in all. That means there is an average of between five- and six thousand syntax chains (432174/79) in each window. As we might expect, there are quite a number on this list of 432174 that are of the same syntax chain type, while there are some syntax chain types on the list that occur only once. We will return to this in due course.

#### **4.1.6 Part two, task four—count the frequency of each syntax chain**

Here we reduce the cumulative list from task three in order to find the frequency, or how many of each syntax chain existed in the list from block A. For example, a syntax chain or structure in the first window (illustrated in A2.2 above) is the syntactical chain: Feminine + definite article + genitive case, or for convenience, 09 + 06 + 15. We can gather together how many there are of this particular grammatical permutation in Mark. There turn out to be twenty-six of these in the odd half of the editorial layer of Mark. Notably, there are almost exactly the same amount in each half of the editorial layer of Mark. This could be taken as one small corroboration of the syntactical similarity between these two blocks (A and B), but there are many more chains to consider.

There are specific points in the text at which we can see such occurrences. The chain 09+06+15 appears—more than once—at each of the following: Mark 1:21, 3:7, and 3:15. Let us examine its appearance in Mark 1:21. In Mark 1:21, our current grammatical permutation, feminine-definite article-genitive, or 09+06+15, appears in the following three Greek words: τὴν, ‘the,’ as the feminine case; τῆ, ‘the,’ as the definite article, and αὐτοῦ, ‘of him,’ as the genitive case.

Here is actual information from three records at the beginning, the middle, and ending of the summary table for block A, the odd half of the editorial layer of Mark:

| Table 4.8: Frequency of syntax chains in Mark block A (unique and triple) |                            |
|---|----------------------------|
| Syntax chain  | Total amount, or frequency |
| The first three in the summary table:                                     |                            |
| 02-02-03  | 5                          |
| 02-02-04  | 3                          |
| 02-02-05  | 1                          |
| ...   | ...                        |
| The middle three in the summary table:                                    |                            |
| 22-26-20  | 3                          |
| 22-26-21  | 2                          |
| 22-26-24  | 11                         |
| ...   | ...                        |
| The last three in the summary table:                                      |                            |
| 53-53-20  | 1                          |
| 53-53-24  | 4                          |
| 53-53-53  | 1                          |

#### 4.1.7 Part two, task five—calculate the proportion of each syntax chain

Now we have such a summary list of total amounts, or frequencies, like the one we made in task four. In task five, from each frequency (or amount), we then calculate the proportion of each

grammatical permutation in A-- in the editorial layer of Mark. In the first line of the previous table, there is the following information:

| Syntax chain | Total amount, or frequency |
|--------------|----------------------------|
| 02-02-03     | 5                          |

That is, there are five occurrences of the syntax chain adverb + adverb + conjunction, or 2 + 2 + 3. A proportion is the total of one element divided by the total of all elements. Therefore, we can find a proportion from the total of one syntactical chain, in the editorial layer of Mark, divided by the total of all syntactical chains, in the editorial layer of Mark. Now, we have already noted that the total of *all* the three-element syntax chains of this kind in the editorial layer of Mark is 432 174. When five is divided by this amount, then the proportion of this particular grammatical permutation in the editorial layer of Mark, in scientific notation, is 1.16E-5 in value. In decimal notation, the proportion is 0.0000116 in value. Here are the rest of the actual proportion figures, from the beginning and end of the summary and proportion table in the editorial layer of Mark:

| Table 4.9: Proportion of syntax chains in the editorial form in Mark block A (unique and triple) |   |  |
|--|---|--|
| (Syntax chain)   | Total amount (frequency) of this syntax chain in this block | Proportion of this syntax chain in this block:<br>(Freq or amount)/(Total of all amounts),<br>i.e. (Freq/ 432 174) |
| The first three in the table:  |   |  |
| 02+02+03   | 5   | 1.16e-05   |
| 02+02+04   | 3   | 6.94e-06   |
| 02+02+05   | 1   | 2.31e-06   |
| ...  | ...   | ...  |
| The middle three in the table:   |   |  |
| 22+26+20   | 3   | 6.94e-06   |
| 22+26+21   | 2   | 4.63e-06   |
| 22+26+24   | 11  | 2.55e-05   |
| ...  | ...   | ...  |
| The last three in the table:   |   |  |
| 53+53+20   | 1   | 2.31e-06   |
| 53+53+24   | 4   | 9.26e-06   |
| 53+53+53   | 1   | 2.31e-06   |

This is the distribution in block A. The process of forming a distribution of the proportions of syntax chains in block A, the odd half of the editorial layer of Mark began above on page 153. The process embraced were the two main steps, the second of which involved some intermediate tasks. Now we repeat a similar process for distribution B, the even half of the editorial layer of Mark.

#### **4.2 Distribution B: Second block—the editorial layer of Mark (even half)**

Here we form a distribution in block B, the even half of the editorial layer of Mark: There are the same main steps toward forming a distribution in the second block as there were in the case of block A above: First, selecting material that can be compared; and secondly, forming a distribution in the material under examination. As before, the distribution arises from ten-word windows in the block B material, the even half of the editorial layer of Mark. It begins by listing all the syntax chains in one window of block B, and continuing with the remaining windows that exist in block B. After this we have an exhaustive list of all the syntax, or all the syntax chains, in this even half of the editorial layer of Mark. There are 461284 in all. This compares to the 432174 that were in the odd half of the editorial layer of Mark. The 461284 syntax chains in block B, the even half of the editorial layer of Mark, includes all the times that a particular syntax chain is repeated within block B. Once again, we accumulate the results from all the windows into frequencies. That is, summarise how many of each type of syntax chain there are in block B. There are 37210 types of syntax chains among the 461284 syntax chains of block B. As in block A, there is an average of just over twelve occurrences of each type of syntax chain. Finally, from the list of frequencies, we calculate a corresponding list of the proportions for each syntax chain in block B. This results in a reference table or a distribution for block B, the even half of the editorial layer of Mark.

| Table 4.10: Syntax chain proportions in Mark block B (unique and triple) |                                      |                               |
|--|--------------------------------------|-------------------------------|
| Syntax chain   | Total amount or frequency in block B | Proportion (Frequency/461284) |
| The first three  |                                      |                               |
| 020203   | 3                                    | 6.50E-06                      |
| 020205   | 1                                    | 2.17E-06                      |
| 020206   | 1                                    | 2.17E-06                      |
| ...  | ...                                  | ...                           |
| The middle three   |                                      |                               |
| 232518   | 2                                    | 4.33E-06                      |
| 232520   | 1                                    | 2.17E-06                      |
| 232524   | 4                                    | 8.67E-06                      |
| ...  | ...                                  | ...                           |
| The last three   |                                      |                               |
| 545036   | 1                                    | 2.17E-06                      |
| 545045   | 1                                    | 2.17E-06                      |
| 545050   | 1                                    | 2.17E-06                      |
| Totals:  |                                      |                               |
| 37210  | 461284                               | 1                             |

### 4.3 Distribution C: Third block—the editorial layer of Luke

Here we follow the same two main steps toward forming a distribution in the third layer as in A and B above: First, select material that can be compared; and secondly, form a distribution in it.

#### 4.3.1 Part one—appropriate material for comparison

To make up block C, we select the final editorial work of Luke. This material in C is therefore of the same form as the words in A, and those in B. Being of the same form (namely, editorial), the three blocks are comparable with one another.

Following Gaston, Dibelius and Bultmann, as described above, there are more than three thousand three hundred words in the editorial form in Luke's Gospel:

Table 4.11: The Editorial Form in Luke's Gospel (block C)

A display of the full list of fragments employed in this study

| The fragment represented in this row begins from: |            |            |                  | The fragment represented in this row ends with: |             |           |                 |
|---|------------|------------|------------------|---|-------------|-----------|-----------------|
| serial<br>numbe                                   | cha<br>pte | ver<br>se: | the Greek word:  | serial<br>numbe                                 | cha<br>pter | ver<br>se | the Greek word: |
| 1   | 1          | 1          | ARXH\            | 14  | 1           | 2         | PROFH/TH        |
| 29587   | 1          | 1          | EPEIDH/PER       | 29628   | 1           | 4         | ASFA/LEIAN      |
| 31619   | 3          | 1          | EN               | 31676   | 3           | 3         | IORDA/NOU       |
| 31734   | 3          | 7          | /ELEGEN          | 31741   | 3           | 7         | AUTOU=          |
| 31879   | 3          | 15         | PROSDOKW=NTOS    | 31897   | 3           | 15        | XRISTO/S        |
| 31956   | 3          | 18         | POLLA\           | 31998   | 3           | 20        | FULAKH=         |
| 32042   | 3          | 23         | KAI\             | 32056   | 3           | 23        | HLI\            |
| 32409   | 4          | 14         | KAI\             | 32439   | 4           | 15        | PA/NTWN         |
| 32857   | 4          | 39         | EPETI/MHSEN      | 32859   | 4           | 39        | PURETW=         |
| 32955   | 4          | 43         | EUAGGELI/SASQAI/ | 32961   | 4           | 43        | QEOU=           |
| 32974   | 5          | 1          | EGE/NETO         | 32997   | 5           | 2         | EI=DEN          |
| 33109   | 5          | 8          | IDW\N            | 33125   | 5           | 8         | KU/RIE          |
| 33168   | 5          | 10         | E/SH             | 33206   | 5           | 12        | KU/RIE          |
| 33252   | 5          | 15         | DIH/RXETO        | 33314   | 5           | 17        | AUTO/N          |
| 33584   | 5          | 32         | EIS              | 33585   | 5           | 32        | META/NOIAN      |
| 33646   | 5          | 36         | /ELEGEN          | 33651   | 5           | 36        | AUTOU\S         |
| 33921   | 6          | 11         | AUTOI\           | 33939   | 6           | 12        | TAU/TAIS        |
| 33945   | 6          | 12         | PROSEU/CASQAI    | 33957   | 6           | 13        | HME/RA          |
| 33963   | 6          | 13         | EKLECA/MENOS     | 33963   | 6           | 13        | EKLECA/MENOS    |
| 33967   | 6          | 13         | OU\S             | 33970   | 6           | 13        | WNO/MASEN       |
| 34010   | 6          | 17         | KAI\             | 34023   | 6           | 17        | KAI\            |
| 34044   | 6          | 18         | KAI\             | 34049   | 6           | 18        | AUTW=N          |
| 34064   | 6          | 19         | O/TI             | 34082   | 6           | 20        | E/LEGEN         |
| 34087   | 6          | 20         | UMETE/RA         | 34087   | 6           | 20        | UMETE/RA        |
| 34104   | 6          | 21         | GELA/SETE        | 34129   | 6           | 22        | ANQRW/POU       |
| 34141   | 6          | 23         | UMW=N            | 34141   | 6           | 23        | UMW=N           |
| 34199   | 6          | 27         | ALLA\            | 34203   | 6           | 27        | AKOU/OUSIN      |
| 34222   | 6          | 29         | TW=              | 34243   | 6           | 29        | KWLU/SH S       |
| 34256   | 6          | 31         | KAI\             | 34266   | 6           | 31        | OMOI/WS         |
| 34303   | 6          | 34         | EAI\N            | 34338   | 6           | 35        | KAI\            |
| 34391   | 6          | 38         | W=               | 34402   | 6           | 39        | MH/TI           |
| 34412   | 6          | 40         | OUK              | 34425   | 6           | 40        | AUTOU=          |
| 34518   | 6          | 44         | OU               | 34518   | 6           | 44        | OU              |
| 34524   | 6          | 44         | OUDE\            | 34524   | 6           | 44        | OUDE\           |
| 34582   | 6          | 47         | UPODEI/CW        | 34583   | 6           | 47        | UMI=N           |
| 34838   | 7          | 11         | KAI\             | 34856   | 7           | 11        | POLU/S          |
| 34949   | 7          | 17         | KAI\             | 34963   | 7           | 17        | PERIXW/RW       |
| 35016   | 7          | 21         | EN               | 35057   | 7           | 22        | EUAGGELI/ZONTAI |

Table 4.11: The Editorial Form in Luke's Gospel (block C)

A display of the full list of fragments employed in this study

| The fragment represented in this row begins from: |            |            |                 | The fragment represented in this row ends with: |             |           |                 |
|---|------------|------------|-----------------|---|-------------|-----------|-----------------|
| serial<br>numbe                                   | cha<br>pte | ver<br>se: | the Greek word: | serial<br>numbe                                 | cha<br>pter | ver<br>se | the Greek word: |
| 35067   | 7:24       |            | APELQO/NTWN     | 35078   | 7:24        |           | IWA/NNOU        |
| 35161   | 7:29       |            | KAI\            | 35192   | 7:30        |           | AUTOU=          |
| 35608   | 8:4        |            | KAI\            | 35617   | 8:4         |           | PARABOLH=S      |
| 35694   | 8:9        |            | EPHRW/TWN       | 35704   | 8:9         |           | PARABOLH/       |
| 36644   | 9:2        |            | KAI\            | 36655   | 9:2         |           | ASQENEI=S       |
| 36938   | 9:18       |            | EGE/NETO        | 36959   | 9:18        |           | EI=NAI          |
| 37003   | 9:22       |            | EIPWN           | 37005   | 9:22        |           | DEI=            |
| 37142   | 9:28       |            | OKTW\           | 37142   | 9:28        |           | OKTW\           |
| 37154   | 9:28       |            | PROSEU/CASQAI   | 37172   | 9:29        |           | ECASTRA/PTWN    |
| 37184   | 9:31       |            | OI\             | 37196   | 9:31        |           | IEROUSALH/M     |
| 37265   | 9:34       |            | EFOBH/QHSAN     | 37273   | 9:34        |           | NEFE/LHN        |
| 37286   | 9:35       |            | O               | 37287   | 9:35        |           | EKLELEGME/NOS   |
| 37312   | 9:37       |            | EGE/NETO        | 37325   | 9:37        |           | POLU/S          |
| 37335   | 9:38       |            | DE/OMAI/        | 37338   | 9:38        |           | EPI\            |
| 37342   | 9:38       |            | O/TI            | 37346   | 9:39        |           | KAI\            |
| 37351   | 9:39       |            | KAI\            | 37357   | 9:39        |           | META\           |
| 37359   | 9:39       |            | KAI\            | 37367   | 9:40        |           | EDEH/QHN        |
| 37418   | 9:42       |            | KAI\            | 37447   | 9:43        |           | AUTOU=          |
| 37662   | 9:57       |            | KAI\            | 37668   | 9:57        |           | EI=PE/N         |
| 37670   | 9:57       |            | PRO\S           | 37676   | 9:57        |           | APE/RXH         |
| 37731   | 9:60       |            | SU\             | 37738   | 9:60        |           | QEOU=           |
| 37779   | 10:1       |            | META\           | 37809   | 10:2        |           | AUTOU/S         |
| 38060   | 10:17      |            | UPE/STREYAN     | 38077   | 10:17       |           | SOU             |
| 38134   | 10:21      |            | EN              | 38145   | 10:21       |           | EI=PEN          |
| 38247   | 10:25      |            | KAI\            | 38272   | 10:26       |           | ANAGINW/SKEIS   |
| 38311   | 10:28      |            | EI=PEN          | 38333   | 10:29       |           | PLHSI/ON        |
| 38566   | 11:1       |            | KAI\            | 38594   | 11:1        |           | AUTOU=          |
| 38639   | 11:5       |            | KAI\            | 38642   | 11:5        |           | AUTOU/S         |
| 38725   | 11:9       |            | KAGW\           | 38727   | 11:9        |           | LE/GW           |
| 38843   | 11:17      |            | AUTO\S          | 38861   | 11:17       |           | PI/PTEI         |
| 38874   | 11:18      |            | AUTOU=          | 38882   | 11:18       |           | DAIMO/NIA       |
| 39062   | 11:29      |            | TW=N            | 39067   | 11:29       |           | LE/GEIN         |
| 39158   | 11:33      |            | OUDEI\S         | 39158   | 11:33       |           | OUDEI\S         |
| 39164   | 11:33      |            | OUDE\           | 39164   | 11:33       |           | OUDE\           |
| 39186   | 11:34      |            | O/TAN           | 39240   | 11:36       |           | SE              |
| 39267   | 11:39      |            | EI=PEN          | 39272   | 11:39       |           | AUTO/N          |
| 39379   | 11:45      |            | APOKRIQEIS      | 39391   | 11:45       |           | UBRI/ZEIS       |
| 39440   | 11:48      |            | O/TI            | 39447   | 11:48       |           | OIKODOMEI=TE    |
| 39523   | 11:53      |            | KAKEI=QEN       | 39563   | 12:1        |           | PRW=TON         |

Table 4.11: The Editorial Form in Luke's Gospel (block C)

A display of the full list of fragments employed in this study

| The fragment represented in this row begins from: |            |            |                 | The fragment represented in this row ends with: |             |           |                 |
|---|------------|------------|-----------------|---|-------------|-----------|-----------------|
| serial<br>numbe                                   | cha<br>pte | ver<br>se: | the Greek word: | serial<br>numbe                                 | cha<br>pter | ver<br>se | the Greek word: |
| 39610   | 12         | 4          | LE/GW           | 39612   | 12          | 4         | UMI=N           |
| 39631   | 12         | 5          | UPODEI/CW       | 39633   | 12          | 5         | UMI=N           |
| 39677   | 12         | 7          | MH\             | 39684   | 12          | 8         | UMI=N           |
| 39830   | 12         | 16         | EI=PEN          | 39834   | 12          | 16        | AUTOUS          |
| 39924   | 12         | 22         | EI=PEN          | 39929   | 12          | 22        | AUTOU=          |
| 39994   | 12         | 26         | EI              | 40003   | 12          | 26        | MERIMNA=TE      |
| 40099   | 12         | 33         | PWLH/SATE       | 40134   | 12          | 34        | E/STAI          |
| 40236   | 12         | 41         | EI=PEN          | 40250   | 12          | 41        | PA/NTAS         |
| 40436   | 12         | 51         | LE/GW           | 40437   | 12          | 51        | UMI=N           |
| 40485   | 12         | 54         | /ELEGEN         | 40489   | 12          | 54        | O/XLOIS         |
| 40533   | 12         | 57         | TI/             | 40541   | 12          | 57        | DI/KAION        |
| 40676   | 13         | 6          | /ELEGEN         | 40680   | 13          | 6         | PARABOLH/N      |
| 40758   | 13         | 10         | =HN             | 40767   | 13          | 10        | SA/BBASIN       |
| 40905   | 13         | 17         | KAI\            | 40917   | 13          | 17        | AUTOU=          |
| 40958   | 13         | 20         | KAI\            | 40966   | 13          | 20        | QEOU=           |
| 40982   | 13         | 22         | KAI\            | 41053   | 13          | 25        | ESTE/           |
| 41251   | 14         | 1          | KAI\            | 41271   | 14          | 1         | AUTO/N          |
| 41333   | 14         | 7          | /ELEGEN         | 41346   | 14          | 7         | AUTOU/S         |
| 41426   | 14         | 12         | /ELEGEN         | 41431   | 14          | 12        | AUTO/N          |
| 41487   | 14         | 15         | AKOU/SAS        | 41494   | 14          | 15        | AUTW=           |
| 41504   | 14         | 16         | O               | 41507   | 14          | 16        | AUTW=           |
| 41653   | 14         | 24         | LE/GW           | 41655   | 14          | 24        | UMI=N           |
| 41667   | 14         | 25         | SUNEPORU/ONTO   | 41676   | 14          | 25        | AUTOU/S         |
| 41952   | 15         | 7          | LE/GW           | 41953   | 15          | 7         | UMI=N           |
| 42015   | 15         | 10         | LE/GW           | 42016   | 15          | 10        | UMI=N           |
| 42028   | 15         | 11         | EI=PEN          | 42029   | 15          | 11        | DE/             |
| 42419   | 16         | 1          | /ELEGEN         | 42425   | 16          | 1         | TIS             |
| 42680   | 16         | 14         | /HKOUON         | 42692   | 16          | 15        | EI=PEN          |
| 43013   | 17         | 1          | EI=PEN          | 43017   | 17          | 1         | AUTOU=          |
| 43083   | 17         | 5          | KAI\            | 43091   | 17          | 5         | PI/STIN         |
| 43185   | 17         | 11         | KAI\            | 43199   | 17          | 11        | GALILAI/AS      |
| 43291   | 17         | 19         | KAI\            | 43303   | 17          | 20        | UPO\            |
| 43315   | 17         | 20         | EI=PEN          | 43315   | 17          | 20        | EI=PEN          |
| 43344   | 17         | 22         | ELEU/SONTAI     | 43358   | 17          | 22        | O/YESQE         |
| 43396   | 17         | 25         | PRW=TON         | 43407   | 17          | 25        | TAU/THS         |
| 43563   | 17         | 37         | APOKRIQE/NTES   | 43566   | 17          | 37        | POU=            |
| 43580   | 18         | 1          | /ELEGEN         | 43591   | 18          | 1         | EKGAKAI=N       |
| 43703   | 18         | 8          | TA/XEI          | 43735   | 18          | 9         | TAU/THN         |
| 44136   | 18         | 34         | KAI\            | 44153   | 18          | 34        | LEGO/MENA       |

Table 4.11: The Editorial Form in Luke's Gospel (block C)

A display of the full list of fragments employed in this study

| The fragment represented in this row begins from: |            |            |                 | The fragment represented in this row ends with: |             |           |                 |
|---|------------|------------|-----------------|---|-------------|-----------|-----------------|
| serial<br>numbe                                   | cha<br>pte | ver<br>se: | the Greek word: | serial<br>numbe                                 | cha<br>pter | ver<br>se | the Greek word: |
| 44262   | 19         | 1          | KAI\            | 44266   | 19          | 1         | IERIXW/         |
| 44409   | 19         | 11         | AKOUO/NTWN      | 44432   | 19          | 11        | ANAFAI/NESQAI   |
| 44653   | 19         | 26         | LE/GW           | 44654   | 19          | 26        | UMI=N           |
| 44811   | 19         | 37         | EGGI/ZONTOS     | 44838   | 19          | 37        | DUNA/MEWN       |
| 44881   | 19         | 41         | KAI\            | 44889   | 19          | 41        | AUTH/N          |
| 44979   | 19         | 47         | KAI\            | 44987   | 19          | 47        | IERW=           |
| 45002   | 19         | 48         | KAI\            | 45014   | 19          | 48        | AKOU/WN         |
| 45606   | 20         | 39         | APOKRIQE/NTES   | 45614   | 20          | 39        | EI=PAS          |
| 45835   | 21         | 8          | KAI/            | 45838   | 21          | 8         | H/GGIKEN        |
| 45872   | 21         | 11         | SEISMOI/        | 45889   | 21          | 11        | E/STAI          |
| 45930   | 21         | 15         | EGW\            | 45946   | 21          | 15        | UMI=N           |
| 45988   | 21         | 20         | /OTAN           | 46080   | 21          | 24        | EQNW=N          |
| 46102   | 21         | 26         | APOYUXO/NTWN    | 46117   | 21          | 26        | SALEUQH/SONTAI  |
| 46133   | 21         | 28         | ARXOME/NWN      | 46147   | 21          | 28        | UMW=N           |
| 46477   | 22         | 15         | KAI\            | 46480   | 22          | 15        | AUTOU/S         |
| 46634   | 22         | 24         | EGE/NETO        | 46645   | 22          | 24        | MEI/ZWN         |
| 46806   | 22         | 35         | KAI\            | 46808   | 22          | 35        | AUTOI=S         |
| 46812   | 22         | 35         | A/TER           | 46812   | 22          | 35        | A/TER           |
| 46854   | 22         | 37         | GEGRAMME/NON    | 46858   | 22          | 37        | EMOI/           |

### 4.3.2 Part two is to form a distribution of the proportions of syntax chain types in the third block of material currently under examination

#### 4.3.2.1 Part two, task one is to form ten word windows

We again begin by dividing the material making up the block C into 'ten-word-windows.' That is, we draw a rectangle around each ten-word unit from the selection of material that we made in the previous step. By doing this, we construct 334 windows of ten words each in the editorial layer of Luke.

| Table 4.12: The first and last complete 10-word windows that can be formed in the editorial strand of Luke.                             |     |  |  |
|---|-----|--|--|
| Ten words with the serial numbers 29587-29596   | ... | Ten words with the serial numbers 46133-46142  | Ten words with the serial numbers 46634-46643  |
| Lk 1:1 Ἐπειδήπερ...ἡμῖν 'Inasmuch as many have undertaken to compile a narrative of the things that have been accomplished among us...' | ... | Lk 21:28 ἀρχομένων...ὑμῶν 'Now when these things begin to take place, look up and raise your heads...' | Lk 22:24 Ἐγένετο ....δοκεῖ 'A dispute arose among them, which of them was to be regarded...' |

#### 4.3.2.2 Part two, task two is to find all the syntax chains in the first window

We take all the syntax chains in this one window of block C. Here we can take the first window.

The actual information for the first three of the 3838 records for the first window in the editorial layer of Luke, at Lk 1:1, begins with Greek word serial number 29587:

| Table 4.13: Syntax chains in the first window from the editorial layer of Luke (block C)                      |  |                              |                                   |                              |                                   |                              |
|---|--|------------------------------|-----------------------------------|------------------------------|-----------------------------------|------------------------------|
| Syntax chains, in order of three parts of speech noted. There are 3838 such syntax chains in this one window. | Serial no of 1 <sup>st</sup> word in this syntax chain | Greek word at this serial no | Serial no of 2 <sup>nd</sup> word | Greek word at this serial no | Serial no of 3 <sup>rd</sup> word | Greek word at this serial no |
| The first three syntax chains of the 3838 in this first window from the editorial layer of Luke:              |  |                              |                                   |                              |                                   |                              |
| 03=Conjunction +04=Correlative +23=Plural   | 29587  | ἘΠΕΙΔΗ/ΠΕΡ                   | 29588                             | ΠΟΛΛΟΙ\                      | 29589                             | ἘΠΕΧΕΙ/ΡΗΣ                   |
| 03=Conjunction+04=Correlative+27=Verb:Any   | 29587  | 'Inasmuch as'                | 29588                             | 'many'                       | 29589                             | ΑΝ 'have undertaken          |
| 03=Conjunction+04=Correlative+31=Verb:Aorist  | 29587  |                              | 29588                             |                              | 29589                             |                              |
| The middle three syntax chains of the 3838 in this first window from the editorial layer of Luke:             |  |                              |                                   |                              |                                   |                              |
| 23=Plural+15=Genitive:Any+16=Dative:Any   | 29589  | ἘΠΕΧΕΙ/ΡΗΣΑ                  | 29593                             | ΤΩ=Ν                         | 29596                             | Η(ΜΙ=Ν                       |
| 23=Plural+23=Plural+11=Neuter:Any   | 29589  | Ν                            | 29593                             |                              | 29594                             | ΠΕΠΛΗΡΟΦΟ                    |
| 23=Plural+23=Plural+15=Genitive:Any   | 29589  |                              | 29593                             |                              | 29594                             | ΡΗΜΕ/ΝΩΝ                     |
| The last three syntax chains of the 3838 in this first window from the editorial layer of Luke:               |  |                              |                                   |                              |                                   |                              |
| 32=Verb:Perfect+26=Prepositn+16=Dative:Any  | 29594  | ΠΕΠΛΗΡΟΦΟΡ                   | 29595                             | Ε)Ν                          | 29596                             | Η(ΜΙ=Ν                       |
| 47=Verb:Passive+26=Prepositn+05=PersPron  | 29594  | ΗΜΕ/ΝΩΝ                      | 29595                             |                              | 29596                             |                              |
| 47=Verb:Passive+26=Prepositn+16=Dative:Any  | 29594  |                              | 29595                             |                              | 29596                             |                              |

#### **4.3.2.3 Part two, task three is to find the syntax chains in the remaining windows**

Repeat the process in one window with the remaining windows that exist in block C. From this point forward, we have an exhaustive list of syntax chains in this material.

#### **4.3.2.4 Part two, task four—count the frequency of each syntax chain type**

According to what we did in Distribution A for this first window, we accumulate the results from the previous step or steps into frequencies. That is, we summarise how many of each syntax chain there were in block C.

With the full amount (334) of LkEd windows, there are 2159417 syntax chains in all, and 60693 unique types of syntax chain. This means that in the full editorial layer of Luke there is an average of 6465 ( $=2159417/334$ ) syntax chains in the average window; and just over thirty-five ( $2159417/60693=35.6$ ) appearances of each type of syntax chain in the whole layer.

| Table 4.14: Syntax chain frequencies in Luke (block C)             |                                  |
|--|----------------------------------|
| Syntax chain   | Total in editorial layer of Luke |
| The beginning of the summary table in the editorial layer of Luke: |                                  |
| 020202   | 4                                |
| 020204   | 5                                |
| 020211   | 1                                |
| 020214   | 3                                |
| 020216   | 1                                |
| The middle of the summary table in the editorial layer of Luke:    |                                  |
| 215054   | 1                                |
| 215302   | 1                                |
| 215303   | 19                               |
| 215304   | 2                                |
| 215306   | 1                                |
| The end of the summary table in the editorial layer of Luke:       |                                  |
| 545025   | 1                                |
| 545027   | 3                                |
| 545028   | 3                                |
| 545045   | 3                                |
| 545046   | 3                                |

#### 4.3.2.5 Part two, task five—calculate the proportion of each syntax chain type

From the list of frequencies, we calculate a corresponding list of the proportions for each syntax chain in block C. This results in a reference table or a distribution for block C, a single window, and the first window, from the editorial layer of Luke.

In the editorial layer of Luke, the particular grammatical permutation, feminine-definite article-genitive, appears 137 times. The total of *all* the three-element syntax chains of this kind in the editorial layer of Luke is 2 159 417. There are 60 693 distinct types of syntax chain. Dividing 137 by 2 159 417, we get the proportion 6.34E-5 or .0000634 for this syntax chain. The proportion for this syntax chain in the editorial layer of Mark, was 6.38E-5. Therefore, for this syntax chain, the proportion in the editorial layer of Luke is less than in the editorial layer of Mark.

| Table 4.15: Syntax chain proportions in Luke (block C)                            |                                  |   |  |
|---|----------------------------------|---|--|
| Syntax chain  | Total in editorial layer of Luke | Calculating the proportion as the total of the one type divided by the total of all types | Proportion multiplied by 1 000 000, or by E+06 |
| The beginning of the summary and proportion table in the editorial layer of Luke: |                                  |   |  |
| 020202  | 4                                | $4/2159417 =$   | 1.9  |
| 020204  | 5                                | $5/2159417 =$   | 2.3  |
| 020211  | 1                                | $1/2159417 =$   | 0.5  |
| 020214  | 3                                | $3/2159417 =$   | 1.4  |
| 020216  | 1                                | $1/2159417 =$   | 0.5  |
| The middle of the summary and proportion table in the editorial layer of Luke:    |                                  |   |  |
| 215054  | 1                                | $1/2159417 =$   | 0.5  |
| 215302  | 1                                | $1/2159417 =$   | 0.5  |
| 215303  | 19                               | $19/2159417 =$  | 8.8  |
| 215304  | 2                                | $2/2159417 =$   | 0.9  |
| 215306  | 1                                | $1/2159417 =$   | 0.5  |
| The end of the summary and proportion table in the editorial layer of Luke:       |                                  |   |  |
| ...   | ...                              | ...   |  |
| 545025  | 1                                | $1/2159417 =$   | 0.46   |
| 545027  | 3                                | $3/2159417 =$   | 1.39   |
| 545028  | 3                                | $3/2159417 =$   | 1.39   |
| 545045  | 3                                | $3/2159417 =$   | 1.39   |
| 545046  | 3                                | $3/2159417 =$   | 1.39   |
| Total: 60 693   | Total: 2159417                   |   | 1.85235181533                                  |

## 5 Results: Evaluation and comparison of distributions A, B, and C

As described above, the method was followed through using three blocks, respectively: First, Mark (an “odd” block from his composition); secondly, Mark (an “even” block from his composition); and, third, Luke (a block made up of his composition). Different distance measures will now be used including the geodesic distance, the sum of logs of ratios, and chi-squared, as described before. Again, as introduced on page 152 above (‘Remark on weighting’), we weight certain parts of the distribution. This is done by means of dividing the results into three different proportion bands: First, the full set; secondly, the central set (the high proportion band); and, third, the ‘tails’ set (the low proportion band). We will find that the results are mixed, with the sum of the logs of the ratios (unweighted and weighted) discriminating correctly. This was especially true of the sum of the logs of

the ratios when it was (or others were) further weighted with a factor enhancing those syntax chains that were most distinctive between blocks B and C.

Here we begin to see whether there is a measurable similarity or difference between the distributions, or pools, of the proportions of each syntax chain type in each of blocks A, B, and C. This discussion will continue through to page 183. It is a fundamental task, because we know that the writers—the final editors of Mark and of Luke, respectively—were different people. Therefore, whether or not a comprehensive assessment of syntax chains is effective must emerge as effective in such a comparison. We can evaluate this in the following way.

In section 4 we obtained the distributions for blocks A, B, and C. From the fourth task in distributions A, B, and C above, respectively, we know we have 35 114 syntax chain types in block A, 37 210 syntax chain types in block B, and 60 693 syntax chain types in block C. The three lists of chain types naturally have many types in common, though the type may exist in different proportions in each list respectively. Combine these three syntax chain type lists into one 'master' list, which then has a total of 63 410 unique types. Of these, we will use the 27 925 unique or distinct syntax chain types that occur in all three blocks. In the calculations that follow, the following is then a corollary of the way that we form and select syntax chains from this list: any chain found to occur at a given proportion in one block will also occur in the other blocks, although at a different proportion. In chapter six, we will take a 'characteristic' of one block as a syntax chain that occurs at a high proportion in that block. By virtue of the selection of chains based on the fact that they exist in all three blocks, such a 'characteristic' syntax chain will occur in the other blocks also, although (perhaps) in a different proportion. A selection from the first, middle and last of the 27925 unique or distinct syntax chain types that occur in all three blocks is given in a combined form in the table below.

| Table 4.16: Syntax chain proportions in block A (odd half of Mark), B (even half of Mark), and C (Luke). |   |  |                             |
|--|---|--|-----------------------------|
| Syntax chain   | Proportion in block A: the odd half of Mark | Proportion in block B: the even half of Mark | Proportion in block C: Luke |
| Five records from the beginning of the comparison:   |   |  |                             |
| 020329   | 9.26e-06                                    | 8.67e-06                                     | 4.63e-07                    |
| 391736   | 6.94e-06                                    | 6.50e-06                                     | 4.63e-07                    |
| 260937   | 6.94e-06                                    | 6.50e-06                                     | 4.63e-07                    |
| 362926   | 6.94e-06                                    | 6.50e-06                                     | 4.63e-07                    |
| 321402   | 6.94e-06                                    | 6.50e-06                                     | 4.63e-07                    |
| Five records from the middle of the comparison:  |   |  |                             |
| 041749   | 3.00e-05                                    | 6.50e-06                                     | 5.56e-06                    |
| 120902   | 3.00e-05                                    | 6.50e-06                                     | 5.56e-06                    |
| 143611   | 3.00e-05                                    | 6.50e-06                                     | 5.56e-06                    |
| 112916   | 2.00e-05                                    | 4.34e-06                                     | 3.70e-06                    |
| 030237   | 2.00e-05                                    | 4.34e-06                                     | 3.70e-06                    |
| Five records from the end of the comparison:   |   |  |                             |
| 263131   | 1.00e-05                                    | 4.34e-06                                     | 9.72e-06                    |
| 031821   | 1.00e-05                                    | 4.34e-06                                     | 9.72e-06                    |
| 452111   | 1.00e-05                                    | 2.17e-06                                     | 9.72e-06                    |
| 121749   | 1.00e-05                                    | 2.17e-06                                     | 9.72e-06                    |
| 212024   | 1.00e-05                                    | 2.17e-06                                     | 9.72e-06                    |

Our analysis will now be applied to the data in the above table using the distance measures described on page 149.

### 5.1 Comparing A (Mark<sub>1</sub>) to B (Mark<sub>2</sub>)

To compare A (Mark<sub>1</sub>) to B (Mark<sub>2</sub>), we use the A and B columns in the table above, and apply the distance measures to them. We will indicate this in the table below for the chi-squared distance measure.

| Table 4.17: An example of a distance measure from block A to block B |   |  |  |
|--|---|--|--|
| Syntax chain   | Proportion in block A: the odd half of Mark | Proportion in block B: the even half of Mark | One example of a distance measure from block A to block B: Chi-squared $(A-B)^2/((A+B)/2)$ |
| Five records from the beginning of the comparison:                   |   |  |  |
| 020329   | 9.26e-06                                    | 8.67e-06                                     | 3.81e-08   |
| 391736   | 6.94e-06                                    | 6.50e-06                                     | 2.85e-08   |
| 260937   | 6.94e-06                                    | 6.50e-06                                     | 2.85e-08   |
| 362926   | 6.94e-06                                    | 6.50e-06                                     | 2.85e-08   |
| 321402   | 6.94e-06                                    | 6.50e-06                                     | 2.85e-08   |
| Five records from the middle of the comparison:                      |   |  |  |
| 041749   | 3.00e-05                                    | 6.50e-06                                     | 3.02e-05   |
| 120902   | 3.00e-05                                    | 6.50e-06                                     | 3.02e-05   |
| 143611   | 3.00e-05                                    | 6.50e-06                                     | 3.02e-05   |
| 112916   | 2.00e-05                                    | 4.34e-06                                     | 2.02e-05   |
| 030237   | 2.00e-05                                    | 4.34e-06                                     | 2.02e-05   |
| Five records from the end of the comparison:                         |   |  |  |
| 263131   | 1.00e-05                                    | 4.34e-06                                     | 4.48e-06   |
| 031821   | 1.00e-05                                    | 4.34e-06                                     | 4.48e-06   |
| 452111   | 1.00e-05                                    | 2.17e-06                                     | 1.01e-05   |
| 121749   | 1.00e-05                                    | 2.17e-06                                     | 1.01e-05   |
| 212024   | 1.00e-05                                    | 2.17e-06                                     | 1.01e-05   |

The chi-squared distance measure is then given by the sum of the numbers in the last column, which leads to an amount that is 0.276 in value (see the 'full list' column, in the 'chi-squared' row, in the table of results on page 182). The other distance measures can be calculated in a similar fashion and their values are given in the table of results on page 182.

## 5.2 Comparing block A (Mark<sub>1</sub>) to C (Luke)

To compare A (Mark<sub>1</sub>) to C (Luke), we use the A and C columns in the table above, and apply the distance measures to them. We will indicate this in the table below for the chi-squared distance measure.

Table 4.18: An example of a distance measure from block A to block C

| Syntax chain                                       | Proportion in block A: the odd half of Mark | Proportion in block C: Luke | One example of a distance measure from block A to block C: Chi-squared $(A-C)^2/((A+C)/2)$ |
|--|---|-----------------------------|--|
| Five records from the beginning of the comparison: |   |                             |  |
| 020329   | 9.26e-06                                    | 4.63e-07                    | 1.59e-05   |
| 391736   | 6.94e-06                                    | 4.63e-07                    | 1.13e-05   |
| 260937   | 6.94e-06                                    | 4.63e-07                    | 1.13e-05   |
| 362926   | 6.94e-06                                    | 4.63e-07                    | 1.13e-05   |
| 321402   | 6.94e-06                                    | 4.63e-07                    | 1.13e-05   |
| Five records from the middle of the comparison:    |   |                             |  |
| 041749   | 3.00e-05                                    | 5.56e-06                    | 3.36e-05   |
| 120902   | 3.00e-05                                    | 5.56e-06                    | 3.36e-05   |
| 143611   | 3.00e-05                                    | 5.56e-06                    | 3.36e-05   |
| 112916   | 2.00e-05                                    | 3.70e-06                    | 2.24e-05   |
| 030237   | 2.00e-05                                    | 3.70e-06                    | 2.24e-05   |
| Five records from the end of the comparison:       |   |                             |  |
| 263131   | 1.00e-05                                    | 9.72e-06                    | 7.68e-09   |
| 031821   | 1.00e-05                                    | 9.72e-06                    | 7.68e-09   |
| 452111   | 1.00e-05                                    | 9.72e-06                    | 7.68e-09   |
| 121749   | 1.00e-05                                    | 9.72e-06                    | 7.68e-09   |
| 212024   | 1.00e-05                                    | 9.72e-06                    | 7.68e-09   |

The chi-squared distance measure is then given by the sum of the numbers in the last column, which leads to an amount that is 0.168 in value (see the 'full list' column, in the 'chi-squared' row, in the table of results on page 182). Once again, the other distance measures can be calculated in a similar fashion, and their values are also given in the table of results on page 182.

### 5.3 Proportion bands

Elsewhere (see Morton, in chapter three, page 127 above; and *hapax legomena*, pages 120 and 240), we have already discussed the fact that either high frequency syntax, or else rarer, uncommon syntax, or both, may be more distinctive of an author than normal, more common syntax. To see whether this is true, we will group the proportions in each of the three blocks into the following classes: First, high proportions: those syntax chains that occur several hundred times. Such high proportion chains

make up the top 50% of the range of proportions in the 'unknown' block,  $A=Mark_1$ , while only 0.07% of all the syntax chain types fall into this range. Secondly, the full range of proportions. Third, low proportions: those syntax chains that occur only once. Such low proportion chains make up the lowest 0.35% of the range of proportions in the 'unknown' block,  $A=Mark_1$ , while about 12% of all the syntax chain types fall into this range. In the discussion below, these will be called (three different) 'proportion bands.'

We said that one approach to weighting the variables is to look first, at the whole distribution, and secondly, at selected parts of the distribution. The 'tails,' or the lower proportional band, appear to have included more of the features where the distance between the two halves of Mark ( $A=Mark_1$  (or  $M_1$ ), and  $B=Mark_2$  (or  $M_2$ )) was closer than the distance between  $A=Mark_1$  (or  $M_1$ ) and  $C=Luke$  (or  $L$ ). Therefore, we can arrange the results in three different proportion bands: by grouping them first, in terms of the central section or the higher proportional band; secondly, in terms of the whole list of features; and third, in terms of the 'tails' or lower proportional band. The table below will be arranged in this way.

Table 4.19: A template for arranging the results in three different proportion bands

| Blocks compared:                      | High proportion band or centre |        | Full list |        | Low proportion band or tails |        |
|---------------------------------------|--------------------------------|--------|-----------|--------|------------------------------|--------|
|                                       | A-to-B                         | A-to-C | A-to-B    | A-to-C | A-to-B                       | A-to-C |
| Distance measure 1 (with explanation) | ...                            |        | ...       |        | ...                          |        |
| Distance measure 2 (with explanation) | ...                            |        | ...       |        | ...                          |        |
| ....                                  | ...                            |        | ...       |        | ...                          |        |

From our three lists of the proportions of syntax chain types, we can compare the syntax chain types through more than one measure of distance. This comparison appears on the table of results below. (The range, mean, and median were ambiguous, so they are not shown on the table.) We divide the results into results for the full list, for the high proportion band, and for the low proportion band or 'tails' area. The following symbols are also used:  $\times$ =Does not follow the expected trend.

✓=Follows the expected trend.

Table 4.20: A table of results from the experiment in chapter four

| Block A ('Unknown')=Odd half of all the editorial material in Mark (unique with triple)<br>Block B ('Known')=Even half of all the editorial material in Mark (unique with triple)<br>Block C ('Known')=The editorial material in Luke (unique) |  |   |                   |                                       |                   |  |                  |
|--|--|---|-------------------|---------------------------------------|-------------------|--|------------------|
| Name of measure  | How the distance measures are interpreted. (The formulae for the distance measures, with a description of each, appear on page 149.)   | The 'centre' of the distribution (i.e. the chains giving values in the upper 50% of the range of proportions)   |                   | The full list or range of proportions |                   | The 'tails' of the distribution (i.e. the chains giving values in the lower 0.35% of the range of proportions) |                  |
|  |  | A-B   | A-C               | A-B                                   | A-C               | A-B  | A-C              |
|  | Number of syntax chains in the full list   | 27925   |                   |                                       |                   |  |                  |
|  | No. of chains giving values in this proportion band  | 20  |                   | 27925                                 |                   | 3367   |                  |
| 1. Geodesic distance   | This treats each pool of data as if it is arranged around a sphere, and then measures the distance between the two spheres. If one pool is close to the other pool, the result will be near zero. If one is far from the other, the result will be near the value of one. This is more correct in the high proportion column, incorrect in the full list, and correct in the tails column. | 0.068   | 0.159             | 0.27                                  | 0.26              | 0.415  | 0.442            |
|  |  | ✓✓  |                   | ✗                                     |                   | ✓  |                  |
| 2. Sum of the logs of the ratios   | (a) The sum of the logs measured 'pairwise': The smaller or the more negative the value, the closer the distance. The larger or the more positive the value, the further the distance. This measure is incorrect in the high proportion column, correct in the full list, and more correct in the tails column.  | A/B=4.8   | A/C=0.03          | A/B=-59                               | A/C=2133          | A/B=-2524  | A/C=-1794        |
|  |  | ✗   |                   | ✓                                     |                   | ✓✓   |                  |
|  |  | (b) The sum of the logs measured three blocks together. A smaller sum [or <0] of the logs of the ratios, the closer A to B. A larger sum [or >0] of the logs of the ratios, the closer A to C. This measure is correct in the high proportion column, incorrect in the full list, and most correct in the tails column. | (A-B)/(A-C)=-0.92 |                                       | (A-B)/(A-C)= 5978 |  | (A-B)/(A-C)=-839 |
|  |  | ✓   |                   | ✗                                     |                   | ✓✓   |                  |
| 3. Weighted sum of logs of ratio   | A negative value would indicate that A is closer to B than A is to C. A positive value would indicate the opposite. This measure is correct in the high proportion band, the full list, and most correct in the tails column.  | -1.18   |                   | -215                                  |                   | -837   |                  |
|  |  | ✓   |                   | ✓                                     |                   | ✓✓   |                  |
| 4. Chi-squared   | A small value would mean close together. A large value would mean far apart. This measure is correct in the high proportion band, incorrect in the full list, and most incorrect in the tails column or the low proportion band.   | 7.65E-4   | 9.88E-4           | 0.276                                 | 0.168             | 0.016  | 0.001            |
|  |  | ✓   |                   | ✗                                     |                   | ✗✗   |                  |

## 6 Conclusions: The method has discriminating power in this case

Overall, we feel that the method seems to have discriminating power in the case considered. This does depend, however, on the distance measure used and the part of the distribution employed. The weighted sum of the logs of the ratios did particularly well over all parts of the distributions, especially using the tails, whilst the (unweighted) sum of the logs of the ratios did well on two of the three distribution parts considered. Similarly for the geodesic measure. The chi-squared distance measure did not do well at all. This is probably due to the data (very small proportions) not being appropriate for the application of chi-squared (taking squares of differentials).

## 7 Summary

Chapter four aimed to find whether there was characteristic syntax in one block of material (Mark) on the one hand, and a notably different pool in another block of material (Luke) on the other. In considering the use of syntax as a measure of authorship characteristics and style, synoptic commentators used syntax but lacked comprehensiveness, on the one hand. On the other hand, quantitatively-based approaches to the measurement of style adopted a comprehensive approach to the variables they selected, but lacked an adequately nuanced evaluation of syntax and other literary concerns.

Our approach was defined by the following: First, we used only material from the same period, genre and form, and used only two authors in the comparison. Secondly, we adopted stylistic features or variables made up of syntax chains, as opposed to vocabulary or lexical selections of the elements of the language. Third, we examined a comprehensive list or set of such stylistic features as opposed to a limited one. Fourth, we employed short word-windows as the unit of measure, as opposed, for example, to sentences, lines, or hundreds of words of Greek text.

The method numbered and morphologically tagged the synoptic text, separated out the editorial layer, formed 'ten-word windows,' found all the syntax chains, and calculated the proportion of

them in each block. This formed a profile, or a distribution, of the stylistic features of syntax that exist in each of the blocks respectively, and there were statistical measures of the distance between the distributions.

Overall, such a comprehensive assessment of syntax chain types, especially when measured with a weighted sum of the logs of the ratios, did link the blocks of A=Mark<sub>1</sub> (or M<sub>1</sub>) to B=Mark<sub>2</sub> (or M<sub>2</sub>), rather than linking A=Mark<sub>1</sub> (or M<sub>1</sub>) to Luke, so distinguishing authorship. The tails of the distribution seemed to have the most discriminating power in the case considered.

We can now go on to consider the case of the clearest source in the synoptic Gospels, that is, the triple tradition as represented by Luke. In chapter two we saw that it was at least plausible that Luke was dependent on Mark for this material, and we may now examine the picture of the relationship between them that emerges through syntax chains.

## **1 Introduction**

In chapter four, we found that a comprehensive assessment of syntax chains correctly linked one half of Mark to the other half of Mark, rather than to Luke, especially in the 'tails,' or low proportion band. That is, syntax chains gave meaningful stylistic information or evidence regarding the authorship of a whole block.

This chapter will take this a step further. We can investigate whether syntax chains give meaningful stylistic information or evidence regarding the authorship of a source.

In part two below, titled 'aims,' we will introduce the experiment, namely, to test and apply the method of syntax chains in terms of the 'triple tradition' source, and see how the results correlate with the findings of literary analysis in terms of this source in chapter two. In part three, 'method' (page 186), we will indicate the adaptation of the method from chapter four for the sake of the experiment in chapter five, although the method of chapter five will be substantially the same as that in chapter four. In part four, 'process' (page 192), we will provide the details of the data and the distributions that arise from the data. In part five, 'results' (page 201), we will compare the distributions to one another using the measures and weights that arose in chapter four. In part six, 'discussion' (page 202) and 'conclusions' (page 204), we will discuss the results and some implications for synoptic studies. In brief, a comprehensive assessment of syntax chains appears to support a reconstruction suggesting the following: First, that Mark and Luke had separate access to the triple tradition (in Rome, as we saw on page 70 above, in chapter two). Secondly, that Mark's version of the triple tradition contains elements indicating it evolved further than the version that

appears in Luke. Third, that they may not have derived the triple tradition one from the other, but rather that both derived it from the community in Rome. Fourth, they respectively show their own, or their local, further modifications of the triple tradition.

## **2 Aims: To test and apply the method in the 'triple tradition'**

Our aim is to test and apply the method of syntax chains in terms of the 'triple tradition' source, and see how the results correlate with the findings of literary analysis in terms of this source in chapter two. The question will be this: When we take the syntax chains that appear in the triple tradition as represented in Luke, and then compare the proportions in which those chains appear in the compositional work of editing in Mark and Luke respectively, does Luke's triple tradition contain Mark's characteristic syntax, so indicating that it came through Mark's work of editing?

## **3 Method: Comparing Luke's triple to unique Mark and unique Luke**

The methodology in chapter five will be the same as chapter four, with the following changes and adjustments.

We have proposed that an author leaves distinctive characteristics in the pool of syntax chains that they use. Therefore, the syntax chains that exist in a sample that is said to be connected with a given text (the possible 'host'), should appear at a higher proportion in the purest examples of the writing of the possible host text, than the proportion at which they exist in a 'non-host' text.

### **The first alternative: Mark derived the triple tradition from Luke**

Now let us apply this to the Griesbach hypothesis, that the 'triple tradition' as presented by Mark derives from Luke (while Luke derived it from Matthew). If the Griesbach scenario represented the

true situation—that is, if Luke composed the material in Luke’s version of the triple tradition, and Mark derived that triple tradition from Luke-- then the result would be as follows: Reference samples from the ‘triple tradition’ as presented by Luke should contain syntax chains that appear at a (significantly) higher proportion in the editorial layer of Luke (unique Luke) than they appear in the editorial layer of Mark (unique Mark); while, at the same time, reference samples from the ‘triple tradition’ as presented by Mark should contain syntax chains that appear at a higher proportion in the editorial layer of Luke (unique Luke) than they appear in the editorial layer of Mark (unique Mark).

Proponents of the two source hypothesis defend the position that Mark did one of the following two things: The first alternative is that Mark may have composed the material of the triple tradition. The second alternative is that Mark included the material of the triple tradition in a synoptic Gospel. In the first case, Luke derived this material from Mark; and in the second case, which we prefer, Luke derived this material from Mark’s community before our version of Mark’s Gospel was complete.

### **The second alternative: Mark composed the triple tradition**

This is the simple form of the two source hypothesis. Let us consider what results we could expect in the first case, that is, from the comparison if Mark composed what appears in Luke’s version of the triple tradition. In this case, some of Mark’s style ought still to be evident in the triple tradition sections of Luke. The reference samples from the ‘triple tradition’ as presented by Luke should contain syntax chains that appear at a higher proportion in the editorial form that appears in Mark alone (editorial form in unique Mark) than they appear in the editorial form that appears in Luke alone (editorial form in unique Luke).

### The third alternative: Luke and Mark had independent access to the triple tradition

This is similar to a recension hypothesis regarding the triple tradition and Mark. Let us consider what results we could expect in the second case, that is, from the comparison if Mark and Luke had independent access to the triple tradition. The situation would be the same as if Mark had included the material of the triple tradition in his Gospel. Let us consider the results that would indicate that a block like a written form of the triple tradition predated both of the forms of Mark and of Luke that we know. An answer would require two experiments, rather than one. The first experiment would be just as we have laid it out in chapter five, that is, with block A made up of Luke's version of the editorial form in the triple tradition. Block B would be unique Mark, and Block C would be unique Luke.

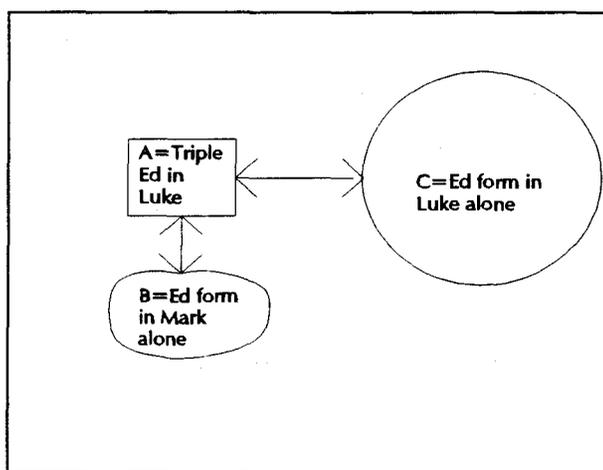


Figure 5.2: A diagram of the three blocks compared in chapter five, the 'first' experiment

A second experiment would be to make up a block A from Mark's version of the editorial form in the triple tradition. Block B would be unique Mark, and Block C would be unique Luke. In this case, the first experiment should show that A was closest to C, that is, that Luke's unique style was more evident in the triple tradition sections of Luke, and Mark's unique style was less so. The second

experiment should show that A was closest to B, that is, that Mark's unique style was more evident in the triple tradition sections of Mark, and Luke's unique style was less so.

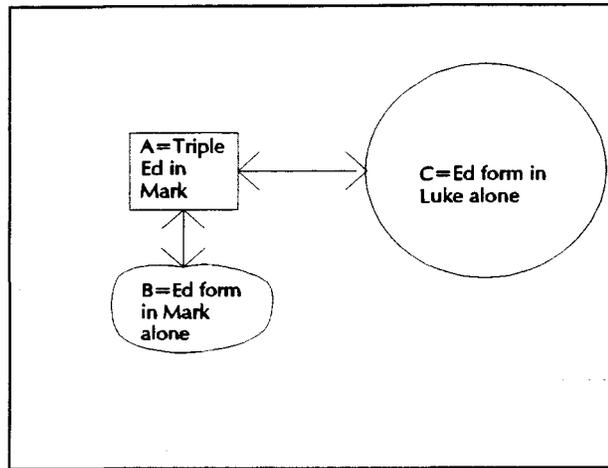


Figure 5.3: A diagram of the three blocks that could be compared in a 'second' experiment similar to that in chapter five

So a clear choice between the above three alternatives requires two experiments. This chapter will carry out only one of these two experiments, while the second (and the other four synoptic experiments indicated in the diagram) will be carried out later. The experiment in this chapter will indicate, at least, whether or not Luke's version of the triple tradition came to Luke through the editing work of Mark himself. It will not indicate what would come from the second experiment, namely, whether or not Mark's version of the triple tradition came to Mark through the editing work of Luke. A negative answer to both of these two experiments would indicate that they both derived the triple tradition independently of one another.

Whether or not the triple tradition was composed by one or the other of the synoptists would then require a comparable pair of experiments in each of the three following directions:

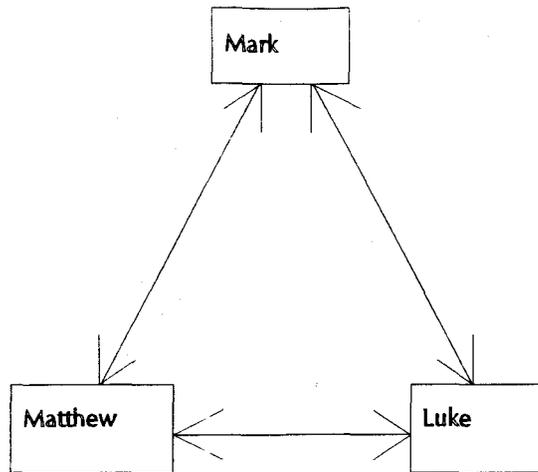


Figure 5.1 The directions of six syntax chain experiments, the combined effect of which could help locate the relative position of the triple tradition

| Table 5.1: Six experiments to measure the 'location' of the triple tradition relative to the final editors of the synoptics |   |                                |                                |
|---|---|--------------------------------|--------------------------------|
|   | Block A= 'Unknown'                        | Block B                        | Block C                        |
| Relative position between Mark and Luke   | Luke's version of the triple tradition    | The unique material in Mark    | The unique material in Luke    |
|   | Mark's version of the triple tradition    | The unique material in Mark    | The unique material in Luke    |
| Relative position between Mark and Matthew  | Mark's version of the triple tradition    | The unique material in Mark    | The unique material in Matthew |
|   | Matthew's version of the triple tradition | The unique material in Mark    | The unique material in Matthew |
| Relative position between Matthew and Luke  | Matthew's version of the triple tradition | The unique material in Matthew | The unique material in Luke    |
|   | Luke's version of the triple tradition    | The unique material in Matthew | The unique material in Luke    |

In this study, we will undertake not the six experiments so indicated, but just the one already indicated, which is the first on the above table of six experiments. Chapter four had the character of a test of the method of syntax chains, because we knew that block A, which was designated as 'unknown,' was actually known to be from Mark. Chapter five will have a dual character: First, that of a test of the method of syntax chains; and secondly, that of an application of the method of syntax chains. First, the test character will be maintained in chapter five because the source concerned--the triple tradition--will be the one that is most widely acknowledged.

Secondly, the application nature of chapter five will emerge in two ways: (a) It will emerge through the fact that the source that we will use as block A is a block that is not necessarily integral with either of the other blocks B (Mark) or C (Luke) with which we will compare it. In chapter four, block A was still integral with block B, but that is not certainly the case in chapter five. (b) The application nature of chapter five will also emerge through the fact that there are reservations about this source. For example, the minor agreements of Matthew and Luke against Mark are a continuing puzzle to the two source hypothesis.

The two things that should correlate (at least to some degree) are the following: First, what the literary method has told us about the relationship between Mark, the 'triple tradition,' and Luke, in chapter two. That is, it is at least plausible that Luke derived a written version of his 'triple tradition' material from the community in Rome (see 'Reconstruction,' page 70). This may have predated the 'triple tradition' as we know it in Mark's Gospel. Secondly, what the analysis of syntax chains indicates about the relationship between the 'triple tradition' as presented by Luke, and the layer represented by the editorial form in unique Mark. To do this, we will establish the distribution of syntax chains in the 'triple tradition' as presented by Luke, and compare it with the following two distributions, which arose in the context of chapter four: First, the distribution of syntax chains in the editorial form in unique Mark. Secondly, the distribution of syntax chains in the editorial form of unique Luke (excluding L).

We will see that there proved to be less support for the simple form of the two source hypothesis in the results from this study, and more support for a recension idea of the triple tradition (see Barton, page 68 above). It will emerge that there is less evidence of Mark's characteristic syntax in Luke's version of the triple tradition, while there is more evidence of Luke's characteristic syntax in it.

#### **4 Process: Distributions in Luke's triple, in unique Mark, and in unique Luke**

The main process to address is the examination of the distribution of syntax chains in three blocks, which we can call distribution A, B, and C. Distribution A (detailed immediately below, on page 192) is the editorial form in the triple tradition as represented by Luke. Distribution B (below, page 194) is the editorial form that exists in Mark alone. Distribution C (below, page 196) is the editorial form that exists in Luke alone.

The application of our distance measures (page 201) will carry out a comparison of A-to-B, relative to the comparison A-to-C, and will indicate which of these two relationships (A-to-B, or A-to-C) is closer in terms of syntax chains.

#### **Distribution A: Forming a distribution in the 'unknown' block**

Now we must form a similar distribution in a block of material, block A, designated to be of 'unknown' or debated authorship. During this experiment, we take the 'triple tradition' as presented by Luke as block A. There are the same two main steps toward forming a distribution in all three blocks: First, selecting material that can be compared; and secondly, forming a distribution in the materials under examination. The first is block A, Luke's version of the triple tradition.

## Part one

From the layer to be examined, we must select sections that compare in form to the material against which the comparison will be made. If the triple tradition is taken as text that appears in parallel in all three synoptics, there are over four thousand words in Luke's version of the triple tradition. That amount of words includes all forms of writing, however. We will restrict ourselves to text that appears in Luke in parallel to Matthew and Mark, where the version in Mark is in the editorial form. In this task of separating material by form, we follow the lead of Gaston (1973:6), Dibelius and Bultmann, as before. When we do this, we have only 411 words specifically in the editorial form within Luke's version of the triple tradition. Because they are in the editorial form, these words in block A are of the same form as the words in block B and block C. Therefore, they are comparable.

| The fragment represented in this row begins from: |            |            |                 | The fragment represented in this row ends with: |             |           |                 |
|---|------------|------------|-----------------|---|-------------|-----------|-----------------|
| serial<br>numbe                                   | cha<br>pte | ver<br>se: | the Greek word: | serial<br>numbe                                 | cha<br>pter | ver<br>se | the Greek word: |
| 32409.  | 4          | 14         | KAI\            | 32412.  | 4           | 14        | )IHSOU=S        |
| 32418.  | 4          | 14         | E)S             | 32420.  | 4           | 14        | GALILAI/AN      |
| 32440.  | 4          | 16         | KAI\            | 32442.  | 4           | 16        | E)S             |
| 32447.  | 4          | 16         | KAI\            | 32449.  | 4           | 16        | KATA\           |
| 32458.  | 4          | 16         | E)S             | 32460.  | 4           | 16        | SUNAGWGH/N      |
| 32712.  | 4          | 31         | KATH=LQEN       | 32737.  | 4           | 32        | AU)TOU=         |
| 32868.  | 4          | 40         | DU/NONTOS       | 32919.  | 4           | 41        | E)=NAI          |
| 32966.  | 4          | 44         | KAI\            | 32973.  | 4           | 44        | )IOUDAI/AS      |
| 33013.  | 5          | 3          | E)MBA\S         | 33018.  | 5           | 3         | PLOI/WN         |
| 33029.  | 5          | 3          | KAQI/SAS        | 33036.  | 5           | 3         | O)/XLOUS        |
| 33921.  | 6          | 11         | AU)TOI\         | 33933.  | 6           | 11        | )IHSOU=         |
| 34018.  | 6          | 17         | KAI\            | 34071.  | 6           | 19        | PA)NTAS         |
| 35604.  | 8          | 4          | SUNIO/NTOS      | 35607.  | 8           | 4         | POLLOU=         |
| 35730.  | 8          | 11         | )ESTIN          | 35815.  | 8           | 14        | OU)             |
| 35817.  | 8          | 15         | TO\             | 35825.  | 8           | 15        | OI(/TINES       |
| 35831.  | 8          | 15         | A)KOU/SANTES    | 35836.  | 8           | 15        | KARPOFOROU=SIN  |
| 36630.  | 9          | 1          | TOU\S           | 36633.  | 9           | 1         | AU)TOI=S        |
| 36636.  | 9          | 1          | E)COUSI/AN      | 36638.  | 9           | 1         | PA)NTA          |
| 36660.  | 9          | 3          | MHDE)N          | 36664.  | 9           | 3         | O(DO)N          |
| 36666.  | 9          | 3          | R(A)BDON        | 36676.  | 9           | 3         | XITW=NAS        |
| 36773.  | 9          | 10         | KAI\            | 36780.  | 9           | 10        | E)POI/HSAN      |
| 44019.  | 18         | 26         | E)=PAN          | 44029.  | 18          | 27        | E)=PEN          |
| 44039.  | 18         | 28         | E)=PEN          | 44049.  | 18          | 28        | SOI             |
| 44160.  | 18         | 35         | E)S             | 44167.  | 18          | 35        | O(DO)N          |
| 44181.  | 18         | 37         | )IHSOU=S        | 44183.  | 18          | 37        | NAZWRAI=OS      |
| 44954.  | 19         | 45         | KAI\            | 44962.  | 19          | 45        | PWLOU=NTAS      |
| 45133.  | 20         | 9          | )HRCATO         | 45135.  | 20          | 9         | PRO\S           |

| Table 5.3: Block A--Luke's version of the triple tradition<br>(the parallels to the editorial form in Mark's version) |            |            |                 |   |             |           |                 |
|---|------------|------------|-----------------|---|-------------|-----------|-----------------|
| The fragment represented in this row begins from:   |            |            |                 | The fragment represented in this row ends with: |             |           |                 |
| serial<br>numbe   | cha<br>pte | ver<br>se: | the Greek word: | serial<br>numbe                                 | cha<br>pter | ver<br>se | the Greek word: |
| 45251.  | 20         | 16         | E)LEU/SETAI     | 45261.  | 20          | 16        | A)/LLOIS        |
| 45303.  | 20         | 19         | KAI\            | 45309.  | 20          | 19        | A)RXIEREI=S     |
| 45319.  | 20         | 19         | KAI\            | 45331.  | 20          | 19        | TAU/THN         |
| 46634.  | 22         | 24         | )EGE/NETO       | 46649.  | 22          | 25        | AU)TOI=S        |

A2. Part two: Form a distribution in the first block of material, block A, currently under examination.

| Table 5.4: The distribution in block A |   |
|--|---|
| Syntax chain                           | Proportions in Luke's version of the triple tradition |
| <b>The first five records:</b>         |   |
| 020304                                 | 0.00000597  |
| 020306                                 | 0.00000597  |
| 020309                                 | 0.00001   |
| 020310                                 | 0.00000597  |
| 020312                                 | 0.00000597  |
| <b>The middle five records:</b>        |   |
| 203403                                 | 0.00002   |
| 203405                                 | 0.00001   |
| 203406                                 | 0.00002   |
| 203410                                 | 0.00007   |
| 203412                                 | 0.00003   |
| <b>The last five records:</b>          |   |
| 535025                                 | 0.00001   |
| 535027                                 | 0.00002   |
| 535028                                 | 0.00001   |
| 535045                                 | 0.00001   |
| 535046                                 | 0.00001   |

**Distribution B:** Form a distribution in block B, the first 'known' layer--the editorial form that exists in Mark alone

In chapter four we formed a distribution in block B, made up of the editorial form that exists in the whole of the Gospel of Mark. We cannot use that distribution here, because it contains editorial

form that exists in Mark's (or Luke's) version of the triple tradition. That this may not be homogeneous with Mark's composition was perhaps evident in the result table for chapter four.

Table 5.5: Block B—The unique editorial material in Mark

| The fragment represented in this row begins from: |         |         |                 | The fragment represented in this row ends with: |          |        |                 |
|---|---------|---------|-----------------|---|----------|--------|-----------------|
| serial number                                     | cha pte | ver se: | the Greek word: | serial numbe                                    | cha pter | ver se | the Greek word: |
| 1.  | 1       | 1       | )ARXH\          | 14.   | 1        | 2      | PROFH/TH        |
| 441.  | 1       | 28      | KAI\            | 455.  | 1        | 29     | EU)QU\S         |
| 706.  | 2       | 1       | KAI\            | 733.  | 2        | 2      | LO/GON          |
| 902.  | 2       | 13      | KAI\            | 917.  | 2        | 13     | AU)TOU/S        |
| 1704.   | 3       | 30      | O/TI            | 1708.   | 3        | 30     | E)/XEI          |
| 3386.   | 6       | 12      | KAI\            | 3401.   | 6        | 13     | E)QERA/PEUON    |
| 3734.   | 6       | 31      | H)=SAN          | 3744.   | 6        | 31     | FAGEI=N         |
| 4068.   | 6       | 52      | OU)             | 4079.   | 6        | 52     | PEPWRWME/NH     |
| 4180.   | 7       | 3       | OI(             | 4188.   | 7        | 3      | MH\             |
| 4190.   | 7       | 3       | NI/YWNTAI       | 4217.   | 7        | 4      | KAI\            |
| 4219.   | 7       | 4       | KAI\            | 4219.   | 7        | 4      | KAI\            |
| 4221.   | 7       | 4       | KAI\            | 4222.   | 7        | 4      | KLINW=N         |
| 4409.   | 7       | 17      | O/TE            | 4422.   | 7        | 17     | PARABOLH/N      |
| 4492.   | 7       | 22      | MOIXEI=A        | 4495.   | 7        | 22     | DO/LOS          |
| 4497.   | 7       | 22      | O)FQALMO\S      | 4499.   | 7        | 22     | BLASFHMI/A      |
| 4756.   | 8       | 1       | )EN             | 4764.   | 8        | 1      | KAI\            |
| 4919.   | 8       | 12      | KAI\            | 4919.   | 8        | 12     | KAI\            |
| 4921.   | 8       | 12      | TW=             | 4924.   | 8        | 12     | LE/GEI          |
| 4943.   | 8       | 13      | PA/LIN          | 4948.   | 8        | 13     | PE/RAN          |
| 4953.   | 8       | 14      | KAI\            | 4967.   | 8        | 15     | AU)TOI=S        |
| 5000.   | 8       | 17      | OU)DE\          | 5006.   | 8        | 17     | U(MW=N          |
| 5055.   | 8       | 22      | KAI\            | 5058.   | 8        | 22     | BHQSAI+DA/N     |
| 5145.   | 8       | 27      | KW/MAS          | 5145.   | 8        | 27     | KW/MAS          |
| 5557.   | 9       | 10      | KAI\            | 5569.   | 9        | 10     | A)NASTH=NAI     |
| 5630.   | 9       | 14      | PERI\           | 5645.   | 9        | 15     | KAI\            |
| 5647.   | 9       | 15      | H)SPA/ZONTO     | 5655.   | 9        | 16     | AU)TOU/S        |
| 5898.   | 9       | 30      | KAI\            | 5903.   | 9        | 30     | GNOI=           |
| 5939.   | 9       | 33      | KAI\            | 5960.   | 9        | 34     | GAIR            |
| 5962.   | 9       | 34      | E)N             | 5966.   | 9        | 34     | MEI/ZWN         |
| 6257.   | 10      | 1       | KAI\            | 6268.   | 10       | 1      | AU)TOU/S        |
| 6361.   | 10      | 10      | KAI\            | 6370.   | 10       | 10     | AU)TO/N         |
| 6590.   | 10      | 24      | OI(             | 6604.   | 10       | 24     | AU)TOI=S        |
| 6741.   | 10      | 32      | )=HSAN          | 6772.   | 10       | 32     | SUMBAI/NEIN     |
| 7295.   | 11      | 11      | E)S             | 7300.   | 11       | 11     | PA/NTA          |
| 7565.   | 11      | 27      | E)/RXONTAI      | 7573.   | 11       | 27     | PERIPATOU=NTOS  |
| 8529.   | 13      | 3       | KATE/NANTI      | 8542.   | 13       | 3      | )ANDRE/AS       |
| 8553.   | 13      | 4       | ME/LLH          | 8556.   | 13       | 4      | PA/NTA          |
| 8970.   | 13      | 30      | A)MH\N          | 8972.   | 13       | 30     | U(MI=N          |

| Table 5.6: The distribution in block B |  |
|--|--|
| Syntax chain                           | Block B: What exists in Mark alone, and is in the editorial form |
| The first five records:                |  |
| 020304                                 | 0.00004  |
| 020306                                 | 0.00003  |
| 020309                                 | 0.00001  |
| 020310                                 | 0.00005  |
| 020312                                 | 0.00005  |
| The middle five records:               |  |
| 203403                                 | 0.00002  |
| 203405                                 | 0.00002  |
| 203406                                 | 0.00003  |
| 203410                                 | 0.00006  |
| 203412                                 | 0.00002  |
| The last five records:                 |  |
| 535025                                 | 0.00002  |
| 535027                                 | 0.00001  |
| 535028                                 | 0.0000071  |
| 535045                                 | 0.0000071  |
| 535046                                 | 0.0000071  |

**Distribution C: Forming a distribution in block C, the second 'known' layer—the editorial form that exists in Luke alone, without parallel, but not 'L'**

In chapter four we formed a distribution in block C, made up of the editorial form that exists in the whole of the Gospel of Mark. We cannot use that distribution here, because it contains editorial form that exists in Luke's version of the triple tradition, which is what makes up block A above. That this may not be homogeneous with Luke's (or Mark's) composition was perhaps evident in the result table for chapter four. The method of forming the distribution is established by now, so we will simply show the contents of the editorial form that exists in Luke alone, without parallel, but not 'L.' That list of contents will be followed by excerpts from the distribution that arises from it.

Table 5.8: The editorial form in Block C=Lucan composition, ie. ed form in Luke alone (but not 'L')...

| The fragment represented in this row begins from: |         |        |                   | The fragment represented in this row ends with: |         |       |                 |
|---|---------|--------|-------------------|---|---------|-------|-----------------|
| serial number                                     | chapter | verse: | the Greek word:   | serial number                                   | chapter | verse | the Greek word: |
| 29587.  | 1       | 1      | )EPEIDH/PER       | 29628.  | 1       | 4     | A)SFA/LEIAN     |
| 31619.  | 3       | 1      | )EN               | 31661.  | 3       | 2     | E)PI\           |
| 31663.  | 3       | 2      | TO\N              | 31671.  | 3       | 3     | E)S             |
| 31734.  | 3       | 7      | )ELEGEN           | 31735.  | 3       | 7     | OU)=N           |
| 31740.  | 3       | 7      | U(P               | 31740.  | 3       | 7     | U(P             |
| 31879.  | 3       | 15     | PROSDOKW=NTOS     | 31897.  | 3       | 15    | XRISTO/S        |
| 31956.  | 3       | 18     | POLLA\            | 31998.  | 3       | 20    | FULAKH=         |
| 32042.  | 3       | 23     | KAI\              | 32056.  | 3       | 23    | )HLI\           |
| 32413.  | 4       | 14     | E)N               | 32417.  | 4       | 14    | PNEU/MATOS      |
| 32421.  | 4       | 14     | KAI\              | 32439.  | 4       | 15    | PA/NTWN         |
| 32857.  | 4       | 39     | E)PETI/MHSEN      | 32859.  | 4       | 39    | PURETW=         |
| 32955.  | 4       | 43     | EU)AGGELI/SASQAI/ | 32961.  | 4       | 43    | QEOU=           |
| 32974.  | 5       | 1      | )EGE/NETO         | 32997.  | 5       | 2     | EI)=DEN         |
| 33109.  | 5       | 8      | )DWN              | 33125.  | 5       | 8     | KU/RIE          |
| 33168.  | 5       | 10     | E/SH              | 33206.  | 5       | 12    | KU/RIE          |
| 33252.  | 5       | 15     | DIH/RXETO         | 33314.  | 5       | 17    | AU)TO/N         |
| 33584.  | 5       | 32     | E)S               | 33585.  | 5       | 32    | META/NOIAN      |
| 33646.  | 5       | 36     | )ELEGEN           | 33651.  | 5       | 36    | AU)TOUS         |
| 33934.  | 6       | 12     | )EGE/NETO         | 33934.  | 6       | 12    | )EGE/NETO       |
| 33936.  | 6       | 12     | E)N               | 33939.  | 6       | 12    | TAU/TAIS        |
| 33945.  | 6       | 12     | PROSEU/CASQAI     | 33957.  | 6       | 13    | H(ME/RA         |
| 33963.  | 6       | 13     | E)KLECA/MENOS     | 33963.  | 6       | 13    | E)KLECA/MENOS   |
| 33967.  | 6       | 13     | OU)\S             | 33970.  | 6       | 13    | W)NO/MASEN      |
| 34010.  | 6       | 17     | KAI\              | 34017.  | 6       | 17    | PEDINOUS        |
| 34073.  | 6       | 20     | AU)TOIS           | 34073.  | 6       | 20    | AU)TOIS         |
| 34108.  | 6       | 22     | MISH/SWSIN        | 34108.  | 6       | 22    | MISH/SWSIN      |
| 34110.  | 6       | 22     | OI(               | 34116.  | 6       | 22    | KAI\            |
| 34119.  | 6       | 22     | E)KBA/LWSIN       | 34123.  | 6       | 22    | W(S             |
| 34126.  | 6       | 22     | TOU=              | 34129.  | 6       | 22    | A)NQRW/POU      |
| 34199.  | 6       | 27     | )ALLA\            | 34199.  | 6       | 27    | )ALLA\          |
| 34202.  | 6       | 27     | TOI=S             | 34203.  | 6       | 27    | A)KOU/OUSIN     |
| 34222.  | 6       | 29     | TW=               | 34223.  | 6       | 29    | TU/PTONTI/      |
| 34225.  | 6       | 29     | E)PI\             | 34225.  | 6       | 29    | E)PI\           |
| 34228.  | 6       | 29     | PA/REXE           | 34228.  | 6       | 29    | PA/REXE         |
| 34233.  | 6       | 29     | A)PO\             | 34235.  | 6       | 29    | AI)/RONTO/S     |
| 34242.  | 6       | 29     | MH\               | 34243.  | 6       | 29    | KWLU/SH S       |
| 34256.  | 6       | 31     | KAI\              | 34257.  | 6       | 31    | KAQWS           |
| 34266.  | 6       | 31     | O(MOI/WS          | 34266.  | 6       | 31    | O(MOI/WS        |
| 34312.  | 6       | 34     | E)STI/N           | 34312.  | 6       | 34    | E)STI/N         |
| 34392.  | 6       | 38     | GA\R              | 34392.  | 6       | 38    | GA\R            |
| 34397.  | 6       | 39     | EI)=PEN           | 34401.  | 6       | 39    | AU)TOI=S        |
| 34518.  | 6       | 44     | OU)               | 34518.  | 6       | 44    | OU)             |
| 34524.  | 6       | 44     | OU)DE\            | 34524.  | 6       | 44    | OU)DE\          |
| 34582.  | 6       | 47     | U(PODEI/CW        | 34583.  | 6       | 47    | U(MI=N          |
| 34838.  | 7       | 11     | KAI\              | 34856.  | 7       | 11    | POLU/S          |
| 35016.  | 7       | 21     | E)N               | 35033.  | 7       | 21    | BLE/PEIN        |
| 35067.  | 7       | 24     | )APELQO/NTWN      | 35067.  | 7       | 24    | )APELQO/NTWN    |
| 35069.  | 7       | 24     | TW=N              | 35071.  | 7       | 24    | )IWA/NNOU       |

Table 5.8: The editorial form in Block C=Lucan composition, ie. ed form in Luke alone (but not 'L')...

| The fragment represented in this row begins from: |         |         |                 | The fragment represented in this row ends with: |          |        |                  |
|---|---------|---------|-----------------|---|----------|--------|------------------|
| serial number                                     | cha pte | ver se: | the Greek word: | serial number                                   | cha pter | ver se | the Greek word:  |
| 35074.  | 7       | 24      | PRO\S           | 35074.  | 7        | 24     | PRO\S            |
| 35161.  | 7       | 29      | KAI\            | 35165.  | 7        | 29     | A)KOU/SAS        |
| 35169.  | 7       | 29      | E)DIKAI/WSAN    | 35174.  | 7        | 29     | BA/PTISMA        |
| 35608.  | 8       | 4       | KAI\            | 35617.  | 8        | 4      | PARABOLH=S       |
| 35694.  | 8       | 9       | )EPHRW/TWN      | 35704.  | 8        | 9      | PARABOLH/        |
| 36628.  | 9       | 1       | SUCKALESA/MENOS | 36629.  | 9        | 1      | DE\              |
| 36634.  | 9       | 1       | DU/NAMIN        | 36635.  | 9        | 1      | KAI\             |
| 36639.  | 9       | 1       | TA\             | 36641.  | 9        | 1      | KAI\             |
| 36644.  | 9       | 2       | KAI\            | 36659.  | 9        | 3      | AU)TOU/S         |
| 36665.  | 9       | 3       | MH/TE           | 36665.  | 9        | 3      | MH/TE            |
| 36677.  | 9       | 3       | E)/XEIN         | 36677.  | 9        | 3      | E)/XEIN          |
| 36680.  | 9       | 4       | H)\N            | 36681.  | 9        | 4      | A)\N             |
| 36696.  | 9       | 5       | A)PO\           | 36699.  | 9        | 5      | E)KEI/NHS        |
| 36702.  | 9       | 5       | A)PO\           | 36702.  | 9        | 5      | A)PO\            |
| 36711.  | 9       | 6       | E)CERXO/MENOI   | 36720.  | 9        | 6      | PANTAXOU=        |
| 36938.  | 9       | 18      | E)GE/NETO       | 36959.  | 9        | 18     | EI)=NAI          |
| 37003.  | 9       | 22      | Ei)PW\N         | 37005.  | 9        | 22     | DEI=             |
| 37142.  | 9       | 28      | O)KTW\          | 37142.  | 9        | 28     | O)KTW\           |
| 37154.  | 9       | 28      | PROSEU/CASQAI   | 37172.  | 9        | 29     | E)CASTRA/PTWN    |
| 37184.  | 9       | 31      | OI(\            | 37196.  | 9        | 31     | )IEROUSALH/M     |
| 37265.  | 9       | 34      | E)FOBH/QHSAN    | 37273.  | 9        | 34     | NEFE/LHN         |
| 37286.  | 9       | 35      | O(              | 37287.  | 9        | 35     | E)KLELEGME/NOS   |
| 37312.  | 9       | 37      | )EGE/NETO       | 37325.  | 9        | 37     | POLU/S           |
| 37335.  | 9       | 38      | DE/OMAI/        | 37338.  | 9        | 38     | E)PI\            |
| 37342.  | 9       | 38      | O)/(TI          | 37346.  | 9        | 39     | KAI\             |
| 37351.  | 9       | 39      | KAI\            | 37357.  | 9        | 39     | META\            |
| 37359.  | 9       | 39      | KAI\            | 37367.  | 9        | 40     | E)DEH/QHN        |
| 37418.  | 9       | 42      | KAI\            | 37447.  | 9        | 43     | AU)TOU=          |
| 37458.  | 9       | 44      | GA\R            | 37458.  | 9        | 44     | GA\R             |
| 37473.  | 9       | 45      | KAI\            | 37481.  | 9        | 45     | AU)TO/           |
| 37486.  | 9       | 45      | PERI\           | 37489.  | 9        | 45     | TOU/TOU          |
| 37663.  | 9       | 57      | POREUOME/NWN    | 37667.  | 9        | 57     | O(DW=            |
| 37670.  | 9       | 57      | PRO\S           | 37670.  | 9        | 57     | PRO\S            |
| 37731.  | 9       | 60      | SU\             | 37738.  | 9        | 60     | QEQU=            |
| 37779.  | 10      | 1       | META\           | 37809.  | 10       | 2      | AU)TOU/S         |
| 38135.  | 10      | 21      | AU)TH=          | 38144.  | 10       | 21     | KAI\             |
| 38247.  | 10      | 25      | KAI\            | 38272.  | 10       | 26     | A)NAGINW/SKEIS   |
| 38311.  | 10      | 28      | Ei)=PEN         | 38333.  | 10       | 29     | PLHSI/ON         |
| 38566.  | 11      | 1       | KAI\            | 38594.  | 11       | 1      | AU)TOU=          |
| 38639.  | 11      | 5       | KAI\            | 38642.  | 11       | 5      | AU)TOU/S         |
| 38725.  | 11      | 9       | KA)GW\          | 38725.  | 11       | 9      | KA)GW\           |
| 38843.  | 11      | 17      | AU)TO\S         | 38843.  | 11       | 17     | AU)TO\S          |
| 38859.  | 11      | 17      | E)PI\           | 38861.  | 11       | 17     | PI/PTEI          |
| 39064.  | 11      | 29      | O)/XLWN         | 39065.  | 11       | 29     | E)PAQROIZOME/NWN |
| 39067.  | 11      | 29      | LE/GEIN         | 39067.  | 11       | 29     | LE/GEIN          |
| 39164.  | 11      | 33      | OU)DE\          | 39164.  | 11       | 33     | OU)DE\           |
| 39192.  | 11      | 34      | KAI\            | 39192.  | 11       | 34     | KAI\             |
| 39203.  | 11      | 34      | KAI\            | 39203.  | 11       | 34     | KAI\             |

Table 5.8: The editorial form in Block C=Lucan composition, ie. ed form in Luke alone (but not 'L')...

| The fragment represented in this row begins from: |         |         |                 | The fragment represented in this row ends with: |          |        |                 |
|---|---------|---------|-----------------|---|----------|--------|-----------------|
| serial numbe                                      | cha pte | ver se: | the Greek word: | serial numbe                                    | cha pter | ver se | the Greek word: |
| 39208.  | 11      | 35      | SKO/PEI         | 39210.  | 11       | 35     | MH\             |
| 39218.  | 11      | 36      | EI)             | 39240.  | 11       | 36     | SE              |
| 39270.  | 11      | 39      | KU/RIOS         | 39272.  | 11       | 39     | AU)TO/N         |
| 39379.  | 11      | 45      | )APOKRIQEI\S    | 39391.  | 11       | 45     | U(BRI/ZEIS      |
| 39523.  | 11      | 53      | KA)KEI=QEN      | 39546.  | 11       | 54     | AU)TOU=         |
| 39557.  | 12      | 1       | H)/RCATO        | 39563.  | 12       | 1      | PRW=TON         |
| 39610.  | 12      | 4       | LE/GW           | 39612.  | 12       | 4      | U(MI=N          |
| 39631.  | 12      | 5       | U(PODEI/CW      | 39631.  | 12       | 5      | U(PODEI/CW      |
| 39633.  | 12      | 5       | U(MI=N          | 39633.  | 12       | 5      | U(MI=N          |
| 39682.  | 12      | 8       | LE/GW           | 39684.  | 12       | 8      | U(MI=N          |
| 39924.  | 12      | 22      | EI)=PEN         | 39929.  | 12       | 22     | AU)TOU=         |
| 39994.  | 12      | 26      | EI)             | 39998.  | 12       | 26     | DU/NASQE        |
| 40001.  | 12      | 26      | TW=N            | 40002.  | 12       | 26     | LOIPW=N         |
| 40099.  | 12      | 33      | PWLH/SATE       | 40110.  | 12       | 33     | PALAIU/MENA     |
| 40112.  | 12      | 33      | A)NE/KLEIPTON   | 40112.  | 12       | 33     | A)NE/KLEIPTON   |
| 40114.  | 12      | 33      | TOI=S           | 40114.  | 12       | 33     | TOI=S           |
| 40118.  | 12      | 33      | OU)K            | 40120.  | 12       | 33     | OU)DE\          |
| 40122.  | 12      | 33      | DIAFQEI/REI     | 40122.  | 12       | 33     | DIAFQEI/REI     |
| 40128.  | 12      | 34      | U(MW=N          | 40128.  | 12       | 34     | U(MW=N          |
| 40133.  | 12      | 34      | U(MW=N          | 40133.  | 12       | 34     | U(MW=N          |
| 40236.  | 12      | 41      | EI)=PEN         | 40250.  | 12       | 41     | PA/NTAS         |
| 40436.  | 12      | 51      | LE/GW           | 40437.  | 12       | 51     | U(MI=N          |
| 40485.  | 12      | 54      | )/ELEGEN        | 40485.  | 12       | 54     | )/ELEGEN        |
| 40487.  | 12      | 54      | KAI\            | 40489.  | 12       | 54     | O)/XLOIS        |
| 40533.  | 12      | 57      | TI/             | 40541.  | 12       | 57     | DI/KAION        |
| 40676.  | 13      | 6       | )/ELEGEN        | 40680.  | 13       | 6      | PARABOLH/N      |
| 40758.  | 13      | 10      | )=HN            | 40767.  | 13       | 10     | SA/BBASIN       |
| 40905.  | 13      | 17      | KAI\            | 40917.  | 13       | 17     | AU)TOU=         |
| 40982.  | 13      | 22      | KAI\            | 41008.  | 13       | 24     | )AGWNI/ZESQE    |
| 41013.  | 13      | 24      | QU/RAS          | 41013.  | 13       | 24     | QU/RAS          |
| 41016.  | 13      | 24      | LE/GW           | 41018.  | 13       | 24     | ZHTH/SOUSIN     |
| 41251.  | 14      | 1       | KAI\            | 41271.  | 14       | 1      | AU)TO/N         |
| 41333.  | 14      | 7       | )/ELEGEN        | 41346.  | 14       | 7      | AU)TOU/S        |
| 41426.  | 14      | 12      | )/ELEGEN        | 41431.  | 14       | 12     | AU)TO/N         |
| 41487.  | 14      | 15      | )AKOU/SAS       | 41494.  | 14       | 15     | AU)TW=          |
| 41504.  | 14      | 16      | O(              | 41505.  | 14       | 16     | DE\             |
| 41653.  | 14      | 24      | LE/GW           | 41655.  | 14       | 24     | U(MI=N          |
| 41667.  | 14      | 25      | SUNEPORU/ONTO   | 41676.  | 14       | 25     | AU)TOU/S        |
| 43013.  | 17      | 1       | EI)=PEN         | 43017.  | 17       | 1      | AU)TOU=         |
| 43083.  | 17      | 5       | KAI\            | 43091.  | 17       | 5      | PI/STIN         |
| 43344.  | 17      | 22      | )ELEU/SONTAI    | 43358.  | 17       | 22     | O)/YESQE        |
| 43396.  | 17      | 25      | PRW=TON         | 43407.  | 17       | 25     | TAU/THS         |
| 43563.  | 17      | 37      | A)POKRIQE/NTES  | 43566.  | 17       | 37     | POU=            |
| 43580.  | 18      | 1       | )/ELEGEN        | 43591.  | 18       | 1      | E)GKAKEI=N      |
| 43704.  | 18      | 8       | PLH\N           | 43735.  | 18       | 9      | TAU/THN         |
| 44136.  | 18      | 34      | KAI\            | 44153.  | 18       | 34     | LEGO/MENA       |
| 44409.  | 19      | 11      | )AKOOU/NTWN     | 44432.  | 19       | 11     | A)NAFAI/NESQAI  |
| 44653.  | 19      | 26      | LE/GW           | 44654.  | 19       | 26     | U(MI=N          |

| Table 5.8: The editorial form in Block C=Lucan composition, ie. ed form in Luke alone (but not 'L')... |         |         |                 |   |          |        |                 |
|--|---------|---------|-----------------|---|----------|--------|-----------------|
| The fragment represented in this row begins from:  |         |         |                 | The fragment represented in this row ends with: |          |        |                 |
| serial numbe   | cha pte | ver se: | the Greek word: | serial numbe                                    | cha pter | ver se | the Greek word: |
| 44811.   | 19      | 37      | YEGGI/ZONTOS    | 44838.  | 19       | 37     | DUNA/MEWN       |
| 44979.   | 19      | 47      | KAI\            | 44987.  | 19       | 47     | I(ERW=          |
| 44997.   | 19      | 47      | KAI\            | 45014.  | 19       | 48     | A)KOU/WN        |
| 45606.   | 20      | 39      | A)POKRIQE/NTES  | 45614.  | 20       | 39     | EI)=PAS         |
| 45835.   | 21      | 8       | KAI/            | 45838.  | 21       | 8      | H)/GGIKEN       |
| 45872.   | 21      | 11      | SEISMOI/        | 45889.  | 21       | 11     | E)/STAI         |
| 45930.   | 21      | 15      | E)GW\           | 45946.  | 21       | 15     | U(MI=N          |
| 45988.   | 21      | 20      | (/OTAN          | 46080.  | 21       | 24     | E)QNW=N         |
| 46102.   | 21      | 26      | A)POYUXO/NTWN   | 46117.  | 21       | 26     | SALEUQH/SONTAI  |
| 46133.   | 21      | 28      | A)RXOME/NWN     | 46147.  | 21       | 28     | U(MW=N          |
| 46477.   | 22      | 15      | KAI\            | 46480.  | 22       | 15     | AU)TOU/S        |
| 46806.   | 22      | 35      | KAI\            | 46808.  | 22       | 35     | AU)TOI=S        |
| 46812.   | 22      | 35      | A)/TER          | 46812.  | 22       | 35     | A)/TER          |
| 46854.   | 22      | 37      | GEGRAMME/NON    | 46858.  | 22       | 37     | E)MOI/          |
| 46867.   | 22      | 37      | PERI\           | 46869.  | 22       | 37     | TE/LOS          |

We can form the distribution in C, which, when listed in parallel with those from block A and block B, brings to an end the description and display of the key data in this experiment.

| Table 5.9: The distributions in block A, B, and C |  |  |   |  |
|---|--|--|---|--|
| Syntax chain                                      | Block A: Luke's version of what Luke has in parallel with Matthew and Mark, and that is also in the editorial form in Mark | Block B: What exists in Mark alone, and is in the editorial form | Block C: What exists in Luke alone, and is in the editorial form. |  |
| <b>The first five records:</b>                    |  |  |   |  |
| 020304  | 0.00000597   | 0.00004  | 0.00000504  |  |
| 020306  | 0.00000597   | 0.00003  | 0.00000168  |  |
| 020309  | 0.00001  | 0.00001  | 0.00000504  |  |
| 020310  | 0.00000597   | 0.00005  | 0.00000672  |  |
| 020312  | 0.00000597   | 0.00005  | 0.00000672  |  |
| <b>The middle five records:</b>                   |  |  |   |  |
| 203403  | 0.00002  | 0.00002  | 0.00000504  |  |
| 203405  | 0.00001  | 0.00002  | 0.0000084   |  |
| 203406  | 0.00002  | 0.00003  | 0.00001   |  |
| 203410  | 0.00007  | 0.00006  | 0.00002   |  |
| 203412  | 0.00003  | 0.00002  | 0.00001   |  |
| <b>The last five records:</b>                     |  |  |   |  |
| 535025  | 0.00001  | 0.00002  | 0.00000672  |  |
| 535027  | 0.00002  | 0.00001  | 0.00000504  |  |
| 535028  | 0.00001  | 0.0000071  | 0.00000336  |  |
| 535045  | 0.00001  | 0.0000071  | 0.00000336  |  |
| 535046  | 0.00001  | 0.0000071  | 0.00000168  |  |

## 5 Results: Luke's triple is closer to unique Luke than to unique Mark

| Table 5.10: A table of results from the experiment in chapter five  |  |        |                             |       |  |        |
|---|--|--------|-----------------------------|-------|--|--------|
| Block A=(‘Unknown’) Luke’s version of the triple tradition (parallel to the editorial form in Mark)<br>Block B=(‘Known’) in Mark alone (not paralleled) and in the editorial form.<br>Block C=(‘Known’) in Luke alone but not ‘L’, and in the editorial form. |  |        |                             |       |  |        |
| Weighting by section of the distribution:   | High Proportion syntax chains (in the top 50% of proportion range) or centre |        | Full range of syntax chains |       | Low proportion syntax chains or tails i.e. in the low 0.35% of the proportion range. A lower percentage will exclude all 1864 records. |        |
| Blocks compared:  | A-B  | A-C    | A-B                         | A-C   | A-B  | A-C    |
| Records in full list  | 14808  |        |                             |       |  |        |
| Records in this proportion band   | 6  |        | 14808                       |       | 1864   |        |
| 1. The geodesic distance, where the geodesic distance closest to zero is the closer relationship:   | 0.09   | 0.05   | 0.399                       | 0.292 | 0.373  | 0.396  |
| 3a and 3b. The sum of the logs of the ratios distance measured pairwise:<br>Ratio (3a)= A/B, (3b)=A/C   | 3.19   | 1.14   | -1437.5                     | 746.7 | -1778.8  | 1814.1 |
| 3c. The sum of the logs of the ratios measured three blocks together:<br>(3c)=Sum[log{(A-to-B)/(A-to-C)}]. A smaller sum (or <0) of the logs of the ratios, the closer A to B. A larger sum (or >0) of the logs of the ratios, the closer A to C.             | 5.3  |        | 1589.53                     |       | 57.4   |        |
| 4. Weighted sum of logs of the ratios: A negative value favours A-to-B connection, while positive favours A-to-C  | 2.07   |        | 6032.9                      |       | 405.7  |        |
| 5. Chi-squared: A smaller chi-squared is a closer relationship.)  | 0.0016   | 0.0003 | 0.49                        | 0.27  | 0.04   | 0.02   |

## 6 Discussion: The effectiveness of the weights

The table in general: That six records account for the 50% of the upper proportion band indicates an extremely high peak that has emerged in this study. That 1864 records (occur once in Luke's version of the triple tradition and) account for 0.35% in the lower proportion band shows the long tails. The shape of a graph of the distribution would tend towards a hyperbolic shape. The few syntax chains in the peak are dominated almost exclusively by grammatical features 24 (the singular) and 10 (the masculine). Among the eighteen features in those six 3-element syntax chains ( $6 \times 3 = 18$  features) there is one mention of feature 17 (the noun). The indications are that this sharp, high peak—that is, the centre or high proportion band—is constituted by the syntactical characteristics of the common editorial form that exists between the three blocks. Editorial form is introductory, transitional or concluding material. It will usually be referring to Jesus, or perhaps one or two other main characters. At least in part, this seems to explain the grammatical features of the singular, the masculine and the noun that dominate the few records in this proportion band.

### The respective proportion bands

There is not the same contrast across the respective proportion bands in this table as there was in the table of results in chapter four. The results are far more consistent. In fact, the high proportion band is just as discriminatory as the low proportion band, if not more so. This strengthens the possibility that the inconsistency in the table for chapter four arose from the fact that there were, in that comparison, two sources that existed in the Mark A and Mark B material, namely, Mark's own composition and the triple tradition. Chapter four rested on the assumption that the triple tradition in Mark originated with Mark, and therefore that they were at least largely from the same hand. Chapter five has them separate. The lower consistency in the table of results for chapter four, by contrast with the higher consistency in the full range of syntax chain results in chapter five suggests that the editorial form that exists in Mark alone is of a different origin from the editorial form that exists in parallel between all three synoptic Gospels. This indicates the importance of a set of experiments along the lines of the table on page 190.

### **The variance**

The trend of A-B by comparison to A-C in each proportion band is remarkably consistent. This tends to correlate with Wachal's finding that the variance was a strong discriminating variable in his study.

### **The geodesic distance**

The low 0.35% proportion band, or tails, the geodesic distance introduces the only note to the contrary of the trend everywhere else in the table, but it does not assert a contrary trend very strongly.

### **The sum of the logs of the ratios**

In the calculation of the sum of the logs of the ratios, there are three results. Results 3a and 3b reflect the 'pairwise' assessment of this distance measure. They produce puzzling results. The sum of the logs of the ratios, when calculated with three blocks as in result 3c, seems to yield more useful information.

### **The weighted sum of the logs of the ratios**

The higher value of the weighted sum of the logs of the ratios in the full list is to be explained by the different number of records, and hence a different number of multiplications, in the different columns denoted to each of the proportion bands respectively. What is clear is that this distance measure connects A-to-C rather than A-to-B in all the proportion bands.

## Chi-squared

Along with the other measures, the chi-squared distance measure is more consistent in this table, but it also points toward or follows the same trend as the other distance measures in this table. This was not the case in the table in chapter four. In chapter four, the chi-squared went quite clearly in the 'incorrect' direction. This must have been because the make up of blocks A and B treated the triple tradition in Mark as a part of Mark. This table (above, in chapter five) seems to indicate that the triple tradition had a separate origin from the editorial form that exists in Mark alone. Therefore, it may be that the chi-squared measure, as one of those most strongly 'incorrect' in chapter four, is particularly sensitive to the homogeneity of the material in a block or blocks that are being assessed.

Therefore, the consensus of the evidence in the table appears to be that the connection between the editorial form that appears in Luke alone (block C) is more closely allied to the editorial form in Luke's version of the triple tradition (block A), than the editorial form that appears in Mark alone (block B) is allied to the same block A.

## 7 **Conclusions: Luke may not have derived the triple tradition from Mark**

A comprehensive assessment of syntax chains appears to indicate that the editorial form in Luke's version of the triple tradition is more closely allied to the editorial form in Luke's own composition than it is to the editorial form in Mark's own composition. That is, syntax analysis does not concur with the two source hypothesis, insofar as it locates the origin of Luke's version of the triple tradition in Mark. The syntax of the editorial form in Luke's version of the triple tradition is closer to the syntax of the editorial forms that exist in Luke alone, than it is to the editorial forms that exist in Mark alone. It appears, therefore, that there is little syntactical evidence that the editorial form in Luke's version of the triple tradition came from or through Mark.

It is necessary to undertake several more experiments with the triple tradition that exists in each synoptic Gospel (as block A), and compare it with the editorial form that exist in each synoptic alone

(as block B and C). This will provide more information. From what we can see in these present results alone, however, it appears unlikely that Luke drew the triple tradition from Mark.

These results, as far as they go, suggest that Luke may have derived the triple tradition from somewhere other than from Mark. Mark, then, may have derived it from that same other place. This would have the further implication that the triple tradition in Mark should be separated from what else is in Mark, if one wishes to find the characteristics of Mark's style.

This would leave open the question as to whether Mark (at least, if not Luke) derived the triple tradition from Matthew. Perhaps we must reconsider Matthew as an origin for Luke's version of the triple tradition, or else, and perhaps better, a primitive version of the triple tradition (see page 24 above). A separate syntax experiment could address these questions.

**1 Selected illustrations and stylistic characteristics from Luke's triple, from unique Mark and from unique Luke**

**1.1 Introduction**

The research has indicated that syntactical information does discriminate between authors. In chapter four we described how we can form a list of all the syntax that appears in a block of text. From that list we could calculate the relative proportions of each syntactical unit or chain, that is, a distribution of occurrence of syntax chains. Such a distribution was formed for each of three blocks of material of the same period, genre and form: block A, the relatively 'unknown' material; and blocks B and C, material from two relatively 'known' and different origins.

All three blocks were in the editorial form, a form which functions in the role of introduction, transition, or conclusion. In chapter five, block A was made up of Luke's version of the triple tradition, which we may call block A=LkTrip. Block B was material in the editorial form which appeared exclusively in Mark, while block C was material in the editorial form which appeared exclusively in Luke. For convenience we refer to the latter two blocks of material in the following way: B=MkUnique; and block C=LkUnique.

From such distributions, the syntax that discriminates between authors appeared especially well through the ratios between the proportions of some syntax involved in the three blocks. More precisely, discriminating syntax appeared through the weighted sum of the logs of the ratios. (A more detailed description of these calculations can be seen on page 150.)

The appearance of such discriminating syntax was in even closer confines, however. The least common syntax was most distinctive between our authors, and the most common syntax was second

most distinctive. That is, discriminating syntax appeared most prominently first in the tails (or low proportions) part of the distribution, and secondly, with slightly less prominence, in the centre (or high proportions) part of the distribution. Here follows a description of what is in the tails of the distribution, and what is in the centre:

**The tails** (or low proportion) part of the distribution refers, in chapter five (page 202), to syntax chains that appear once (or very few times) in A=LkTrip. Such syntax chains occurred in varying proportions in two other blocks of material. Our authors differed most sharply in the rates in which they used such uncommon syntax. **The centre** (or high proportion) part of the distribution refers to syntax chains that appeared many times at least in A=LkTrip, but it usually occurred in quite high proportions in the other two blocks as well. Our authors differed in the rates in which they used such common syntax.

The discussion below will begin with a clarification of our aim in this section—to provide selected illustrations of the experiment and of authors' characteristics in the text of the synoptics. This will be followed with the details of the method of achieving the aim—the means of selecting illustrations from our work in chapter five that will provide information that is more readily visible in the synoptic texts. The illustrations will be first, of the results of the experiment; and, secondly, of cases of contrasting characteristics between block B and block C. The discussion will end with conclusions about what has appeared, particularly with regard to the characteristics of block B=MkUnique by comparison with block C=LkUnique.

## **1.2 Aim: In the text of the synoptics, to illustrate the experiment and some author characteristics**

With regard to the experiment in chapter five, it would be helpful to the New Testament reader to have representative selections from the syntax chain information where it can be read in the synoptics. It would also be interesting to the New Testament reader to see some ways that the method casts further light on the nature or syntactical characteristics ('Markanisms' and 'Lucanisms')

of the layers concerned. The aim of this section of chapter six is to provide the New Testament reader both kinds of information: first, illustrations from the research experiment (in paragraph 1.4.1 below); and second, some syntactical characteristics of Mark and Luke (in paragraph 1.4.2 below). To begin with, we clarify the method of selecting such information.

### **1.3 Method**

To see whether syntax yielded useful information about authorship, we considered a great deal of syntactical information. For this purpose, small components of that information were far more useful than the rest of it. We would like to have a representative idea of the most useful syntax. The most valuable syntax appeared in the tails and in the centre of the distributions for the comparison between the three blocks. The method of acquiring such representative information appears in paragraph 1.3.1 below. We would also like to have information showing the syntactical characteristics of block B=MkUnique and block C=LkUnique. The method for acquiring such characteristics appears in paragraph 1.3.2.

#### **1.3.1 The method of deriving examples of the results of the experiment in the layers concerned**

The method of deriving representative examples of the results of the experiment in the layers concerned is as follows: 'Representative examples' from the experiment would be those that illustrate the results of the whole experiment in a concise way. From chapter four (page 183), we saw the following. First, that the calculation with the most satisfactory results was that of the weighted sum of the logs of the ratio. Secondly, that the sections of the distributions that discriminated 'correctly' were (a) the tails parts of the distribution; and (b) the centre or high proportions parts of the distribution. Thirdly, the most satisfactory calculation was a sum. It is not useful to show the long list of results making up such a sum. This sum can be illustrated through examples of the trend followed by most results. Such examples appear in paragraph 1.4.1 below.

### 1.3.2 The method of deriving some contrasting characteristics from at least one of the layers concerned

The method of deriving some contrasting characteristics from at least one of the layers concerned is this: The subject of the analysis, or the shared 'term of comparison' among the three blocks indicated was the 'unknown' block, block A=LkTrip. The two objects of comparison were the two blocks: B=MkUnique and C=LkUnique.

It seems reasonable to derive the contrasting characteristics from the latter two (block B=MkUnique and block C=LkUnique). It is reasonable because we have the results of the weighting calculation that specifically contrasted each syntax chain in the two blocks B and C. High values of the weight show syntax chains that were most different in the proportions in which B and C used them.

We approached Block A=LkTrip in a different way, however. Block A provided the primary list of syntax which was to be measured in relation to each of the other two blocks. The log of the ratio does not measure whether block A was particularly '*fond*' of a syntax chain. Rather, it measures whether A was more *similar* to B, or else to C, in the proportion in which block A employed the syntax chain. Therefore, it is only block B and block C (and not block A) that will be discussed in terms of their contrasting characteristics. Such examples of contrasting characteristics appear in paragraph 1.4.2 below.

## 1.4 Process

The process of obtaining samples of the experiment appears in paragraph 1.4.1. The process of obtaining some contrasting characteristics of block B and block C appears in paragraph 1.4.2.

## **1.4.1 Deriving examples of the results of the experiment in the layers concerned**

The most significant experimental results emerged through the weighted sum of the logs of the ratios. The discussion will be divided into two parts: First the tails (1.4.1.1); and, secondly, the centre or high proportion parts of the distribution (1.4.1.2). The most significant among the logs of the ratios were those where the calculation had the highest value on the one hand, or where it had the lowest value on the other. The highest ratios reflect those syntax chain proportions that were closest in the comparison between block A=LkTrip and block C=LkUnique. The lowest ratios reflect those syntax chain proportions that were closest in the comparison between block A=LkTrip and block B=MkUnique. Therefore, the lists that follow will take the highest and lowest few results of the weighted log of the ratio connected with the layers concerned.

### **1.4.1.1 In the tails part of the distribution**

Here we consider the tails part of the distribution. For the tails, the highest values of the log of the ratio are shown in paragraph 1.4.1.1.1, and the lowest in paragraph 1.4.1.1.2.

#### **1.4.1.1.1 The highest values of the weighted log of the ratio**

In the following table, the highest values of the weighted log of the ratio shows syntax that was closest between LkTrip and LkUnique. The values are listed in descending order. The derivation of the weight is indicated in chapter four (on page 152). The key to reading the information in the following table follows in the text below the table.

It should be noted that it is by virtue of the selection of syntax chains (see page 177) that every syntax chain that appears in the following tables occurs in all three blocks of writing. Syntax chains that did not appear in all three blocks were excluded from consideration.

| Table 6.1: Specific cases of syntax chains from the experiment in chapter five:<br>in the tails<br>the highest values of the weighted log of the ratio |   |   |   |   |                       |        |         |
|--|---|---|---|---|-----------------------|--------|---------|
| Syntax chain   | Grammatical features in chain                           | Frequency (f), proportion (p), &reference (r) in A=LkTrip | Frequency (f), proportion (p), &reference (r) in B=MkUnique | Frequency (f), proportion (p), &reference (r) in C=LkUnique | Log of ratio AB to AC | Weight | Log* Wt |
| 02+25+27   | Descriptive adverb+Plural+Verb (any)                    | f=1<br>p=5.97e-06<br>r=35762<br>(Lk 8:12)                 | f=22<br>p=.0001563<br>r=706<br>(Mk 2:1)                     | f=3<br>p=5.05E-6<br>r=32042<br>(Lk 3:23)                    | 3.58                  | 1.75   | 6.26    |
| 02+25+50   | Descriptive adverb+Plural+Verb (3 <sup>rd</sup> person) | f=1<br>p=5.97e-06<br>r=35762<br>(Lk 8:12).                | f=16<br>p=.0001137<br>r=706<br>(Mk 2:1)                     | f=1<br>p=1.68E-06<br>r=45998<br>(Lk 21:20)                  | 3.19                  | 1.94   | 6.18    |
| 16+25+36   | Dative (any)+Plural+Verb (infinitive)                   | f=11<br>p=.0000657<br>r=32722<br>(Lk 4:31).               | f=11<br>p=7.82e-05<br>r=716<br>(Mk 2:1)                     | f=2<br>p=3.36E-06<br>r=36938<br>(Lk 9:18)                   | 3.2                   | 1.82   | 5.81    |

The first line of the above table can be read in the following way: The syntax chain concerned is made up of the three grammatical features that are numbered 02, 25, and 27. The feature numbered 02 is an (or a descriptive) adverb; 25 is the plural; and 27 is any verb. In the third column, the frequency (f) is 1, which means that there was only one occurrence of this syntax chain in block A=LkTrip. When that value of 1 is divided by the sum of all the syntax chain frequencies that exist in block A, then one reaches a proportion (p) which is 5.97e-06 (or 0.00000597) in value. One reference (r)—in this case, the only one—to this syntax chain appears at serial number 35762, which is a part of Luke 8:12. That verse reads: “The ones along the path are those who have heard; then the devil comes and takes away the word from their hearts, that they may not believe and be saved.”

The wording ‘that they may not believe and be saved’ contains the indicated syntax chain (adverb+ plural+ verb). In this phrase, the adverb is the word ‘not’ (μή). This word ‘not’ (μή) has another layer of meaning, because it is (here) also a part of a purpose clause (Bauer et al 1979:516a). This does not detract from its adverbial function of qualifying a verb or other part of speech, however. This phenomenon (of different levels of meaning for one word) simply provides an example of additional linguistic dimensions that a more sophisticated system of coding could contain. Returning to the remaining two words in the syntax chain, we note that the plural in the syntax chain could refer either to the word ‘believe’ (πιστεύσαντες) or else to the word ‘saved’ (σωθῶσιν). If ‘believe’

is taken as the plural, then the verb indicated in the syntax chain could refer either to the word 'believe,' or else the verb could refer to the word 'saved.' This is to be noted because the syntax chains preserve the order in which the grammatical elements appear, as long as they all occur within the confines of a range of ten words.

When one consults a parallel of the synoptics, one finds that Luke 8:12 is a part of the interpretation of the parable of the sower. This has parallels in Mt 13:18-23 and Mk 4:13-23. The parallels are the reason that this passage, and so this syntax chain, is included in (the column for) Luke's version of the triple tradition (A=LkTrip). There are parts of Luke 8:12 itself that exist only in Luke, like 'the devil,' 'from,' and (our phrase here) 'that they may not believe and be saved.' The verse is still to be regarded as a part of a triple account, however, although it may well be a Lucan modification of that account. Without prejudice, it is, after all, at least possible that it was not a Lucan modification of the account. If Luke derived the triple tradition from somewhere other than Mark, such a reference could have been a part of the version Luke saw. It is even conceivable that it could be a phrase which was omitted by Mark, if the phrase was in the version that Mark saw. It would be through the accumulated consideration of the grammar in small sections of wording like these that a case could be made in one direction or another.

There is also the question about whether this passage (Mk 4:13-20) is Mark's own editorial work, or whether it is from another source than that of the original parable, for example, from the preaching of Peter as he expounded Jesus' parable. Since the passage is in the triple tradition, we do not regard it as a part of Mark's editorial work in chapter five. It is in the editorial form, but we allocated it to editorial work already entailed within the triple tradition, as opposed to the editorial form in unique Mark. Only the editorial form in unique Mark is taken as Mark's own editorial work in chapter five.

The fourth and fifth columns of the above table can be read in a similar way to that described in the preceding paragraph. The sixth column is the result of the logarithm of the following ratio: the dividend in the ratio is the difference between the proportions in columns A and B; while the divisor in the ratio is the difference between the proportions in A and C. The seventh column, the weight, is the result of the difference between the proportions in B and C divided by their average. Syntax

from A which is most different in B and C is hereby given more emphasis. This weighting is explained in chapter four (on page 152). The eighth and last column is the log of the ratio multiplied by the weight.

In the first line, we can see the following:

| Extract from the above table                                       |  |  |
|--|--|--|
| Frequency (f),<br>proportion (p),<br>&reference (r) in<br>A=LkTrip | Frequency (f),<br>proportion (p),<br>&reference (r) in<br>B=MkUnique | Frequency (f),<br>proportion (p),<br>&reference (r) in<br>C=LkUnique |
| f= 1<br>p= 5.97e-06<br>r=35762<br>(Lk 8:12)                        | f= 22<br>p= .0001563<br>r= 706<br>(Mk 2:1)                           | f=3<br>p=5.05E-6<br>r=32042<br>(Lk 3:23)                             |

There are three proportions here: A=LkTrip (0.00000597 or 5.97e-06); B=MkUnique (0.0001563, or 1.56e-4); and C=LkUnique (0.00000505 or 5.05e-6). (The scientific notation e-4 means that the decimal point has been moved, for the sake of abbreviation, four places to the right.) One can see that the proportion in A is closer to the proportion in C than it is to the proportion in B. Since A-to-C is closest, this one syntax chain (adverb+ plural+ verb) would be evidence in favour of a link between A and C rather than between A and B. There are all the other syntax chains to take into consideration, however.

#### 1.4.1.1.2 The lowest values of the weighted log of the ratio

The lowest values of the weighted log of the ratio (in the last column) shows syntax that was closest between Lk Trip and MkUnique. The lowest values are as follows, listed in ascending order of the values in the last column.

| Table 6.2: Specific cases of syntax chains from the experiment in chapter five: |  |   |   |   |                       |         |         |
|---|--|---|---|---|-----------------------|---------|---------|
| in the tails  |  |   |   |   |                       |         |         |
| the lowest values of the weighted log of the ratio                              |  |   |   |   |                       |         |         |
| Syntax chain  | Grammatical features in chain            | Frequency (f), proportion (p), &reference (r) in A=LkTrip | Frequency (f), proportion (p), &reference (r) in B=MkUnique | Frequency (f), proportion (p), &reference (r) in C=LkUnique | Log of ratio AB to AC | Weig ht | Log* Wt |
| 15+46+24  | Genitive (any) +Verb (middle) +Singular  | f= 1<br>p= 5.97e-06<br>r= 35784<br>(Lk 8:13).             | f= 1<br>p= 7.1e-06<br>r=4202<br>(Mk 7:4) .                  | f= 61<br>p=1.03e-04<br>r= 43704<br>(Lk 18:8).               | -4.42                 | 1.73    | -7.67   |
| 09+16+11  | Feminine (any)+Dative (any)+Neuter (any) | f= 1<br>p= 5.97e-06<br>r= 46634<br>(Lk 22:24).            | f= 1<br>p= 7.1e-06<br>r=6741<br>(Mk 10:32) .                | f= 52<br>p= 8.73e-05<br>r= 44811<br>(Lk 19:37).             | -4.18                 | 1.67    | -7      |
| 16+17+17  | Dative (any)+Noun (any)+Noun (any)       | f= 1<br>p= 5.97e-06<br>r= 32722<br>(Lk 4:31).             | f= 1<br>p= 7.1e-06<br>r=6741<br>(Mk 10:32) .                | f= 50<br>p= 8.4e-05<br>r= 44811<br>(Lk 19:37).              | -4.18                 | 1.67    | -7      |

This table shows that the syntax chains with the closest connection between A=LkTrip and B=MkUnique could be expressed in terms of the syntax chains indicated in the second column. This shows that a certain amount of syntax chains (in the first table) leaned in the direction of connecting A with C, on the one hand, while on the other hand some syntax chains (in this table above) leaned in the direction of connecting A with B. This is the reason that we use the sum of these weighted logs of the ratio (in the last column) to accumulate all the 'votes' on one side and on the other side into a single concluding value.

The number and the value of the weighted logs of the ratios in the preceding table (the highest values of the log of the ratio) outweighed syntax chains such as those in the above table (the lowest values of the log of the ratio). As a result, the accumulation of data in the tails linked the syntax in A=LkTrip to C=LkUnique rather than to B=MkUnique.

#### 1.4.1.2 In the centre or high proportion part of the distribution

In the centre part of the distribution, the highest ratios (1.4.1.2.1, 1.4.2.1, 1.4.2.2) again reflect those syntax chains that were closest in the comparison between block A=LkTrip and block C=LkUnique.

As before, the lowest ratios (1.4.1.2.2) reflect what syntax chains were closest in the comparison between block A=LkTrip and block B=MkUnique.

#### 1.4.1.2.1 The highest values

The highest values of the weighted log of the ratio shows syntax chains that were closest between LkTrip and LkUnique. They are listed in descending order (of the value in the last column) in the following table. We may note that the frequencies in A=LkTrip are here (in the centre) in the hundreds, as opposed to single digits (or occasionally double digits) in the tails part of the distribution above.

| Table 6.3: Specific cases of syntax chains from the experiment in chapter five: |                                 |  |  |  |                       |           |           |
|---|---------------------------------|--|--|--|-----------------------|-----------|-----------|
| in the centre   |                                 |  |  |  |                       |           |           |
| the highest values of the weighted log of the ratio                             |                                 |  |  |  |                       |           |           |
| Syntax chain  | Grammatical features in chain   | Frequency (f), proportion (p), & reference (r) in A=LkTrip | Frequency (f), proportion (p), & reference (r) in B=MkUnique | Frequency (f), proportion (p), & reference (r) in C=LkUnique | Log of ratio AB to AC | Weight    | Log* Wt   |
| 24+24+24  | Singular+Singular+Singular      | f=297<br>p=.00177<br>r=32868<br>(Lk 4:40).                 | f=146<br>p=.00104<br>r=6741<br>(Mk 10:32).                   | f=940<br>p=.00158<br>r=44811<br>(Lk 19:37).                  | 1.31                  | 0.41<br>5 | 0.54<br>3 |
| 24+24+17  | Singular+Singular+Noun<br>(any) | f=160<br>p=.000956<br>r=32868<br>(Lk :40).                 | f=72<br>p=.000512<br>r=6751<br>(Mk 10:32).                   | f=485<br>p=.000815<br>r=44811<br>(Lk 19:37).                 | 1.15                  | 0.45<br>5 | 0.52<br>1 |

#### 1.4.1.2.2 The lowest values

The lowest values of the weighted log of the ratio shows syntax chains that were closest between LkTrip and MkUnique. They are listed in ascending order of the value in the last column as follows:

| Table 6.4: Specific cases of syntax chains from the experiment in chapter five: |   |   |   |   |                       |        |         |
|---|---|---|---|---|-----------------------|--------|---------|
| in the centre   |   |   |   |   |                       |        |         |
| the lowest values of the weighted log of the ratio                              |   |   |   |   |                       |        |         |
| Syntax chain  | Grammatical features in chain             | Frequency (f), proportion (p), &reference (r) in A=LkTrip | Frequency (f), proportion (p), &reference (r) in B=MkUnique | Frequency (f), proportion (p), &reference (r) in C=LkUnique | Log of ratio AB to AC | Weight | Log*W t |
| 24+10+10  | Singular+ Masculine (any)+Masculine (any) | f=174<br>p=.00104<br>r=32868.<br>(Lk 4:40)                | f=111<br>p=.00079<br>r=6751<br>(Mk 10:32).                  | f=517<br>p=.000868<br>r=44821<br>(Lk 19:37).                | 0.386                 | .0976  | 0.038   |
| 24+24+10  | Singular+Singular+Masculine (any)         | f=241<br>p=.00144<br>r=32868<br>(Lk 4:40).                | f=126<br>p=.0009<br>r=6751<br>(Mk 10:32).                   | f=620<br>p=.00104<br>r=44821<br>(Lk 19:37).                 | 0.325                 | 0.155  | 0.051   |

The number and the value of the weighted log of the ratios in the preceding table (the highest values of the log of the ratio) outweighed syntax chains such as those in the above table (the lowest values of the log of the ratio), where both were measured in the centre, however. As a result, the accumulation of data in the centre linked A=LkTrip to C=LkUnique rather than to B=MkUnique.

#### 1.4.2 Characteristics of block B=MkUnique by contrast with block C=LkUnique

The weight is the feature in the above calculations that specifically contrasts the appearance of a particular syntax chain in block B=MkUnique over against its appearance in block C=LkUnique. Therefore, at least some characteristics of block B by contrast with block C emerge through those weights which yielded the highest values. Such contrasting characteristics appear in two parts of the distribution, first, the tails part (see paragraph 1.4.2.1); and secondly, the centre part (see paragraph 1.4.2.2).

##### 1.4.2.1 The tails part of the distribution

We have already noted that the tails part of the distribution is based on syntax chains that appear only once or very few times in A=LkTrip. Such syntax chains appear in contrasting proportions in block B=MkUnique and in block C=LkUnique, respectively. The highest values of the weight

shows syntax that appeared in proportions which had the sharpest contrast between MkUnique and LkUnique. They are listed in descending order of the value in the last column (here, the weight) as follows:

| Table 6.5: Specific cases of syntax chains from the experiment in chapter five:<br>Characteristics of unique Mark by comparison with unique Luke<br>in the tails |   |  |   |        |
|--|---|--|---|--------|
| Syntax chain   | Grammatical features in chain                           | Frequency (f), proportion (p), &reference (r) in B=MkUnique  | Frequency (f), proportion (p), &reference (r) in C=LkUnique | Weight |
| 02+25+50   | Descriptive adverb+Plural+Verb (3 <sup>rd</sup> person) | f=16<br>p=1.14e-04<br>r=6762<br>(Mk 10:32)                   | f=1<br>p=1.68e-06<br>r=45998<br>(Lk 21:20)                  | 1.94   |
| 18+21+21   | Noun (nominative)+Noun (genitive)+Noun (genitive)       | f=10<br>p=7.1e-05<br>r=1<br>(all 10 are in the verse Mk 1:1) | f=1<br>p=1.68e-06<br>r=43344<br>(Lk 17:22)                  | 1.91   |
| 12+28+29   | Nominative (any)+Verb (present)+Verb (imperfect)        | f=8<br>p=5.68e-05<br>r=3386<br>(Mk 6:12)                     | f=1<br>p=1.68e-06<br>r=33284<br>(Lk 5:17)                   | 1.87   |

From this table we have an indication that the three syntax chains contained there are among the most characteristic in the unique sections of Mark. They occur in a proportion that is at least ten times greater in Mark than in Luke.

Notes on the first syntax chain: The appearance of the plural in the first syntax chain (cf. 10:32, ‘...and Jesus was walking ahead of them; and they were amazed, and those who followed were afraid’) is important in Mark, recurring in his conclusion (16:5, 8). In Mark 6:12 (in the third row) the plural emerges again: ‘So they went out and preached that they should repent.’ ‘The impersonal plural’ appears sixth in order in the list given by Taylor ([1952] 1969:4). The emphasis on the plural may correspond with Mark’s theme of treating people—like the ‘opponents,’ or the disciples—as a *group*, rather than as an individuals. Our listing of leading or characteristic syntax can guide us to a place or places in Mark in which we find important themes in Mark’s unique writing—the emphasis on groups, the emotional turmoil among the followers of Jesus occasioned primarily by their confusion about Jesus, and repentance preaching (that must not be distracted by such circumstances).

Notes on the second syntax chain: Notably, all the occurrences of the second syntax chain in the table are found in one verse—the ‘title’ verse of the Gospel of Mark. Therefore, the second syntax chain may not be a characteristic of Mark after all. This points towards the importance of assessing the *spread* of a syntax chain throughout the block. This factor must be deferred for study under other circumstances than this thesis. Nevertheless, since the nominative case appears also in the third syntax chain, this case appears to be important for Mark.

Notes on the third syntax chain: There is the recurrence of the nominative combined with a verb amongst Mark’s distinctive language (by contrast with Luke). The third person, and the verbal tenses of the present and of the imperfect are characteristic of Mark in this comparison. In this table (above) and in the next table (below), Luke is not notable for a particular verbal tense, apparently using a range of tenses, and also a range of cases. Since Mark dominates here in the tails, he is characterised by unusual grammatical structures. Taken together, these features in Mark are surely connected with Mark’s relatively simple, direct grammatical structure and, conceivably, perhaps with his awkwardness with Greek, or with his underlying Aramaic background.

Neither the conjunction nor the participle appears in the above three leading characteristics of Mark. This indicates that those so-called ‘Markanisms’ may be more features of the triple tradition than they are features of unique Mark. So we may query L Johnson (1986:150), who said, ‘Mark’s sentence structure was paratactic, that is, he joins clauses with ‘and,’ rather than by using relative pronouns and subordinate conjunctions, and this, together with his frequent use of the adverb ‘immediately’ (εὐθύς), gives his narrative an immediate, sometimes even frantic, quality.’ Taylor ([1952] 1969:48) said ‘Parataxis, or the simple co-ordination of clauses with καί (‘and’), instead of the use of participles or subordinate clauses, was one of the most noticeable characteristics of Mark’s style.’ Since neither the conjunction nor the participle appears in our list of characteristic syntax, we may ask whether these are not characteristics of Mark’s version of the triple tradition rather than of Mark’s own writing. In chapter five we suggested five additional experiments. Such comparisons as were suggested there, for example a comparison with Matthew, will help to clarify the nature of the evolution in syntax from the triple tradition to unique Mark, to unique Matthew, and to unique Luke respectively.

It is not inappropriate to make this point a little more emphatically. 'A multiplication of participles' was a Markanism, according to Taylor ([1952] 1969:46). Taylor also remarked on Mark's characteristic use of the participle with a particular verb, quoting evidence from Howard—'sixteen instances, in Mark, compared with Matthew, three; Luke, twenty-nine,....' For our part, we do not notice any reference to the participle in the above table. The reasons for the difference in our assessment by contrast with theirs include the following three: First, Taylor's evidence came from layers that he did not define. Taylor (or Howard) simply said 'in Mark,' 'Matthew,' 'Luke.' By now it should be quite clear that these documents cannot be assessed as single units. Secondly, their evidence came from material of different literary forms. Howard used instances that were not included in Bultmann and Gaston's assessment of what constitutes the editorial layer in Mark. Two examples are those of 1:13 ('And he was in the wilderness forty days...') and also 2:18.

The next two matters go into the quantitative area. Third, Taylor and Howard did not tell us the *proportion* represented by their frequencies of sixteen, three, and twenty nine. Fourth, Taylor did not give us a rationale for his specific criteria of style, but simply started to list features that seemed prominent to him. There should be some discussion as to whether given syntax should be connected with an author on the one hand, as opposed to the literary categories of the author's form or genre on the other. Finally, they broadly hinted that the particular characteristic they selected (the participle with a particular verb) may be different in its rates of appearance in the synoptics. They stopped short of saying what the various rates actually are, however, for some unnamed reason. Their method was only marginally clearer than saying 'Mark was *fond* of this syntax chain.' With certain of the syntax chains we have discovered there are far greater differences of proportion, however, than appears to be the case in the syntax chain they selected. We have discovered syntax that occurs in rates that differ between ten times and a hundred times. This highlights the importance of discussing which syntax the analyst selects to characterise an author, and how, and why the analyst makes such a selection.

In the third line of the above table we see also the imperfect verb. The verb in the first line is linked with the plural. Elsewhere in the distribution (not shown above) there is the following ratio in the comparison between Mark and Luke:

| Syntax chain | Grammatical features               | Mark Unique         | Weight | Luke Unique         |
|--------------|------------------------------------|---------------------|--------|---------------------|
| 45+25+29     | Active verb+plural+ imperfect verb | Proportion=1.30e-04 | 1.95   | Proportion=1.68e-06 |

Here we see the prominence in Mark's composition of the 45 (active verb)-25 (plural)-29 (imperfect verb) chain. There are nineteen occurrences in Mark's composition, or an average of one every second sentence. The rate in Mark unique is many times (around 77 times) the rate of that in Luke unique.

Examples of the plural in Mark's composition appear at the following references, whose context is interesting from the point of view of Mark's characteristics: In Mark 7:3 (unique in Mark), we read 'For the Pharisees, and all the Jews, do not eat unless they wash their hands, observing the tradition of the elders....' Therefore, at least one context in which Mark accumulates the plural occurs in relation to Jesus' 'opponents.' This was noted by Bultmann (1934:35) as a late development in Mark.

Again, in Mark 6:12 ('So they went out and preached that they should repent'); 6:52 ('for they did not understand about the loaves, but their hearts were hardened'); 9:15 ('and immediately all the crowd, when they saw him, were greatly amazed, and ran up to him, and greeted him'); and 10:32 ('and Jesus was walking ahead of them, and they were amazed (ἐθαμβοῦντο), and those who followed him were afraid'). What is prominent in Mark's composition in these references is that the disciples (consistently as a group) continue to proclaim repentance despite their state of impenetrability, 'amazement,' apprehension, and fear. They experienced emotional turmoil (both in the time of Jesus as well as in the time of the composition of this Gospel), but at the same time they continued the work with which Jesus had charged them.

Mark's composition framed the triple tradition (that Mark received from elsewhere) with a particular focus. Mark's own focus was that of the tenacious repentance-preaching of the disciples, as a group, always surrounded by groups of enemies, and always assaulted by their own resistance, hesitations and misgivings. We find an abrupt end to Mark in 16:1-8, concluding with a description of the disobedience and fear of the disciples in verse 8. This is often thought of as some kind of a mistake. The discussion above indicates that it may not have been a a mistake, but perhaps it was rather a

succinct or even dramatic conclusion to the major concern and theme of the final editor of Mark's Gospel.

This is an example of the way in which characteristic syntax chains can assist or even guide us both with regard to the evolution or history of the synoptic tradition, and also to the essential intentions of one contributor after the other in the text of the synoptic Gospels.

### 1.4.2.2 The centre or high proportion part of the distribution

The centre part of the distribution will show syntax chains that appear many times in all three blocks. Such syntax chains appear in contrasting proportions in block B=MkUnique and in block C=LkUnique, respectively. The highest values of the weight shows syntax that appeared in contrasting proportions between MkUnique and LkUnique. The values are listed in descending order (by the last column) as follows:

| Table 6.6: Specific cases of syntax chains from the experiment in chapter five:<br>Characteristics of unique Mark by comparison with unique Luke<br>in the centre |                                  |   |   |        |
|---|----------------------------------|---|---|--------|
| Syntax chain  | Grammatical features in chain    | Frequency (f), proportion (p), &reference (r) in B=MkUnique | Frequency (f), proportion (p), &reference (r) in C=LkUnique | Weight |
| 27+24+24  | Verb (any) + Singular + Singular | f=51<br>p=.00036<br>r=4068<br>(Mk 6:52)                     | f=413<br>p=.00069<br>r=33295<br>(Lk 5:17)                   | 0.6    |
| 24+24+17  | Singular+Singular+Noun<br>(any)  | f=72<br>p=.00051<br>r=4409<br>(Mk 7:17)                     | f=485<br>p=.00082<br>r=33295<br>(Lk 5:17)                   | 0.5    |
| 24+24+24  | Singular+Singular+Singular       | f=146<br>p=.001<br>r=4409<br>(Mk 7:17)                      | f=940<br>p=.0016<br>r=33295<br>(Lk 5:17)                    | 0.4    |

At this 'centre' part of the distribution, the proportions indicate that Luke places almost double Mark's emphasis on the fairly common syntax chain made up of the (verb+) singular+singular (+singular + noun). The weight column shows that unique Mark's rate of use of these three chains is

in the region of half the rate of unique Luke. Of course Luke has a number of plurals, like pairs of people (e. g. 9:30). Any syntax chain represented here had the prior condition that it appeared in all three blocks. Our information indicates, however, that it is the relative proportion of the singular in Luke that is far more noticeable, however; while the relative proportion of the plural is more characteristic of unique Mark by comparison with unique Luke.

We may note that it is the syntax chains in Luke that appear in higher proportions here in the centre, as opposed to those in Mark that appear in the tails. That is, when we compare Mark and Luke, Mark may have been distinctive in using unusual syntax, while Luke may have been distinctive in using normal syntax. Furthermore, the singular is a very prominent feature in Luke's unique writing, as can be seen from its reappearance in all three of the syntax chains above. This is by contrast or counterpoint with the importance of the plural in Mark.

### **1.5 Conclusions with regard to characteristic syntax of Mark and Luke**

The most prominent syntax chains can not only help to link a text with its author (as we saw in chapter four), but it can also guide us to important themes and emphases in the author's writing. It was notable that Mark seemed most aware of discipleship first as a group phenomenon, and secondly as having a hallmark of emotional turmoil. It is possible that a closer scrutiny of the characteristic syntax of Mark will involve a reassessment of our view of the structure (the beginning, the divisions, and the end) of the Gospel, of Mark's Christology and of other long standing views of Mark's interests. Such interests have been styled as 'conflict,' or 'action orientation,' for example. Such interests may need to be rearranged around a central principle or emblem of the following nature: 'The group of preachers (or witnesses) must press on, though they may be confused and anxious (about Jesus).'

In almost direct counterpoint, Luke emphasised the importance of the individual. It is entirely feasible that a closer examination of Luke's individual syntax (and further comparisons with Matthew) will entail a reevaluation of the structure of Luke's Gospel, of Luke's Christology and of other

accounts of Luke's concerns. Such concerns are said to include, for example, 'salvation history,' 'prayer,' 'joy,' 'the outcast,' 'women,' and 'spirituality.' These may need to be re-organised around an idea of Luke's emphasis on the individual implications of 'the way.'

## **2 Conclusions with regard to the thesis as a whole**

### **What we set out to do**

In our aims (in chapter one), we set out to see whether stylistic analysis through syntax could contribute evidence to the discussion about the evolution from earlier to later material within what we know as our three synoptic Gospels. We intended to investigate the ways that scholars examined such layers, their procedures with regard to style within such examinations, the way they acquired their stylistic evidence, and the manner in which they drew their conclusions. Then we wanted to consider another way of doing all this, or a new synthesis for doing it, with a particular emphasis on an extensive analysis of syntax. An important question was whether the syntax in two blocks of the same authorship was measurably closer than the syntax in two blocks of different authorship.

### **What we discovered**

A careful review of the stylistic literature showed that, in using style to assess authorship matters, it was important to compare syntax, to compare no more than two works that come from the same period, genre and form, and to be comprehensive in the comparison. In our comparison, we found that our distance measures, overall, in chapter four, indicated that the syntax in two or three blocks of writing could be measured, and compared. We found that the syntax was indeed closer in two blocks of the same authorship than it was in two blocks of different authorship. In chapter five, the trial and application of the method contributed surprising evidence for the fact that the 'two source hypothesis' may be placing too much emphasis on Mark as a source for Luke's version of the triple

tradition. Luke may have derived the triple tradition from somewhere other than from Mark. We also found some interesting indications that the stylistic characterisations of the unique material in Mark and Luke respectively could be investigated anew through the syntax chains method.

In chapter two we surveyed the principal theories in the literary critical dialogue on the development of the synoptic Gospels. The findings from our examination of syntax supplement, rather than support, one or another of the majority views. This study supports a recension hypothesis rather than the simple form of the two source hypothesis. In the process, this study also presents new information for the synoptic scholar. For example, it adds new and better characteristics of style; it contributes a new ability to apply acknowledged stylistic tools in ancient, fragmentary texts; it gives a fresh way to know whether a synoptic source existed; and it renders a different approach in determining the contents of a source. Taken together, these measures of syntax analysis can allow us to know more about the history of the Jesus event, or at least of the early Christian community, and to adjust our current assessment of these matters. That is significant because these things affected, affect and will continue to affect world history in a pervasive way.

Here is a more detailed statement of the conclusions that have emerged from this study:

- 2.1 The results of syntax analysis provided significant information regarding important elements in the synoptic relationships. For example, the style of an author, and the history of sources.
  - 2.1.1 Distinguishing authors based on syntactic style: Both syntax analysis and literary critics concur in distinguishing between the final editors of the Gospels of Mark and Luke. Syntax analysis provides evidence that the larger pool of their work is significantly distinct one from the other. On literary grounds, we are confident that they are distinct from one another, so this is an important correlation.
  - 2.1.2 Source history: The interim results of an experiment in chapter five showed that syntax analysis is not entirely consistent with the views of the majority of literary critics in their proposals about the origin of a block of earlier tradition. For example, syntax analysis does

not indicate that what is in the triple tradition as presented by Luke, came from or through Mark. Nevertheless, chapter five showed that the syntax chain method can bring new evidence to the discussion about the evolution of the synoptics (and other ancient documents).

Examples of the new information from syntax analysis for the dialogue on the synoptic relationships include these: the detection of new and better characteristics of style; a new ability to apply acknowledged stylistic tools in ancient, fragmentary texts; a new way to assess whether a synoptic source existed; a new way to assess the contents of the synoptic sources. Furthermore, the tails sections of the distributions provided the clearest stylistic evidence. The tails sections took syntax chains that appeared only once, or a very few times in block A, the unknown block. This implies, then, that even small fragments can be associated with one or another author through this method.

- 2.1.3 The discovery of undetected classification features: The comprehensiveness of syntax analysis shows that there is certain syntax that is more characteristic of a given writer than was recognised. For example, certain characteristics of the final editors of Mark (the plural) and Luke (the singular) respectively, call for far closer attention. The significance of the conjunction and the participle may have been overstated in Mark, and they may be characteristics of the triple tradition instead.
- 2.1.4 A useful tool in ancient documents: Modern stylistic tools, combined with statistical theory, have, in the case of Mosteller and Wallace, uncovered new evidence for authorship in long documents. Biblical material, and other ancient material, has been too short or fragmentary for such techniques, effective though those techniques may have proved to be in longer works. Our careful analysis of small fragments in chapter five showed this: in such short, fragmentary material, a comprehensive analysis of syntax is a new tool or microscope, discovering not only clues about authorship, but also providing a satisfactory quality of new evidence for the discussion. Notably, the frequency of syntax chains in the centre of the distribution compares with the frequency of Mosteller and Wallace's 'function words.'

Therefore, the syntax chain method can open the way to bring their authorship techniques to bear on ancient documents, short and fragmentary though they may be.

- 2.1.5 A new way to assess whether a synoptic source existed arises from the capacity of syntax chains to distinguish between authors. We have noted the syntactical evidence for the distinction between the final editors of Mark and of Luke. The application of the same method can show whether the double tradition is syntactically different from Matthew on the one hand, or from Luke on the other.
- 2.1.6 A new way to determine the contents of a source: If we can now determine that the double tradition was a distinct source, we can now measure a verse like Luke 11:27-28 (for example) to see whether it should be connected with the double tradition on the one hand, or with the unique writings of Luke on the other. Syntax analysis can provide new evidence to the discussion and resolution of a question like this, and so help to more clearly delineate the sources from the editorial work in the synoptics.
- 2.1.7 An ability to understand more about the early history of Christianity: We noted the almost total silence in secular history about the life and death of Jesus. We are uncertain about what is history in the New Testament, and uncertain about the identity of those who wrote the little we do know. The extent of our ignorance about such significant matters is problematic and surely has consequences in terms of certain flaws in current Christian perceptions and positions. Taken together, these measures of syntax analysis can allow us further into the tunnel, further into the history of events that affected, affect, and will continue to affect world history.

### **3 Applications of the analysis of syntax in New Testament research**

We know that syntax can help us find either the author or else the host source of given material. This, in turn, serves the purpose of clarifying the history of development of the documents and sources that we find in the New Testament. Six examples of such further challenges in the synoptics are as follows: First, in blocks when we are still uncertain of the host source or the direction of dependence; secondly, what has been thought of as belonging to one source that actually belongs to a different source; third, the further examination of the synoptic problem, say, the relationship between the 'triple tradition' as presented by Matthew and the editorial layer of Mark through syntax; fourth, the beginning and ending of parallel blocks of text; fifth, the unity of a section of writing; and sixth, whether the synoptics on the one hand, or the Gospel of Thomas on the other, preserves a less edited version of a text.

#### **3.1 Where we are still uncertain of the host source or the direction of dependence**

We want to make use of the comprehensive analysis of syntax to find the proper author, or host source of a given sample. The larger end is to further clarify the history of the New Testament communities of the first century, because there is a substantial part of the synoptics (and elsewhere in the New Testament) whose origin is not yet clear. Syntax can help to show the proper origin or host source when we are uncertain about such matters.

In chapter four, we already knew the sample's host source. The host source of the first sample was the editorial layer in Mark. The host source of the second sample was the editorial layer in Luke. There, we were conducting a controlled or benchmark study. The study in the second section of chapter five was undertaken on what is regarded as one of the most certain sources in the synoptics, namely, the triple tradition. Yet, after a very long discussion in chapter two, we summed up the state of 'certainty' as still a great deal of uncertainty! Therefore, it is no surprise that the whole of the New Testament is dogged by such challenges. Knowledge about the author of a biblical document affects

our interpretation of what these documents mean. One fascinating application of such an authorship study could be in the letter to the Hebrews, which is a notorious challenge.

In some places there is a parallel, but the direction of dependence is unclear. In chapter two, for example, we undertook a literary discussion about the direction of dependence between the triple tradition parallels in Mark and in Luke. In the second section of chapter five, we discussed the same issue in terms of the distribution of syntax chains. We compared the distribution in Luke's version of the triple tradition with the distribution in the editorial layer of Mark, and with the distribution in the editorial layer of Luke. We found that the results, though they must be supplemented with additional experiments, indicated support of the recension hypothesis along the lines suggested by Barton (page 68 above). It is possible to carry out a similar process in terms of the triple tradition parallels in Mark and Matthew, and so to discover more information bearing on the question of dependence between these two.

Other places, or blocks, in the synoptic Gospels, or in the New Testament, when we are uncertain of the host source include the following: There are narrative blocks like Mark's passion narrative, the infancy narrative in Luke, or the infancy narrative in Matthew. Such material may predate the author. Otherwise there could be inconsistencies, for example, of time, place, and audience with the surrounding material, or with the rest of the book in which such text was found. At some places there are sudden, surprising language shifts, for example, from the first person to the third person, or other changes in style. Then there are sayings like the parables, or speeches, which may begin with an *ὅτι* recitative, that is, with the Greek form of quotation marks. There may be a suspicion that parts of the saying or the speech predated the author.

It would be very useful to know whether sections of this nature are composed by the author of the whole, or whether they rely on another source. Sections like this may follow, precede, or interrupt material which the author has composed, or material which comes from a source. In each case, one could do the following: One could separate the section. Then one could analyse the distribution in such a block. Finally, one could compare that distribution with the distribution in the editorial or another layer, or both, of the relevant synoptic Gospel.

### **3.2 Where material believed to be of one source actually belongs to a different source**

The method can be used to advantage at the margin of a parallel text. We can think of these marginal areas between one source and another in a political analogy. In such an analogy, such marginal areas are like buffer zones between one country and another. One can think of Alaska, which at one time belonged to Russia. The United States later purchased Alaska, which, as a state of the US, turned out to have strategic military, and economic significance for the US. Once these marginal areas in the synoptics have been investigated and assigned to one source or another, the sources will change their shape and content. The next step would be to search through the remaining material to find out whether what has been thought of as belonging to one source ought now to be assigned to a different source.

### **3.3 Synoptic investigations addressed by a comprehensive assessment of syntax chains**

In chapter two, we saw that it was largely the existence of parallel passages that cause discussion about sources. The parallels point towards some kind of relationship between the material that was in parallel. As useful as the parallel passages are, however, they are not sufficient on their own. The puzzle over the synoptic problem is a case in point. The characteristics of style that emerge through syntax chains can supplement the parallel passage technique in addressing such a problem. Previous studies of this nature were confined to a range of syntax that was consciously selected, to a range that was arbitrarily or intuitively selected, and to a range that was relatively short.

We have enhanced this well-known method in a straightforward way. That is, we have used many syntactical structures rather than only one or a few grammatical or syntactical structures. The simple development we examined in this thesis is the way in which an author is most distinct in a comprehensive assessment of their syntax chains. This is by contrast to trying to distinguish an author based on their use of a few grammatical features or syntactical structures.

It is through a comprehensive assessment of syntax chains, however, that the author's own mental processes can emerge in a new way. Different musicians arrange a piece of music in different ways. That can be a metaphor for the way an author's arrangement of grammar underlies and modifies the vocabulary of a source in the written text. This arrangement of grammar, especially in a comprehensive assessment of syntax chains, can convey the thought structures of the author. In the conclusions to the first part of this chapter, we saw some characteristics of Mark and of Luke that seemed to portray such a dimension, one of their respective backgrounds, philosophies or attitudes.

If we wish to further the investigation into the 'synoptic problem' with the syntax chain method, we could examine the triple tradition as it appears in Matthew. We could ask, 'Did Matthew derive his version of the triple tradition from Mark?' In particular, we could duplicate the study above, in the first part of chapter five, and examine the syntax (A.) in the editorial layer of Mark; (B.) in the editorial layer of Matthew; and (C.) in reference samples from the editorial form in the 'triple tradition' as presented by Matthew.

From this we could, first, draw conclusions about whether the triple tradition may have preceded them. Secondly, we could draw conclusions about whether one may have been dependent upon the other for the triple tradition that now appears in them.

### **3.4 The beginning and ending of parallel blocks of text in the synoptics**

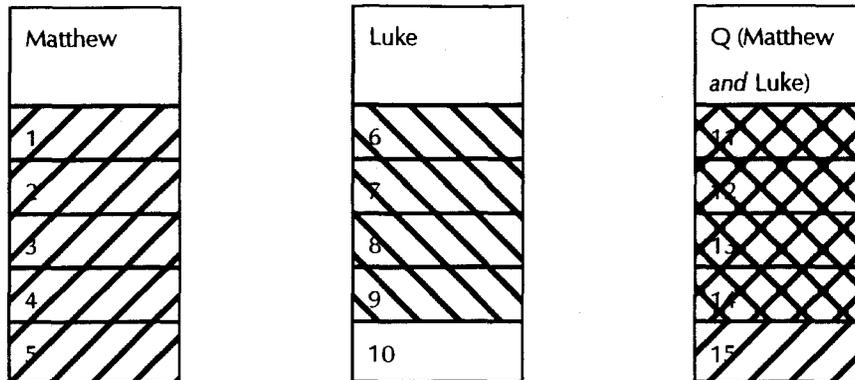
Then there are places where parallels in the synoptics come to an end. The dominant way that literary analysis argues for Q is when Matthew is the same as Luke, but neither of the two appears in Mark. When we compare what comes before, after or around such a 'parallel text,' we find features like those in the following diagram:

- In the diagram below, we can know the following two points by comparing the parallels between Luke and Matthew:
1. We can know, or argue, that block J from Luke, and block Y from Matthew come from block C of the lost source.
  2. We can be fairly sure that blocks H and K were composed by Luke, and blocks W and Z were composed by Matthew.

Then let us consider blocks B, I, and X. At this point, only Luke was drawing from the lost source. We could only know that this block, I, comes from the lost source from grammatical analysis. We could not know that from comparing a parallel, because Matthew was not drawing on the lost source at that point. We would have to form a distribution of syntactical structures in I, another distribution in J, and another distribution in H+K. We would see whether the syntactical structures in I exist at a greater proportion in distribution J or in distribution HK. The proportion should be greater in J than in HK, and this would signal that Luke drew block I from the lost source. If Luke had composed block I, then the proportion of I should be greater in HK than in J.

| A lost source or an ancient piece of writing, like the hypothetical Q. | Description of the various kinds of principal relationships between Luke, Matthew, and the lost source, like the hypothetical Q.   | Examples from some parts of Luke | Examples from some parts of Matthew |
|--|--|----------------------------------|-------------------------------------|
| A?   | Little, if any introductory material existed in the lost source. Luke and Matthew composed their own material. Neither Luke nor Matthew drew from the lost source.   | H 2:39-40                        | W 2:22-23                           |
| B  | The hypothetical lost source covered this area. Only one, Luke, drew from the lost source, however, but not the other--Matthew. That Luke drew from the lost source can only emerge from grammatical analysis.   | 11:27-28                         | --X--<br>No ref                     |
| C  | The hypothetical lost source covered this area. Both Luke and Matthew drew from the lost source. That Luke and Matthew drew from the lost source emerges, arguably, from the parallels between Luke and Matthew. | 14:25-32                         | 12:40-42                            |
| --D--  | We think there was nothing in the lost source covering this area, the Passion forward., In parts,, Luke and Matthew composed their own material. Neither drew from the lost source.                              | K 24:13-25                       | Z 28:11-15                          |

Let us assume for a moment that there really was a written version of the double tradition that both Matthew and Luke used. Assume that the diagram above, or that below, displays a part of this process. In the diagram below, let us assume that, in block 1 to 5, Matthew copied block 11 to 15 of Q. Assume also that in block 6 to 9 Luke copied only block 11 to 14 of Q. Then we have the following picture: Matthew has the whole of a Q passage, but Luke has less than the whole of that Q passage.



In such a case, using the 'parallel text' method, we notice that blocks 1 to 4 are the same as blocks 6 to 9. On those grounds, we *currently* assume that the Q passage was the cross hatched section, that is, blocks 11 to 14. The contribution of a syntactical analysis would be to indicate that block five is more consistent with blocks 1 to 4 (that is, with Q) than it is with other unique parts of Matthew. We would then know that the Q passage was made up of block 11 to block 15, and not of block 11 to block 14.

Such an approach would help the person who wished to establish whether there really were separate strands in the synoptics like M, Matthew's *Sondergut*, L, Luke's *Sondergut*, and the double tradition (or the hypothetical Q), and, if so, to further define their contents or extent.

### 3.5 The composition and unity of a section of writing

In some parts of the synoptics there is uncertainty as to which of the following two situations was closer to the truth: First, two possible layers in a document may have been distinct from one another. Secondly, those two layers may have developed as one unit. A decision about this affects the way in which the passage is read (either as one episode, or else as two different matters)—for example, through the spacing of paragraphs in translations—, and it affects the way in which we understand it. This application can be illustrated in the 'Healing of the Paralytic,' as follows:

In Mark 2:1-12 we have the story of the healing of the paralytic. There is debate over whether these twelve verses form a single unit, or whether there are two parts involved. Bultmann ([1921] 1963:12-14, 227), and Taylor ([1952] 1969:191) both said that there are two parts. Daube (1952:170-75), Mead (1961:348-51), Simonsen (1972:1-23) and Dewey (1973:394-401) all argued that the passage was a unity, and that Mark would have been the author of the whole of it. An analysis into two parts can be along the following lines: A first part could be the miracle narrative in verses 1-5a, 10b-12. It may be said that the breaking of the roof and the description of the crowds lend a tone of vivid immediacy. One could easily attribute these words to a report from an eye witness.

A second part could be a 'saying' source in the verses 5b-10. The shift of address that appears in the words 'he turned to the paralytic man,' in verse 5, may be a clue to the fact that they originated in a different time or situation. Furthermore, there is theology or Christology in the second part, which is a hint at later reflection. This 'saying' section could be explained as a later development on the first--and earlier--part, namely, the miracle narrative. Rawlinson (1925:25) thinks that this part could be, or could contain, an expansion of the first part *in the light of controversy between early Christianity and Judaism*. That is, it comes from a time (of conflict) after the event described in the first part. Such material can be called conflict material. Therefore, it is possible that the second part (5b-10) should be read and understood as a separate matter from the healing miracle altogether.

Some scholars (referred above) said that this passage was not composite, and that it did not have two parts, but that it was rather a single unit. They wonder why else the synoptics would all have kept it together as a unit. The single theme of forgiveness could have been sufficiently important in the communities of Mark, Matthew and Luke to explain the account as an integrated whole.

We can see that there are reasonable arguments on both sides of this debate. Either side may be right. There is a contribution that 'a comprehensive assessment of syntax chains' offers to a debate like this. One way in which it could make a contribution may be as follows: One could gather the miracle narratives (in a particular synoptic Gospel) on one side, and controversy material (from that document) on the other. One could then examine each of these two groups to see whether there is

any significant difference in the way that they use—that is, in their distributions of--syntax. A difference would point to two steps or two layers of development. The absence of any appreciable difference would point to a single, integrated process of development.

No doubt there are other layers like this in several books of the New Testament. The Gospels, of course, are the prime example, an example from which is the case of Q. There are strong indications that Acts is also composite. Then there is the question of the relationship between Ephesians and Colossians. Helping to unravel questions like these would contribute to a clearer idea of the history of the development of the *written Christian tradition* in the first century. From there, we could work out a clearer appraisal of the history of the Christian church in the first century.

### **3.6 Assessing originality in similar versions of an event—the Gospel of Thomas**

With respect to the Gospel of Thomas, or similar materials, a comprehensive analysis of syntax could tell whether a reference sample, from Mark, or from the Gospel of Thomas, was more closely connected with Mark, or with one of the layers in Thomas. Note that literary analysis of an internal or of an external type could show that the Gospel of Thomas was a homogeneous text in its entirety, or that it was made up of two or more layers. If there was more than one layer, each layer would constitute one more among the set of possible host texts.

## **4 For further study**

4.1 The quality and sophistication of the database: While the morphological tagging employed in this study is substantially correct, yet there is a certain level of inaccuracy, however small (see page 163), when there are diverse meanings with which a certain word was used. We need a definitive or critical computer version of the Greek New Testament, marked in a standardised way with at least three parameters. The first is a marking with an agreed and carefully checked set of morphological tags, especially for words with diverse meanings. The

second marking we need is one of textual concerns (for example, the question of whether Mark 1:1 contains a title written by Mark, or whether all manuscripts agree on the wording of this verse). The third marking we need is one of the possible developmental layer or stage to which the word should be assigned. The separation of the synoptics into layers of potentially different origin requires a further process of reflection and consensus in the scholarly community.

- 4.2 Parameters and variables: We saw that we could reduce, multiply or extend any one of the variables first, of window size (also on page 159); secondly, of the number of grammatical features from a word; or thirdly, of the number of grammatical features in a chain (page 161). That would yield a different—a less, or a more detailed—profile of one or another linguistic pool. Also, the starting point of the window (page 159) and whether the windows overlap or not (page 160) can also affect the results.
- 4.3 Literary devices: Certain characteristics of style (like chiasm) occur across several sentences (see page 106). Therefore, the small size of our windows means that they preclude such structures of style. For example, they would preclude the features of ‘echo,’ inverse correspondences, and chiasm or palistrophe. Yet, as we saw above (page 88), the absence of such larger structures from the study of Radday and Shore may have been one factor, if a secondary factor, that prevented them from finding characteristics for the hypothetical source documents of Genesis. We should investigate some means of incorporating syntactical features that stretch across several sentences (that is, a means of incorporating literary devices).
- 4.4 Antecedent material: A second literary task could be to investigate the use of a ‘moving average’ of multiple grammatical constructions (see page 94 above). The purpose would be to detect antecedent material or attribute it to an origin other than the writer.
- 4.5 Taxonomy of genres and forms: Another matter in the area of literary studies could be a complete taxonomy of the syntactical style in each of the genres and forms in the New

Testament (from page 14). This could assist the analysis of the synoptic Gospels insofar as the materials concerned would no longer need to be of the same genre or form, since adjustments could be made on the basis of such a taxonomy.

4.6 Statistical theory: This study was essentially a descriptive one in its approach to quantities. Teamwork with those who specialise in statistical 'modeling,' especially of the small proportions we found in our tails, could have a significant impact on this subject.

4.6.1 Other examples of future statistical possibilities: Continuing further from the method outlined in chapter four, we might also contemplate other ways of detecting differences in the windows as  $t$  varies. For example, let  $X_h(t)$  denote the matrix of morphological indicators in the window at  $t$ . The singular value decomposition of  $X_h(t)$  is

$$SVD(X_h(t)) = U_h(t) \Lambda_h(t) V_h'(t)$$

The eigenvalues or eigenvectors may also change between one editorial layer, or source, and another. A consideration of theories of very small occurrences may cast light on what is taking place in the tails of our distributions, and statistical theory concerning confounded data may guide the further analysis of the synoptic Gospels.

4.6.2 The spread factor: We saw that whether or not a particular syntax chain is spread or patterned in a particular way through the layer in question is also an important issue for further research. Whether or not a syntax chain has such a predictable spread-pattern should be a part of the weighting (see page 152) of the syntax chain. The syntax chain may appear at a high proportion, but those many appearances may all be grouped in only a small area of the layer or block being considered. In this case, it would not be a stylistic feature (according to our working definition of style), but it must be connected with some other phenomenon, for instance, with the subject that the writer is addressing, or with some particular literary form (like a genealogy). The weighting for a syntax chain like this should reduce its significance in the calculation of the author's style. This matter was addressed in some detail by Mosteller and Wallace (Francis 1966:47f).

## 1 Working definitions

**\*Block of text:** (See also \*Layer.) A block of text is used here of consecutive, uninterrupted text. Such a block of text may be short, or may even encompass a large complex of literature, or more than one document, like the Pentateuch.

**\*Chance, \*Expectation:** Chance is a variation from an expectation or from a norm. Usually it is a small variation of 1% or 5%. 'Expectation' is what we may expect to be the case, for example, the average temperature and rainfall in a given month, or the average traffic at a certain time on a given day of the week. In the case of style, the expectation would be a linguistic structure that one can expect to occur in a certain proportion either in a given written language or in a given text. The 'average' in the case of written language could be the average for the writer, or for some other collection. If a variation from the average falls within the bounds of chance variations, then the variation has a high probability of still being a part of the group of writing whose average is calculated. We can see the importance of this category in the case of *hapax legomena* (page 120).

**\*Combination:** A set of elements whose order is not important.

**\*Clustering effect:** Where more than one discriminant variable tend to agree, without exact agreement, on there being a stylistic change.

**\*Controlled experiment:** A 'controlled experiment constitutes two groups of patients. The first group of patients receives supposedly effective agent (the treatment group). The second group (the control group) receives a placebo--that is, this group receives treatment that is the same in every way other than that it lacks only the specific agent being tested. In the experiment the assignment of a

patient to either group is made at random. Furthermore, neither the patients nor those evaluating the results know whether a patient belongs to the treatment group or to the control group. Such an experiment is called a 'double-blind randomized controlled experiment.' In non-controlled experiments it is rare that a single statistical analysis can establish a firm relationship of cause and effect.

We can apply this to stylistic studies in the following way. A controlled literary investigation would be made up of: First, a 'treatment group.' The point here is to have a group in which we do not know the outcome at the start of the investigation, and in which we want to find the outcome. In terms of our task, this would be a group in which we are not sure of the authorship for one reason or another [block A]. Secondly, a 'control group.' The point here is to have a group in which we already know the outcome. In terms of our task, this would be a group in which we can know the authorship, or be fairly sure of it [usually block B and block C]. Third, a 'treatment,' or the supposedly significant stylistic features that will be measured in the 'treatment group'—this would be all the syntax chains. Fourth, in a controlled literary investigation the assignment of a literary sample to either group is made at random. In the case of the small size, or the small fragments of the layers comprising the synoptic Gospels, we must substitute exhaustiveness for randomness. Fifth, in a controlled literary investigation, the agency evaluating the results should not know to which group the samples belong. The point of this condition is to achieve objectivity and neutrality in the administration of the 'treatment.' We can achieve this condition in the following way. We can declare an exhaustive check of linguistic features, we can use computer assistance to administer the check, and we can apply the check to an exhaustive set of samples. In non-controlled literary investigations, it is unlikely that the analysis of a single feature or of a few features can establish a firm, exclusive relationship between an author and a particular stylistic phenomenon.

**\*Dead Sea Scrolls:** In 1947, scrolls were discovered that came from the Essene community at Qumran. They were written after 168 BCE, but before the end of the Second Jewish Revolt against Rome (which ended in CE 135). There are materials among these scrolls that are significantly older than these dates. Ideas of the Essenes are reflected in the Gospels, for example, in John the Baptist.

We know of no more direct evidence of interaction between the Essenes and the Christian community, however.

**\*Discriminant analysis:** Analysing the factors that appear at a different proportion in one author or another.

**\*Discriminant capacity:** The extent of difference in the proportions in which a grammatical feature appears in the writing of one author or another.

**\*Discriminant variables:** (See also, \*Variable.) A 'variable,' here, a grammatical feature, that may appear in different proportions in the writing of one author and another.

**\*Distribution:** Distribution, in statistics, means the way in which a particular characteristic is spread over the members of a class (Sykes [1911] 1976:301). Probability distribution refers to a graph curve of the frequency of one class of observations, the information in which one is interested, relative to the frequency of another class of observations (Spiegel 1992:54).

For example, in a representative but random selection, or sample, of 100 adults, one could ask about the percentage of people who have a weight--the parameter--in each of the following classes: The seven classes or distributions are 55-59.9 kg, 60-64.9 kg, 65-69.9 kg, 70-74.9 kg, 75-79.9 kg, 80-84.9 kg, 85-89.9 kg. The measurement and tabulation of this information will produce or indicate a bell shaped relative frequency curve, or a relative frequency distribution. The peak of the curve and the spread of the curve are both important for averages and predictions.

**\*Expectation:** See *Chance*.

**\*Form, form criticism:** (See page 91, and see also 'Genre.')

**\*Frequency:** The amount of a given element in a set. For example, the frequency of red balls is the number of red balls in a set of balls of different colours. See also 'Proportion.'

**\*Genre:** (See page 6, and also *\*Form*.)

**\*Grammatical combination:** A list of, some, grammatical features that appear within a consecutive set of words, without regard to the order of the grammatical features. A permutation would reflect Greek syntax, while a combination would not.

**\*Grammatical feature:** Any grammatical element from the list on page 49, or in Appendix A, or comparable to the elements in that list.

**\*Grammatical grade level:** The full amount of grammatical elements that correspond between two windows that match, i.e. between two windows that have at least one grammatical feature that corresponds.

**\*Hapax legomena:** Words which occur only once in ancient texts, or in a particular ancient text, or in the texts available to us. With such a word, it is difficult to know meaning, or the range of meaning, that the word or a particular author, had in mind. These are interesting to stylistic study because they can serve as extremely uncommon selections of language. A contrasting approach would be to study extremely common selections of language, like the definite article.

**\*Host text:** (See also, *\*Source*.) We will use the phrase 'host text' for the layer of the synoptic Gospel that includes one source or another.

**\*Josephus, Flavius:** Flavius Josephus, or Joseph ben Mattathias was an historian, and an officer of the Galilean Jewish forces in the war against Rome, 66-70 CE, when he was about 30 years old. He surrendered to Vespasian. There was a section in his *Antiquities* which may touch on early Christianity. Frend ([1965] 1982:24) said, 'Josephus mentions briefly John the Baptist and the martyrdom of James in 62 but about Jesus (except in the Slavonic version) he was silent. Conspiracy or insignificance? We do not know, though one suspects the latter.'

**\*Layer:** (See also *\*Block*). The term 'a layer of text' is used here of material that may be interrupted, but it was produced by a single or integral authorship, whether the author was an individual or an authoring group. It could extend across more than one document if it was in not only a layer but also a source that was used by two different writers.

**\*Match:** A grammatical feature that is shared in common between two word-windows.

**\*Multivariate, multivariate distributions:** (See also *\*Variable*.) The distribution of more than one variable at a time.

**\*Nag Hammadi literature:** The Nag Hammadi literature was discovered near the Upper Egyptian city of Nag Hammadi. The discovery, in 1946, was of a collection of fourth century Christian and non-Christian Gnostic writings in Coptic, including the *Gospel of Thomas*. The latter may preserve a very limited group of parables in a version that may predate those that appear in the synoptic Gospels, but there was no more direct representation of early Christianity than this.

**\*Parameter:** A parameter is a mathematical term for a measurable characteristic or quantity that is constant in the case considered, but is a quantity that varies in different cases. In the example below, the parameter is the weight of a person. It is a constant at the time of the experiment for one person, but varies for different people. What is measured is constant, but the amount of the measurement differs from case, person, to case. When repeated measurements lead to different outcomes, probability is a means of studying such differences.

**\*Permutation:** (See also *\*Combination*.) A permutation is a set of elements whose order is important. That means that 'combination locks' are improperly named. They should be called 'permutation locks,' because the order of numbers is important to open such a lock. A grammatical permutation is a list of certain grammatical features that appear within a consecutive set of words, taking account of the order of the grammatical features concerned, and therefore, of the Greek syntax.

**\*Population:** We will use 'population' for all the words in a given layer of the synoptic Gospels.

**\*Probability:** Probability is how likely an event is to occur. The probability of an event is measured by the amount of times it actually took place, or the favourable outcomes, divided by the total number of occurrences, or total outcomes. One hundred spins of a coin should result in about fifty heads. The probability of heads is then fifty divided by one hundred, or 0.5. The probability of an event is often determined by a great many repetitions, that is, experimentally or empirically.

**\*Proportion:** The *frequency* of a given element in a set would be the number of that given element. For example, in a set of balls of different colours, the frequency of red balls is the number of red balls. The *proportion* of a given element in a set would be the number of that given element divided by the whole population (Hayslett 1981:9). The proportion of children in South Africa is the number of children divided by the total population of South Africa.

**\*Ratio, or relative proportion ratio:** We can divide the proportion of occurrences of a given grammatical grade level in one source, say Mark, by the proportion in another source, say LukeQ. This would give us a Mark-to-Luke Q 'relative proportion ratio,' or more simply (in this thesis), a Mark-to-Luke 'ratio.'

**\*Reference sample:** See 'sample.'

**\*Sample, reference sample:** We will use 'sample' for a selection of a small group--in our case, a consecutive group of words--from the whole population. The fragment of text whose authorship we want to know will have the name 'reference sample.' We use 'reference sample' with the understanding, at least initially, that it is from a typical section of an author, their text or a source. Here, we use it with the understanding that the sample is from a typical section of a source. An example of a source is the triple tradition as Mark represents it.

**\*Sondergut:** In synoptic studies, material that is unique to one synoptic evangelist.

**\*Source:** (See also page 20.) A source was certain primary text that appears within a second document. The source text has an origin or authorship that was earlier. We can call the second document a 'host' text or document. The host document was later, or it has an author or editor that was different to the source document, or both. A source is similar to a 'cycle of tradition' in that they both had an earlier origin. A source was different from a 'cycle of tradition' in that a source had some part of itself or its existence in a written form. A cycle of tradition could then be an oral precursor of a source. Perhaps oral materials (now in a written form) could be marked by short units with mnemonics or narrative action. Perrin and Duling (1982:234) suggest that there may be cycles of tradition, or collections of sayings, in the following: the controversy stories (Mk 2); the parables (Mk 4); the miracle stories (Mk 5, 7); the complex made up of the feeding (Mk 6:30-44, 8:1-10); the lake crossing (6:45-56, 8:10); the controversies (7:1-13, 8:11-13); the teaching concerning bread (7:14-23, 8:14-21); the Lord's Supper (Mark 10:42-45, 1Cor 11:23-26, Lk 22:24-27); and the apocalypse (Mk 13). Written material could conceivably be marked by longer units with extended, more abstract content. With Gerhardsson (1961), and despite the reservations of Riesenfeld (1970) and Teeple (1970), we will take as a working proposition that there were not only written sources, but also oral sources. The oral period was 'long or short, before the sources of our present gospels were committed to written form' (Mann 1986:16).

Four examples must suffice to illustrate these matters. First, the Lord's Supper 1Cor 11:23-26, Mark 10:42-45, Lk 22:24-27 exemplifies a cycle of tradition. Perhaps the passion narrative is a good example of a cycle of tradition. Beck (1962:663) thought so: 'The narrative of the Passion became the earliest and most significant nucleus around which the gospel was preached and the four gospels were composed.' Perrin and Duling (1982:234) disagree, referring to studies (Kelber 1976) saying that Mark formed it out of a number of *isolated* traditions.

Secondly, the parables, like the group in Mark 4, give a fascinating example of three main steps in the development of material as it migrates from an oral cycle of tradition, into a written source, and finally into one or more of the synoptic Gospels. The initial step would be that Jesus spoke in parables himself. That is, Jesus was an oral source. Notably, this was not necessarily true of all parables: 'The parable of the weeds (Matt. 13:24-30) gives every indication that the First Evangelist

created both the parable and its allegorical interpretation' (Mowry 1962:653). Then in the next step, Mowry (1962:653) said, '[Oral] Collections [, perhaps written down later,] of such remembered words were made [that preceded the Gospels].' In our terms, the oral phase of this collection would be a cycle of tradition. If there was a subsequent written phase, the collection would thereby become a potential source for one of the documents of the New Testament. The last main step emerges when the Gospel writer receives and remoulds the material: 'A comparison of...the great supper (Luke 14:16-24) and the wedding feast (Matt. 22:1-14) leads one to conclude that they are...alterations of the same parable.' On the one hand, that it was the same parable testifies to the conserving power of the tradition which bore it along, probably within a collection of some kind. The conserving power was the power not only of the collection, but also of the written word. In our terms, this would have made the collection into a source. On the other hand, that the parable was *altered* testifies to the following: By this stage, there was a process of editorial work, a process of modifying and weaving the parable into several overarching concerns of the gospel. In the Mark 4 collection, the editing work appears in the secrecy motif in verses 10 to 12 (Perrin and Duling :234). This part of the process corresponds best with a context of reflective writing. Such reflective writing was either *editing*, or else *redaction* of source material.

Thirdly, the so-called Q sections in Matthew and Luke continue to be debated, but they reflect a source that was both written and oral. The mirror-image in the parallel passages Mt 3:7-10// Lk3:7-9 seem to be among the best examples of the possibility that at least a part of 'Q' was written.

Fourth, the apocalypse in Mark 13 may be structured by Mark and reflect a central focus of his whole Gospel. Nonetheless, this chapter appears to be a mixture of the words of Jesus (e.g. v. 30-31), Jewish or Jewish Christian apocalyptic (e.g. vv. 7-9, 14-21, 24-27), and words reflecting Mark's own emphasis (e.g. 'Watch' v. 9, 33).

Fifth, the words of Matthew 23:2 ('The scribes...sit on Moses' seat...') may arise from the community rather than from a tradition they were passing on. The community may even have been 'creating scripture,' rather than simply recording it, in a conscious way, comparable to the process visible in the Temple Scroll from Qumran (Mann 1986:16, 18).

**\*Triple tradition:** In this thesis, triple tradition is a term for the material that exists in all three of Matthew, Mark, and Luke and is in parallel between them. It is the characteristic of these three together that gives rise to the name triple tradition. As used here, the term does not include material that is in parallel in only two of these three. For example, we can call the sections of Luke that are parallel to (//) Mark and Matthew the 'triple tradition' as presented by Luke. Furthermore, we can call the sections of Matthew that are parallel to Mark and Luke the 'triple tradition' as presented by Matthew. Examples appear on pages 18 and following, and especially in a table on page 30.

**\*V-Index:** All the vocables that occur a different number of times are summed. All the vocables that occur the same number of times are summed. The first is divided by the second for the 'v-index' Fucks (1952) .

**\*Variable:** (See also \*Discriminant Variable, \*Multivariate.) For the purposes of this thesis, a variable is a symbol or term for any *stylistic feature*. We note above that Taylor ([1937] 1948:44-54) or Fitzmyer (1981:111) list a number of stylistic features for Mark and for Luke respectively. Another way of saying this would be that Taylor or Fitzmyer list a number of *variables* for Mark and for Luke respectively. One element from their lists of features would be one variable. In Greek, when one has a definite article with a noun in Greek, then the definite article must use the same case as the noun. Here, the case of the definite article is a dependent variable, and the case of the noun is an independent variable. Such a variable can be selected from the set, or the full range, of possible linguistic norms of the Greek language. That full range of possibilities would be equivalent to what is known as the 'domain' of our variable or variables. If there is only one possible grammatical possibility for this variable for some reason, then the variable becomes, or can be called, a 'constant.'

**\*Word-window, Word-window size.** A 'word-window' in this thesis is a slice or sample of text expressed in a number of Greek words. We use the name 'ten word-window' for ten consecutive Greek words from a given layer. The word-window size of the reference sample is the same as the word-window size we use for the analysis in the whole population. On page 103, there is further discussion about the optimum word-window size. The following considerations affect our choice of word-window size. First, we want to use as many words as possible for the following reason. The

more words we use, the more extensive will be the potential number of syntax chains in a comparison. Secondly, the size of the individual fragments making up a required source will control the upper boundary of the word-window size. If the word-window size is larger than many of these fragments, then the analysis will exclude those fragments and so be ineffective.

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## 2 A full list of the fifty-four grammatical features

Here is a list of the grammatical features attached to each word in the synoptics and in the sample. A database can be compared to the card catalogue in the library. In this case, a database record would be like an individual card in the catalogue. A database field would be like each of the lines of information on the card in the library catalogue. Just as there would be a separate card in the card catalogue for each book in the library, so there would be a separate record in a database. On each card in the card catalogue, there would be a separate line for the author, the title, the subject and so on. In one record of the library's computer database, each of these last items would be in a separate field.

In our situation, each word of the synoptics has a separate record. Each word, or record, has database fields T1 to T54 as part of the record for the word. The meaning of the T-number is the letter T plus the line number of the grammatical feature below. If the database has '1' in any of fields T1 to T54, then the word possesses the relevant grammatical feature from the following list. Most words, of course, have more than one field marked in this way.

Radday and Shore (1985:27-29) discussed their selection of grammatical features for Hebrew words. The following list is a complete list of the grammatical possibilities for Greek words. Radday and Shore allow for a number of specific 'transitions'—that is, one grammatical category that appears with one other grammatical category, e.g. 'Finite verb forms with pronouns.' In our approach, of a comprehensive assessment of syntax chains, we allow for an infinite number of transitions,

irrespective of word order. It is important to have a technique that is not bound to word order for the following reason. Word order is flexible in Greek—far more so than it is, for example, in English. Greek has the ability to place the most important word near or at the beginning of a sentence. The value of this infinite capacity to deal with transitions is clear in the following quotation from Radday and Shore (1985:29): ‘..These transitions bring to light the *Feinstruktur* of a text.’ They point out that the analysis is finer when the transitions are more numerous. This shows that our technique of a comprehensive assessment of syntax chains has the capacity to examine extremely fine structures in a text.

- 1 Descriptive adjective
- 2 Descriptive adverb
- 3 Conjunction
- 4 Correlative or functional adverb, pronoun or word often used with or for another
- 5 Personal pronoun
- 6 Definite article
- 7 Demonstrative pronoun
- 8 Relative pronoun
- 9 Feminine, any
- 10 Masculine, any
- 11 Neuter, any
- 12 Nominative, any
- 13 Vocative, any
- 14 Accusative, any
- 15 Genitive, any
- 16 Dative, any
- 17 Noun, any
- 18 Noun: nominative
- 19 Noun: vocative
- 20 Noun: accusative
- 21 Noun: genitive
- 22 Noun: dative
- 23 Particle
- 24 Singular
- 25 Plural
- 26 Preposition
- 27 Verb: any
- 28 Verb: present tense or mode
- 29 Verb: imperfect
- 30 Verb: future
- 31 Verb: aorist
- 32 Verb: perfect

- 33 Verb: pluperfect
- 34 Verb: indicative mood
- 35 Verb: imperative
- 36 Verb: infinitive
- 37 Verb: subjunctive
- 38 Verb: optative
- 39 Verb: participle
- 40 Verb: participle, accusative case
- 41 Verb: participle, dative
- 42 Verb: participle, genitive
- 43 Verb: participle, nominative
- 44 Verb: participle, vocative
- 45 Verb: active voice
- 46 Verb: middle
- 47 Verb: passive
- 48 Verb: 1st person
- 49 Verb: 2nd person
- 50 Verb: 3rd person
- 51 Exclamation or ejaculative particle
- 52 Number: ordinal
- 53 Noun: proper
- 54 Pronoun, interrogative

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## *Curriculum vitae*

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### JOHN DEREK STUBBS

I was born in Johannesburg on 3 September 1952 to Margaret Helen Waller Stubbs and Derek Duncan Stubbs. I carried out my primary and secondary education at King Edward VII School in that city, matriculating in 1969. After school I was a church youth worker for ten years. During that period, between 1976 and 1980, I completed the B.Th. through the University of South Africa. In 1980 I was married to Nommo Nelisa Ngodwane.

The Rt. Revd. Bruce Evans, Bishop of Port Elizabeth, accepted me for training for Anglican (CPSA) orders in 1980. My studies for the M.Div. began at the General Theological Seminary in Manhattan, New York City, and I majored in New Testament under Prof John Koenig. After graduating in 1983, I did the S.T.M. at Union Theological Seminary, Manhattan during the next year. My thesis on Galatians was supervised by Prof J Louis Martyn.

After serving as a cleric in Christ (Episcopalian) Church, Suffern, NY, I assisted from 1986 to 1990 at the Church of the Heavenly Rest in Manhattan, and was also a biblical tutor under Prof Norman Gottwald at New York Theological Seminary. Participation in the International Q Project during this period was particularly stimulating, and, in that connection, I registered for the D.Th. with the University of South Africa in 1990. At first, my promoters were Prof Patrick Hartin and J H Roberts, and latterly Profs Johan Engelbrecht and John Fresen.

The Most Rev Desmond Tutu invited me to take up the position of Dean of Studies for the Anglican (CPSA) Diocese of Cape Town in 1991. Over these years I have taught New Testament at the Moravian Theological Centre, and have also served as an external examiner in New Testament for the Joint Board for the Diploma.