# A Genealogical History of the Greek Text of the New Testament 

## Volume 21

# A Genealogical History of the Greek Text of the First Epistle of Peter 

By
James D. Price

Copyright © (2021) James D. Price, all rights reserved.

## Table of Contents

Page
List of Tables ..... vi
List of Figures ..... vii
PREFACE ..... viii
CHAPTER 1: INTRODUCTION ..... 1
Textual Criticism ..... 1
The Problem of Mixture ..... 2
The Database Used ..... 3
CHAPTER 2: WITNESSES TO THE TEXT OF 1 Peter ..... 5
Number of Witnesses ..... 6
Date ..... 6
Completeness ..... 6
Limited Diversity ..... 8
Commonness of Text ..... 10
Quantitative Affinity ..... 12
Genealogical Affinity ..... 12
Conclusion ..... 12
CHAPTER 3: GENEALOGICAL HISTORY OF 1 PETER'S MANUSCRIPTS ..... 15
Readings of the Autographic Text ..... 18
The Generations of Genealogical History ..... 19
Mixture ..... 20
Primary Daughters ..... 21
Page
Secondary Daughters ..... 22
Resolution of Mixture ..... 22
Distribution of Affinity ..... 23
Date of the Autograph. ..... 25
Conclusions ..... 25
CHAPTER 4: THE HISTORY OF THE TEXTUAL VARIANTS IN 1 PETER ..... 26
Types of Variants ..... 27
Determining Exemplar Readings ..... 28
Autographic Readings. ..... 29
Agreement with NA-27. ..... 30
The Origin of the Variants ..... 31
Egyptian Recension ..... 31
Western Recension ..... 32
Antiochian Recension ..... 32
Tracing Variant History ..... 33
Variants of Textual Interest ..... 33
Missing "Through the Spirit" in 1:22,1 ..... 33
Missing "Therefore" in 2:13,1 ..... 35
Missing "Knowing" in 3:9,1 ..... 36
Missing Words in 4:14,3 ..... 38
Non-NA-27 in 1:21,1 ..... 39
Non-NA-27 in 3:16, 2 ..... 41
Non-NA-27 in 5:11,2 ..... 43
Multiple Variants in 3:1,2 ..... 44
Page
Multiple Variants in 2:19,1 ..... 46
Variants of Theological Interest ..... 48
Changed Words in 2:21,3 ..... 49
Changed Words in 3:18,2 ..... 51
Changed Words in $4: 1,1$ ..... 53
Changed Words in 5:1,3 ..... 55
Tracing Any Variant ..... 57
Conclusion ..... 61
CHAPTER 5: SUMMARY AND CONCLUSIONS ..... 62
The Effect of Recensions ..... 63
Binary Branches ..... 63
So What! ..... 64
APPENDIX A: List of Extant Witnesses to the First Epistle of Peter ..... 65
APPENDIX B: List of the References Associated with Each Place of Variation ..... 70
Appendix C: The Tree Diagram of The Textual History of the First Epistle of Peter ..... 72
Appendix D: List of Autographic Readings For 1 Peter ..... 78
Appendix E: List of the Places the Lachmann-10 Text Differs from the NA-27 Text. ..... 85
Appendix F: Places Where the Non-Autographic Variants Were Initiated ..... 87
Appendix G: Places Where the Non-Autographic Variants Were Initiated ..... 98
Appendix H: Every Place Where a Variant is Initiated ..... 111
GLOSSARY OF TERMS ..... 130
BIBLIOGRAPHY ..... 134

## List of Tables

Table 2.1: Distribution of Extant Witnesses by Century ..... 7
Table 2.2: Distribution of Witnesses by Completeness ..... 8
Table 2.3: Distribution of Witnesses of $80 \%$ or Greater Completeness by Century ..... 9
Table 2.4: Distribution of Number of Variations per Place of Variation ..... 10
Table 2.5: Distribution of Variation Type ..... 10
Table 2.6: Distribution of Commonness of Text among Witnesses ..... 11
Table 2.7: Distribution of Quantitative Affinity Among all Witnesses. ..... 13
Table 2.8: Distribution of Quantitative Affinity Among Witnesses with $80 \%$ or Greater ..... 14
Table 3.1: Distribution of Extant Witnesses by Generation ..... 20
Table 3.2: Distribution of Witnesses by Number of Parents ..... 21
Table 3.3: Distribution of Exemplars by Number of Primary Daughters ..... 22
Table 3.4: Distribution of Exemplars by Number of Secondary Daughters ..... 22
Table 3.5: Distribution of Affinity of Extant Witnesses with Primary Parent. ..... 23
Table 3.6: Distribution of Affinity of Exemplars with Primary Parent ..... 24
Table 4.1: Distribution of Number of Variants per Place of Variation ..... 26
Table 4.2: Distribution of Variants by Type ..... 27
Table 4.3: Distribution of All Variants by Type ..... 27
Table 4.4: Frequency of Exemplar Reading Rules ..... 28
Table 4.5: Frequency of Exemplar Reading Rules ..... 29
Table 4.6: Distribution of Autographic Readings by Probability ..... 30
Table 4.7: Frequency of Variants ..... 30

## List of Figures

Figure 3.1: Condensed Genealogical Stemma of 1 Peter ..... 16
Figure 3.1a: The Egyptian Recension ..... 17
Figure 3.1b: The Antiochian Recension ..... 18
Figure 3:2: Condensed Tree Diagram of 1 Peter ..... 19
Figure 4.1: Distribution of 1 Peter 1:22,1 ..... 34
Figure 4.2: Distribution of 1 Peter2:13,1 ..... 36
Figure 4.3: Distribution of 1 Peter 3:9,1 ..... 37
Figure 4.4: Distribution of 1 Peter 4:14,3 ..... 39
Figure 4.5: Distribution of 1 Peter 1:21,1 ..... 40
Figure 4.6: Distribution of 1 Peter 3:16,2 ..... 42
Figure 4.7: Distribution of 1 Peter 5:11,2 ..... 43
Figure 4.8: Distribution of 1 Peter 3:1,2 ..... 45
Figure 4.9: Distribution of 1 Peter 2:19,1 ..... 47
Figure 4.10: Distribution of 1 Peter 2:21,3 ..... 50
Figure 4.11: Distribution of 1 Peter 3:18.2 ..... 52
Figure 4.12: Distribution of 1 Peter 4:1,1 ..... 54
Figure 4.13: Distribution of 1 Peter 5:1,3 ..... 56
Figure 4.14: Distribution of 1 Peter 5:10,3 ..... 59
Figure 4.15: Distribution of 1 Peter 5:10,3 ..... 60

## PREFACE

My interest in textual criticism was first aroused when I studied the subject in seminary in the 1950s, and my interest in tree-diagraming (also called stemmatics) was first awakened when, in the 1960s, I learned to apply it to grammatical analysis and to computer aids for translation. I learned that the method works best when applied always to the most deeply imbedded unanalyzed element-that is, the element at the lowest hierarchic level. When I began using tree-diagraming techniques to teach Hebrew grammar and syntax in the 1970s, it occurred to me that the same analytic principles would logically apply to textual criticism, and that just as these principles could be implemented by computer programs for grammatical and syntactical analysis of language, so also, they could be implemented for the genealogical analysis of textual criticism. So began a lifetime of research and experimentation to create a computer program for reconstructing the genealogical history of an ancient text based on genealogical principles and tree-diagraming.

Earlier textual scholars had determined that the key to the genealogical history of a text lies in those places in the text where its manuscript copies differ, and that the percentage of agreement between two manuscript copies at those places of variation is a measure of their genealogical affinity. I call that percentage of agreement quantitative affinity. Gradually over time I realized that the variant readings in a manuscript are a record of its genealogical history; its variant readings are the accumulation of the inherited genetic mutations of all its ancestor exemplars, and its variants constitute a kind of genetic DNA code. One must learn to read the history of a manuscript from its genetic code. Quantitative affinity was one of the leading principles guiding my earlier research and computer implementation.

Eventually I also realized that a manuscript inherits the unique mutant variants of its parent exemplar and only its sibling sister manuscripts share those same variant readings. That collection of variants peculiar to sibling sister manuscripts serves as their genetic marker-a kind of sibling gene. Every manuscript has a marker by which its sister manuscripts may be identified. For lack of a better term, I call that marker a sibling gene. Now I am not naïve enough to suppose that in a collection of extant manuscripts every sibling gene marks real sister manuscripts, although it often does; but what it actually marks are nearest relative manuscripts having a recoverable nearest
common ancestor exemplar. The presence of the sibling gene assures true genetic relationship and a consistent line of genealogical descent.

This work brings together both quantitative affinity and the sibling gene, working in harmony with tree diagraming methodology, to reconstruct parent exemplars one at a time, always for the most remote unreconstructed branch - that is, the most deeply imbedded branch, being at the lowest hierarchy or the most recent generation - to reconstruct the genealogical history of the text of an ancient document one branch at a time. The principles and analytical methods of this theory have been implemented and tested on computer software which I call Lachmann-10. That is what this work is all about.

James D. Price

## Chattanooga, TN

September, 2021

## CHAPTER 1 INTRODUCTION

This book is the twenty-first in a series of studies regarding the genealogical history of the text of the Greek New Testament. Volume 1 provided the genealogical history of the Greek text of the Gospel of Matthew; this volume does the same for the First Epistle of Peter. The first volume provides an introduction to textual criticism, a review of the various textual critical theories and methodologies, a description of a genealogical theory of textual criticism along with its methodology. Readers not familiar with that volume should read at least the first four chapters of that study before going further, because this work presumes the reader has that informed background. What follows is a brief summary of those chapters.

## Textual Criticism

Textual criticism is the branch of literary science which studies surviving copies of ancient literature ${ }^{1}$ with the intent of determining the original form of a literary composition. ${ }^{2}$ The problem is that surviving copies of a composition differ because of scribal errors accumulated during the copying history of the composition. At certain places in the text of a composition, existing copies may differ, one having this reading, another having that reading, and yet another having the reading originally written by the author. Such places are called places of variation, and such differing readings are called textual variants. Every place of variation has at least two textual variants.

Because every manuscript is a copy of some earlier copy (exemplar), intuitively one imagines the history of the manuscripts of a composition to be like a family tree. So initially textual scholars of classical literature took this approach with some measure of success. However, when it came to the text of the Greek New Testament, scholars despaired and regarded the genealogical approach as much too complex because of the large number of manuscripts and large number of

[^0]variants. So, various theories and methodologies were developed to work with the variants at each place of variation to decide which one is more likely original. But with the development of highspeed computers, the complex data processing is no longer a problem; all that is needed is a viable genealogical theory together with its associated programable methodology. That's where this project came on the scene.

The present genealogical theory is based on several known facts about the relationship of manuscripts and variant readings. (1) It is a fact that the variants in a manuscript consist of all the uncorrected scribal errors of its ancestral exemplars; ${ }^{3}$ this collection of variants may be regarded as the genealogical history of the manuscript, and may be likened to its DNA code. In addition, the variants introduced by the parent exemplar of a manuscript may be regarded as its sibling gene. So, every manuscript has its own DNA and sibling gene, and these data are recoverable from the manuscript database. (2) Sibling manuscripts may be identified by mutual sibling genes, or by greatest quantitative affinity, ${ }^{4}$ or by both. (3) Sibling manuscripts are daughters of the same parent exemplar the readings of which may be recovered from the consensus of its daughters' readings, except where no consensus exists. Sibling daughter manuscripts inherit all the readings of their parent exemplar except where their own scribes initiate a new one. In case of ambiguity (where no consensus exists), one variant will have been inherited and the other will have been newly initiated. Inherited variants have history and may be identified by the principle of delayed ambiguity, ${ }^{5}$ whereas newly initiated variants have no history and fail the test of delayed ambiguity. (4) A reconstructed exemplar may stand in place of all its descendants in the database, and function as their representative in that stage of reconstructing the genealogical history. (5) Iteration of the above steps will converge genealogical stemma into a single exemplar representing the autographic text. The actual methodology as described in the first volume is more complex than the above, but the above is sufficient to describe the basic principles.

## The Problem of Mixture

Mixture occurred when a scribe copied from more than one exemplar. Critics of the genealogical method assert that mixture creates an irresolvable complication. But, as it turned out, as far as the reconstructing procedure is concerned, a reading copied from a secondary exemplar is no different than a variant newly initiated by the scribe either by mistake or intent. Both are

[^1]uninherited from the primary exemplar; the only difference is that a newly initiated variant has no history, whereas a variant borrowed by mixture has a history, but a history outside the genealogical descent of the primary exemplar. So, mixture is not a problem for the reconstruction methodology described above. The sources of mixture in genealogical history may be of interest in some cases. A separate algorithm of the software finds the most likely source of every variant introduced by mixture rather than by scribal error or intent.

## The Database Used

The database used in this project is derived from an expansion of the Nestle-Aland $27^{\text {th }}$ edition of the Greek New Testament ${ }^{6}$ hereafter referred to as NA-27. The variations of the text are listed at the bottom of each page, providing the verse number where the variation occurs, the associated symbol indicating the kind of variation, the alternate readings that occur there, and a list of witnesses ${ }^{7}$ that contain the given alternate reading. The list of witnesses is provided in compressed form in order to avoid as much repetition as possible. This compressed form is useful for conserving paper and ink, and is relatively easy for scholars to follow. But the computer software must have every item of data explicitly recorded, that is, there must be a record of every witness to the text under study, and a record of which variant reading each witness has at every place of variation. This necessity requires the NA-27 database to be unpacked and expanded. Until recently the NA-27 database existed only in printed form, and expanding the data into the form needed by the genealogical software was a complex and time-consuming task. ${ }^{8}$ However, the database is now available in digital electronic form in the Stuttgart Electronic Study Bible. ${ }^{9}$ That form of the database is capable of being expanded and unpacked electronically.

The expanded database consists of two separate files, one containing a list of every witness together with its name, date, language, and content. The second file is a list of every place of variation in the NA-27 database, the chapter and verse number where the variation occurs, the Greek text of each variant at that place of variation, along with a list of witnesses containing the given variant.

[^2]The present program, called Lachmann-10 herein, is written in the Turbo Pascal 7.0 programming language intended for IBM compatible machines with extended memory. The size of the problems it can handle is flexible and is limited only by the amount of RAM available and the speed of the machine [up to a maximum of 2,000 variation units and 2,000 manuscripts]. Large problems require a reasonable amount of time to converge on a solution. The next chapter describes the genealogical history of the extant witnesses to the Greek text of the First Epistle of Peter.

## CHAPTER 2 WITNESSES TO THE TEXT OF 1 Peter

The witnesses ${ }^{1}$ to the text of the Book of 1 Peter used in this study are those derived from the electronic form of the textual apparatus of the NA-27 edition of the Greek New Testament as contained in the Stuttgart Electronic Study Bible ${ }^{2}$ as edited and modified for the purposes of this project. They consist of 115 existing witnesses ${ }^{3}$ of various types:
(1) Papyrus manuscripts 3
(2) Uncial manuscripts 16
(3) Minuscule manuscripts 43
(4) Lectionary manuscripts 2
(5) Latin Versions 8
(6) Egyptian Versions 5
(7) Syriac Versions 2
(8) Greek Church Fathers 8
(9) Latin Church Fathers 20
(10) Printed Editions $8^{4}$

The witnesses to the text of an ancient document must have several characteristics before a reasonably reliable reconstruction of its genealogical history can be made. Among these are (1) number of witnesses, (2) date, (3) completeness, (4) limited variableness, (5) commonness of text, and (6) genealogical affinity. These characteristics of the available witnesses to the text of 1 Peter are discussed below and are shown to be suitable for a reasonable reconstruction of its textual history.

[^3]
## Number of Witnesses

Contrary to the number of available witnesses to the texts of ancient classical literature, there are approximately 2,328 existing Greek manuscripts of the Gospels, including about 178 fragments. ${ }^{5}$ This does not include the witnesses of the ancient translations and church fathers. This study makes use of the 115 witnesses to the Book of 1 Peter recorded in the NA-27 apparatus which includes all the ancient papyri witnesses and most of the existing manuscripts dating before the ninth century and a good sample of those from later times. This number includes the consensus witness of the many manuscripts of the text used in the Greek speaking Byzantine churches together with a number of manuscripts related to the Byzantine text. Also, it contains the consensus witness of the many manuscripts of the Latin Vulgate and the individual witness of four different printed editions of the Vulgate. The various Old Latin translations also are represented by a consensus of a number of manuscripts of each of these individual translations. Consequently, the consensus witnesses bring many additional manuscripts indirectly into the reconstruction process. There is good reason to believe that there are sufficient witnesses to the text of the Book of 1 Peter to reconstruct its genealogical history.

## Date

While it is possible to reconstruct the genealogical history of a text without the benefit of dates, they are very helpful for accurately locating scribal activity in real history. The dates of the witnesses to 1 Peter range from the second to the twenty-first centuries. ${ }^{6}$ Table 2.1 and its associated graph display the reasonably good distribution of the witnesses by date.

## Completeness

Many of the witnesses are fragmentary, not all their text having survived the passage of time. Only 49 of the 115 witnesses have $96-100 \%$ of their text complete, and only 64 have a text $80 \%$ or more complete; thus, completeness is significant for this study. Table 2.2 and its associated graph display the distribution of completeness for the witnesses used in this study.

[^4]
## Table 2.1:

Distribution of Extant
Witnesses by Century:

| Century | Number <br> of Wit- <br> nesses |
| :---: | :---: |
| 1 | 0 |
| 2 | 0 |
| 3 | 12 |
| 4 | 14 |
| 5 | 15 |
| 6 | 7 |
| 7 | 5 |
| 8 | 3 |
| 9 | 10 |
| 10 | 4 |
| 11 | 9 |
| 12 | 16 |
| 13 | 5 |
| 14 | 3 |
| 15 | 4 |
| 16 | 2 |
| 17 | 0 |
| 18 | 0 |
| 19 | 2 |
| 20 | 4 |
| 21 | 0 |



Completeness is important for the reconstruction of the textual history, because the computer depends on minimal difference between witnesses to determine quantitative affinity. Consequently, the computer reconstructed the genealogical history on the basis of witnesses having at least $80 \%$ of their text complete; the more fragmentary witnesses are added to the genealogical tree where they best fit after the tree is constructed. The fragmentary witnesses are still important and should not be excluded from the study because they contribute to establishing fixed dates in the textual history.

## Table 2.2

Distribution of Witnesses
by Completeness:

| $\%$ Complete | Number of <br> Witnesses |
| :---: | :---: |
| $0-5$ | 26 |
| $6-10$ | 4 |
| $11-15$ | 3 |
| $16-20$ | 0 |
| $21-25$ | 0 |
| $26-30$ | 0 |
| $31-35$ | 0 |
| $36-40$ | 0 |
| $41-45$ | 0 |
| $46-50$ | 0 |
| $51-55$ | 8 |
| $56-60$ | 0 |
| $61-65$ | 2 |
| $66-70$ | 3 |
| $71-75$ | 2 |
| $76-80$ | 3 |
| $81-85$ | 9 |
| $86-90$ | 3 |
| $91-95$ | 3 |
| $96-100$ | 49 |



Because many of the witnesses are fragmentary, it is of interest to know the distribution of those witnesses having $80 \%$ or greater completeness. They are the ones that contribute to the reconstruction of the genealogical history. Table 2.3 and its associated graph display the distribution of these witnesses. It is evident that numerous contributing witnesses are from as early as the fourth century, so a reasonably good reconstruction can be expected.

## Limited Diversity

The more diverse the text the more difficult the reconstruction of its textual history is. In the overall picture, all witnesses to 1 Peter agree in over $90 \%$ of the text. The places of variation and the number of variants at those sites provide the data for reconstruction. However, even so, the number of places of variation and the number of variants constitute a limit to what can be reconstructed because of the magnitude and complexity of the problem.

Table 2.3
Distribution of Witnesses of $\mathbf{8 0 \%}$ or Greater Completeness by Century

| Century | Num. of <br> Witnesses |
| :---: | :---: |
| 1 | 0 |
| 2 | 0 |
| 3 | 0 |
| 4 | 2 |
| 5 | 4 |
| 6 | 2 |
| 7 | 4 |
| 8 | 2 |
| 9 | 10 |
| 10 | 4 |
| 11 | 8 |
| 12 | 9 |
| 13 | 3 |
| 14 | 3 |
| 15 | 3 |
| 16 | 1 |
| 17 | 0 |
| 18 | 0 |
| 19 | 1 |



But modern technology has expanded that limit to where reconstruction is now possible for texts the size and diversity of 1 Peter. The NA-27 apparatus records 232 places of variation ${ }^{7}$ for the Book of 1 Peter with a total of 589 variant readings distributed among them. ${ }^{8}$ This averaged out to 2.54 variants per place of variation. In earlier decades, this amount of information would have been impossible to manually process, but not so today; my desktop computer provides complete solutions to problems this size in just a matter of minutes. Table 2.4 and its associated graph display the distribution of the number of variations per place of variation. For example, 148 places of variation have only two variations whereas only 7 places of variation have 5 variations.

[^5]Table 2.4
Distribution of Number of Variations per Place of Variation


However, a few maverick witnesses occur whose diversity obscures their genealogical affinity. These witnesses skew the reconstruction of the stemma and for this reason are excluded from the process but are added to the completed stemma where they best fit. For 1 Peter they are $\mathrm{P}^{\wedge} 72,1505^{*}$, and $1505^{\wedge} \mathrm{c}$; these each have an affinity with their parent exemplar of only $57-80 \%$.

The NA-27 apparatus records seven different types of variations to the text. Table 2.5 displays the distribution of these types of variation for the Book of 1 Peter. While the type of variation has no significance for the reconstruction process, the information is provided for those who are interested.

Table 2.5
Distribution of Variation Type

| Omit a word | 28 |
| :---: | :---: |
| Omit a phrase | 8 |
| Alternate word | 99 |
| Alternate words | 47 |
| Transposed words | 5 |
| Added word or phrase | 45 |
| Other | 0 |
| Total $=$ | 232 |

## Commonness of Text

Commonness is a measure of the percentage of text two witnesses have in common. When two witnesses both have complete texts, that is, they are not fragmentary, having readings at every
place of variation, they have $100 \%$ commonness, regardless of the agreement or disagreement of their readings.

Fragmentary witnesses, however, are less than complete and may actually have no commonness of text. For example, witness A may be $40 \%$ complete, lacking the text for the last $60 \%$ of the places of variation, and witness B may be $40 \%$ complete, lacking the text for the first $60 \%$ of the places of variation; as a result, the two witnesses have no commonness of text. The greater the commonness of text two witnesses have the greater potential they have for genealogical affinity. Table 2.6 and its associated graph display the distribution of commonness each witness shares with every other witness for the Book of 1 Peter.

Table 2.6
Distribution of Commonness of Text among Witnesses


## Quantitative Affinity

Quantitative affinity ${ }^{9}$ is a measure of how strongly two witnesses are genealogically related. Witnesses are genealogically related when they have many of the same readings at their shared places of variation. Quantitative affinity is determined by the number of places of variation where the witnesses have the same reading divided by the number of places of variation the witnesses have in common. For example, if witness A and witness B have 1,000 places of variation in common, and in 952 places they have the same reading, the quantitative affinity of A to B is $952 \div 1,000=0.952$ or $95.2 \%$. Table 2.7 and its associated graph display the distribution of quantitative affinity among all the pairs of witnesses for the Book of 1 Peter.

It is evident that many of the extant witnesses to 1 Peter have relatively strong quantitative affinity with one another. These data are skewed because of the many fragmentary witnesses. A better picture of the significant affinity is that which is among witnesses having $80 \%$ content or greater. These witnesses are the ones used to reconstruct the genealogical history. Table 2.8 and its associated graph display the distribution of quantitative affinity among witnesses having $80 \%$ content or greater. This suggests that reconstruction of the genealogical history is reasonably feasible.

## Genealogical Affinity

Genealogical affinity among witnesses occurs when they share a common sibling gene. The sibling gene of a witness consists of the variants initiated in its parent exemplar. This information is derived from the database as the variants two witnesses share that occur a minimum number of times in the database.

## Conclusion

There are sufficient witnesses to the text of the Book of 1 Peter with dates distributed over the historical period of interest, being sufficiently complete, having relatively limited diversity, and having ample mutual commonness and strong genealogical affinity. There is good reason to expect that the genealogical history derived from these witnesses will be a good approximation of the actual textual history of the book.

[^6]Table 2.7
Distribution of Quantitative Affinity
Among all Witnesses

| $\begin{gathered} \% \\ \text { Affinity } \end{gathered}$ | Number of Witnesses |  | Distribution of Quantitative Affinity Among all Witnesses |
| :---: | :---: | :---: | :---: |
| 0-5 | 1,703 |  |  |
| 6-10 | 45 |  |  |
| 11-15 | 48 | 1800 |  |
| 16-20 | 105 | 1600 |  |
| 21-25 | 158 |  |  |
| 26-30 | 92 | 这 1400 |  |
| 31-35 | 117 | \% 1200 |  |
| 36-40 | 97 | 1000 |  |
| 41-45 | 38 | \% |  |
| 46-50 | 175 | ¢\% 800 |  |
| 51-55 | 116 | 600 |  |
| 56-60 | 178 | 400 | - |
| 61-65 | 350 | \% 400 |  |
| 66-70 | 661 | 200 |  |
| 76-80 | 464 | 0 |  |
| 81-85 | 267 |  |  |
| 86-90 | 391 |  | Percent Affinity |
| 91-95 | 446 |  | Percent Affinity |
| 96-100 | 488 |  |  |

## Table 2.8

Distribution of
Quantitative Affinity
Among Witnesses with
$\mathbf{8 0 \%}$ or Greater Content

| $\%$ Affin- <br> ity | Number <br> of Wit- <br> nesses |
| :---: | :---: |
| $0-5$ | 0 |
| $6-10$ | 0 |
| $11-15$ | 0 |
| $16-20$ | 0 |
| $21-25$ | 0 |
| $26-30$ | 0 |
| $31-35$ | 0 |
| $36-40$ | 0 |
| $41-45$ | 0 |
| $46-50$ | 0 |
| $51-55$ | 24 |
| $56-60$ | 91 |
| $61-65$ | 180 |
| $66-70$ | 380 |
| $71-75$ | 291 |
| $76-80$ | 152 |
| $81-85$ | 47 |
| $86-90$ | 134 |
| $91-95$ | 154 |
| $96-100$ | 87 |



## CHAPTER 3 GENEALOGICAL HISTORY OF 1 PETER'S MANUSCRIPTS

This chapter presents the genealogical history of the manuscripts ${ }^{1}$ of the Greek text of the First Epistle of Peter as reconstructed by computer program Lachmann-10. ${ }^{2}$ Beginning with a data base of 115 existing witnesses, 232 places of variation, and 589 variants, the program reconstructed 28 intermediate exemplars, arranging them in the genealogical stemma (tree diagram) presented in its full form in Appendix C, but in a condensed form in Figure 3.1. This condensed form portrays the genealogical interrelationship of all the reconstructed exemplars of the text of 1 Peter including most of the terminal witnesses. The rectangular boxes contain the information for the exemplars created by the software and the boxes with rounded corners contain the information for the extant witnesses. Witnesses in the same box are siblings. Figure $3.2^{3}$ displays a second tree diagram in which the principal line of descent from the autograph through the Antiochian text tradition appears in a straight line from which the other text traditions branch off. All the technical data and diagrams contained in this chapter were derived from the monitor screen of Lachmann-10 or the report it created.

The head exemplars of the three main branches of the stemma are exemplars Ex-135\#, Ex$141 \#$, and Ex-142\#. These branches are quite independent of one another, having mutual affinities ranging from $87 \%$ to $89 \%$. But they have affinities with the autograph ranging from $93 \%$ to $95 \%$. In addition, the sibling gene of each uniquely distinguishes them from one another. The following table lists their mutual differences and affinities.

[^7]|  | Ex-135\# | Ex-141\# | Ex-142\# | Autograph |
| :---: | :---: | :---: | :---: | :---: |
| Ex-135\# |  | $87 \%$ | $89 \%$ | $94 \%$ |
| Ex-141\# | 31 |  | $88 \%$ | $93 \%$ |
| Ex-142\# | 26 | 27 |  | $95 \%$ |
| Autograph | 15 | 16 | 11 |  |

Figure 3.1
Condensed Genealogical Stemma of 1 Peter


The above diagram displays the overall structure of the genealogical stemma of 1 Peter, but it presents only the branch of the Antiochian text tradition in full detail, listing all the sibling descendants of each exemplar; its history extends over 10 generations. The corresponding branch of the Egyptian text tradition is presented in Figure 3.1a and that of the Western text tradition in Figure 3.1b. Exemplar Ex-142\# is the Antiochian recension, the ancestral source of the witnesses in the Antiochian tradition. Its date (c. AD 80) is derived from that of fifth-generation church father Tertullian (Tert^a\% c. AD 220). It has an $95 \%$ affinity with the autographic text, differing from it in 11 places. ${ }^{4}$


Figure 3.1a displays the Egyptian branch of the genealogical stemma of 1 Peter; its history extends over five generations. Exemplar Ex-141\# is the Egyptian recension, the ancestral source of the witnesses in the Egyptian tradition. Its date (c. AD 200) is derived from that of the thirdgeneration papyrus $\mathrm{P}^{\wedge} 72$ (c. AD 300). It has an affinity with the autographic text of $93 \%$, differing from it in 16 places. The NA-27 text found its best fit as a daughter of second-generation Exemplar Ex-139 beside MS P^72. It is interesting to note that Codex Sinaiticus (01*) and Codex Vaticanus (B*) are in different branches; they have an affinity of only $64 \%$, differing by 84 readings.

[^8]Figure 3.1b


Figure 3.1b displays the Western branch of the genealogical stemma of 1 Peter; its history extends over four generations. Exemplar Ex-135\# is the Western recension, the ancestral source of the witnesses in the Western tradition. Its date (c. AD 95) is derived from that of fourth-generation church father Clement $\left(\mathrm{Cl}^{\wedge} \mathrm{a} \% \mathrm{c}\right.$. AD 215). It has an affinity with the autographic text of $94 \%$, differing from it in 15 places. This text tradition contains mostly the Latin Vulgate, the Old Latin witnesses, and the Latin church fathers.

## Readings of the Autographic Text

The theory expressed in the first volume of this series ${ }^{5}$ indicates that the readings of the autographic text should be determined on the basis of the "consensus among ancient independent witnesses." The solution for 1 Peter ended up with three independent recensions which were candidates for being witnesses to the text of the autograph. The guideline given in the theory recommended selecting the three most ancient recensions for use in determining the consensus; for 1 Peter they are: Exemplars Ex-135\#, Ex-141\#, and Ex-142\#. The text of the autograph is presented in Appendix D.

[^9]
## The Generations of Genealogical History

Program Lachmann-10 reconstructed the genealogical history of the text of 1 Peter in ten generations of descent from the autograph. Of course, the exact number of generations cannot be known because the genealogical history before the alleged first-generation major recensions was too fuzzy for the software to accurately reconstruct. The 115 extant witnesses are distributed throughout every generation of the genealogical history. Table 3.1 and its associated graph display the distribution of the extant witnesses of 1 Peter by generation. Every generation has at least 1 extant witness.

Figure 3.2
Condensed Tree Diagram of 1 Peter


## Table 3.1

Distribution of Extant Witnesses
by Generation

| Generation | Num. of <br> Witnesses |
| :---: | :---: |
| 1 | 0 |
| 2 | 23 |
| 3 | 30 |
| 4 | 26 |
| 5 | 13 |
| 6 | 13 |
| 7 | 6 |
| 8 | 1 |
| 9 | 1 |
| 10 | 2 |



## Mixture

The number of parents a witness had is a measure of the mixture of its text; the more parents, the more mixture. At any place of variation, the reading of a witness may differ from that of its primary parent exemplar ${ }^{6}$ for one of two reasons: (1) the reading is a newly initiated variant having no prior existence; or (2) the scribe selected the reading from one of the secondary exemplars he was consulting. Witnesses having only one parent experienced no mixture; every variant differing from that of the primary parent exemplar was newly initiated by the scribe either accidentally or intentionally. Table 3.2 displays the distribution of witnesses by number of parents. Those witnesses with the greatest mixture are those with the most diverse text; for example: 31 of the witnesses had only one parent, having no mixture at all; MS 1852 has 14 parents, MS C^2 has 11 , and MSS L020*, $1505^{\wedge} \mathrm{c}$, and $\mathrm{vg}^{\wedge} \mathrm{b}$ have 10 , indicating the extreme mixture of those witnesses. The sources of mixture are not displayed in the tree diagrams.

[^10]Table 3.2
Distribution of Witnesses
by Number of Parents

| Num. of <br> Parents | Num. of <br> Witnesses |
| :---: | :---: |
| 1 | 31 |
| 2 | 23 |
| 3 | 33 |
| 4 | 12 |
| 5 | 19 |
| 6 | 12 |
| 7 | 8 |
| 8 | 0 |
| 9 | 7 |
| 10 | 3 |
| 11 | 1 |
| 12 | 0 |
| 13 | 0 |
| 14 | 1 |



## Primary Daughters

When an exemplar is the primary parent of one of its daughter manuscripts, then that daughter in turn is a primary descendant of the exemplar. Except for exemplars created to account for same-generation mixture (those marked with \$), an exemplar always has at least two primary daughters, but it may have as many as needed for grouping multiple sibling daughters. The number of primary daughters of an exemplar is a measure of how well the software was able to find groups of sibling sisters. Table 3.3 displays the distribution of primary daughters by number of exemplars. Exemplar Ex-126 has 9 primary daughters and Ex-123 has 12.

Critics of the genealogical theory protest that the genealogical trees it develops are almost exclusively binary, that is, nodes in the tree have only two branches-in other words, reconstructed exemplars have only two primary daughter descendants. Table 3.3 demonstrates the error of this claim. Exemplars with no primary descendants are those created to account for same-generation mixture; they rightly have no primary descendants.

| Table 3.3 <br> Distribution of Exem- <br> plars by <br> Number of Primary <br> Daughters |  |
| :---: | :---: |
| Num. of <br> Primary <br> Daughters Num. of <br> Exemplars <br> 2 19 <br> 3 5 <br> 4 1 <br> 5 1 <br> 9 1 <br> 12 1 |  |


| Distribution of Exemplars by <br> Number of Secondary Daughters |  |  |  |
| :---: | :---: | :---: | :---: |
| Num. of <br> Secondary <br> Daughters Num. of <br> Exemplars Secondary <br> DaughtersNum. of <br> Exemplars |  |  |  |
| 0 | 9 | 13 | 1 |
| 1 | 5 | 14 | 1 |
| 2 | 2 | 15 | 2 |
| 3 | 1 | 18 | 1 |
| 5 | 1 | 22 | 1 |
| 6 | 1 | 32 | 1 |
| 7 | 4 | 36 | 1 |
| 8 | 1 | 66 | 1 |
| 9 | 1 |  |  |
| 10 | 1 | Total | 309 |

## Secondary Daughters

When an exemplar is the source of mixture (a secondary parent) for one of its daughter descendants, then that daughter is a secondary descendant of the exemplar. An exemplar does not need to have any secondary descendants, but it may have as many as needed for resolving mixture within its associated branch. The number of secondary descendants of an exemplar is a measure of its value as a source of mixture, suggesting that scribes regarded the exemplar as having some measure of authority. Table 3.4 displays the distribution of secondary daughters by number of exemplars. For example, Exemplar Ex-127, a second-generation exemplar of the Western text tradition, had 36 secondary daughters; those with more than 36 secondary daughters were merely sources of same-generation mixture.

## Resolution of Mixture

The optimizing procedures of the software resolve all mixture in a genealogical tree, leaving every instance of a variant accounted for either by genealogical descent, by mixture, or by initiation. That is, the software locates the exemplar where every variant originated in the genealogical history of the witnesses. ${ }^{7}$ This feature is treated further in Chapter Four where the genealogical history of the variants is discussed.

[^11]
## Distribution of Affinity

Another measure of the success of the software in reconstructing the genealogical history of the text of 1 Peter is the distribution of the affinity of the witnesses to their primary parent exemplars. If this affinity is consistently high, the success may be regarded as high. Table 3.5 and its associated graph display the distribution of the affinity of the extant witnesses ${ }^{8}$ to their corresponding primary parent exemplar. Table 3.6 and its associated graph display the distribution of the affinity of the reconstructed exemplars to their corresponding primary parent exemplar, not including those functioning only to resolve same-generation mixture. ${ }^{9}$

Table 3.5
Distribution of Affinity of Extant
Witnesses with Primary Parent

| $\%$ Af- <br> finity | No. of <br> Wit- <br> nesses |
| :---: | :---: |
| $0-5$ | 0 |
| $6-10$ | 0 |
| $11-15$ | 0 |
| $16-20$ | 0 |
| $21-25$ | 0 |
| $26-30$ | 0 |
| $31-35$ | 0 |
| $36-40$ | 0 |
| $41-45$ | 0 |
| $46-50$ | 0 |
| $51-55$ | 0 |
| $56-60$ | 0 |
| $61-65$ | 0 |
| $66-70$ | 0 |
| $71-75$ | 1 |
| $76-80$ | 2 |
| $81-85$ | 2 |
| $86-90$ | 7 |
| $91-95$ | 12 |
| $96-100$ | 32 |
| Total | 56 |



[^12]The evidence from Table 3.5 indicates that all but 12 extant witnesses had a strong affinity (> 90\%) with their primary parent exemplar, and all but 3 had an affinity greater than $80 \%$. This demonstrates that considerable close grouping exists among the extant witnesses.

The evidence from Table 3.6 indicates that $20(74.1 \%)$ of the 27 reconstructed exemplars ${ }^{10}$ have a strong affinity (>90\%) with their primary parent exemplar, and another 7 ( $2.6 \%$ ) had a moderate affinity (81-90\%) with their parent. Third-generation Exemplar Ex-124, the source of the Latin Vulgate witnesses, has an affinity of $81 \%$ with its parent exemplar.

Table 3.6
Distribution of Affinity of Exemplars with Primary Parent

| $\%$ Af- <br> finity | No. of <br> Exem- <br> plars |
| :---: | :---: |
| $0-5$ | 0 |
| $6-11$ | 0 |
| $11-15$ | 0 |
| $16-20$ | 0 |
| $21-25$ | 0 |
| $26-30$ | 0 |
| $31-35$ | 0 |
| $36-40$ | 0 |
| $41-45$ | 0 |
| $46-50$ | 0 |
| $51-55$ | 0 |
| $56-60$ | 0 |
| $61-65$ | 0 |
| $66-70$ | 0 |
| $71-75$ | 0 |
| $76-80$ | 1 |
| $81-85$ | 5 |
| $86-90$ | 1 |
| $91-95$ | 10 |
| $96-100$ | 10 |
| Total | 27 |



The presence of weak affinities is troubling because it questions the reality of any actual genealogical relationships. But the corresponding presence of sizeable sibling genes confirms that the given witness has a common ancestry with its alleged sisters, even though the relationship may

[^13]be one of distant cousins; whatever the actual relationship may have been, within the collection of witnesses the relationship is closest possible.

## Date of the Autograph

The date of the autograph was determined by the rule that a parent exemplar is fifty years older than its oldest sibling daughter. When the dates diminish to below AD 100, the generation gap is reduced to twenty years, giving more room for activity in the first century. The date of the autograph (c. AD 75) is traced down through the Western recension to fifth-generation Latin church father Tertullian (Tert^a\% c. AD 220) through the following exemplars:

```
Autograph[0.00]<0> {AD 75}/0/0/0
    |-Ex-142#[0.95]<1>{AD 80}/11/11/2
        |-Ex-140[0.84]<2>{AD 100}/38/11/5
        |-Ex-130[0.96]<4>{AD 170}/10/3/4
            |-Tert^a%[1.00]<5>{AD 220}/0/10/1
```

Tertullian's witness is very fragmentary, having only three readings, but with $100 \%$ affinity with its parent exemplar. So, the date of the autograph is not very firm, but it may be at least as early as c. AD 85 based on the date of fourth-generation church father Clement $\left(\mathrm{Cl}^{\wedge} \mathrm{a} \% \mathrm{c}\right.$. AD 215).

## Conclusions

The software does indeed reconstruct a genealogical history of the manuscripts of the First Epistle of Peter, and of the other books of the New Testament as well. However, the results are not what was anticipated, based on earlier experiments with smaller books, smaller databases, and less sophisticated programs. I anticipated that the commonly accepted text traditions would emerge as independent witnesses to the autograph. Those text traditions did emerge, but they turned out to be not exactly Western, Alexandrian, Caesarean, and Antiochian, but rather Western, Egyptian, and Antiochian, with the Byzantine tradition being the latest form of the Antiochian text tradition, and with no clear evidence of a Caesarean tradition.

This concludes the discussion of the genealogical history of the witnesses to 1 Peter. While the reconstruction of the genealogical history of witnesses depends on the genetic affinity (consensus), sibling genes, and the date of the witnesses, the genealogical history of variant readings depends on the consensus and inheritance of variants. The history of the variant readings of the text of 1 Peter is discussed in Chapter Four.

## CHAPTER 4 <br> THE HISTORY OF THE TEXTUAL VARIANTS IN 1 PETER

Chapter Three presents the genealogical history of the manuscripts ${ }^{29}$ of the Greek text of the First Epistle of Peter. That history is necessary before the genealogical history of an individual variant may be safely discussed, because the history of a textual variant is totally dependent upon the history of the manuscripts in which it occurs. The NA-27 Greek New Testament records 232 places of textual variation in the Book of 1 Peter and 589 variant readings. This averages out to a variableness index of 2.54 variants per place of variation-a relatively low value. Table 4.1 and its associated graph display the distribution of the number of variants per place of variation.

## Table 4.1

Distribution of Number of
Variants per Place of

## Variation

| Number <br> of vari- <br> ants | Number <br> of Places <br> of Varia- <br> tion |
| :---: | :---: |
| 1 | 0 |
| 2 | 148 |
| 3 | 50 |
| 4 | 27 |
| 5 | 7 |
| 6 | 0 |
| 7 | 0 |
| 8 | 0 |
| 9 | 0 |
| 10 | 0 |
| Total $=$ | 589 |



Initially the number 232 seems large when considering textual variations in a book of the Bible, but this number must be considered with respect to the total number of places where variation could occur. If the number of words in the Greek text of 1 Peter $(c .1,698)$ is regarded as the number of places where variation could occur, and each variation is regarded as the equivalent of

[^14]one word, then the text of 1 Peter is $86.3 \%$ pure ${ }^{30}$ before variations are even considered. Thus, variation occurs in only $13.7 \%$ of the text. In that small portion of the text 589 variants are recorded, but 232 of them are original readings, so only 366 are real variants. While this still seems like a large number, the genealogical software clearly identified all of them as non-original.

## Types of Variants

Four basic types of textual variations occur in the text of 1 Peter: (1) omissions, (2) alterations, (3) transpositions, and (4) additions. Table 4.2 lists the distribution of these types of variants in the 160 places of variation in the text of the First Epistle of Peter, and Table 4.3 lists their distribution with respect to all variations.

Table 4.2
Distribution of Variants by Type

| Variation type | Number of Variants |
| :---: | :---: |
| Omit a word | 28 |
| Omit a phrase | 8 |
| Alternate word | 99 |
| Alternate words | 47 |
| Transposed words | 5 |
| Added word or phrase | 45 |
| Total | 232 |

Table 4.3
Distribution of All Variants by Type

| Variation Type | Number of Variants |
| :---: | :---: |
| Omit a word | 56 |
| Omit a phrase | 16 |
| Alternate word | 250 |
| Alternate words | 159 |
| Transposed words | 10 |
| Added word or phrase | 98 |
| Total | 589 |

[^15]
## Determining Exemplar Readings

Whenever the genealogical software creates a new exemplar as the parent of a group of sibling sister witnesses, at each place of variation, the reading of the exemplar is decided on the basis of four ordered rules:
(1) Majority consensus among all the immediate sibling children;
(2) if no majority, then postpone the decision until a sibling emerges for the exemplar currently being reconstructed, that sibling will have the inherited reading; ${ }^{31}$
(3) if, in the case of deciding the readings of the autograph, majority consensus fails, then accept the first variant (the NA-27 reading) if it is an option;
(4) if the first variant is not an option, then by default arbitrarily select the smallest variant number that is an option; ${ }^{32}$
(5) if witnesses are of different languages, then select the Greek reading, if available.

Table 4.4 lists the number of times each of the above rules was used in the process of constructing the genealogical history of the text of 1 Peter.

## Table 4.4 <br> Frequency of Exemplar Reading Rules

| (1) by greatest probability | 5,977 |
| :--- | ---: |
| (2) by deferred ambiguity | 375 |
| (4) by default to NA-27 | 44 |
| (5) by arbitrary choice | 9 |
| (6) by language deference | 71 |
| Total | 6,476 |

The evidence indicates that the vast majority of exemplar readings ( $92.29 \%$ ) were determined by "consensus among independent witnesses," and $5.79 \%$ were determined by deferred ambiguity, while $0.78 \%$ were deferred to the NA- 27 reading, and $1.14 \%$ were determined by arbitrary choice or language deference.

[^16]
## Autographic Readings

The readings of the autographic text of 1 Peter were determined on the basis of consensus among the three most ancient independent witnesses. For the Book of 1 Peter, the exemplars of the three most ancient independent recensions were used: (1) Exemplar Ex-141\#, the Egyptian text tradition; (2) Exemplar Ex-135\#, the Western text tradition; and (3) Exemplar Ex-142\#, the Antiochian text tradition. Appendix D lists each of the 232 readings of the autograph together with its place of variation, the chapter and verse where it occurs, the reading of the text at that place, and the probability that the reading is original. Those readings lacking consensus were determined by default to the decision of the NA-27 editors' evaluation of internal evidence if that reading was among the available alternatives; otherwise, the next lowest variant number was selected by arbitrary choice. Table 4.5 lists the number of times each of the above rules was used in the process of determining the autographic readings of the text of 1 Peter. The evidence indicates that $100 \%$ of the readings were determined by "consensus among ancient independent witnesses."

Table 4.5
Frequency of Exemplar Reading Rules

| Number of Autographic variants decided by greatest probability | 232 | $100 \%$ |
| :--- | :---: | :---: |
| Number of Autographic variants decided by choice of NA27 | 0 | $0.00 \%$ |
| Number of Autographic variants decided by arbitrary choice | 0 | $0.00 \%$ |
| Number of Autographic variants decided by language deference | 0 | $0.00 \%$ |
| Total | 232 |  |

Table 4.6 and its associated graph displays the distribution of the probability of the reconstructed autographic readings. Of the 232 readings, 190 had a probability of 1.0 ( $100 \%$ ), and 42 had a probability of 0.66 (67\%).

Table 4.6
Distribution of Autographic
Readings by Probability

| Probability | Number of <br> Readings |
| :---: | :---: |
| 0.1 | 0 |
| 0.2 | 0 |
| 0.33 | 0 |
| 0.4 | 0 |
| 0.5 | 0 |
| 0.66 | 42 |
| 0.7 | 0 |
| 0.8 | 0 |
| 0.9 | 0 |
| 1 | 190 |



## Agreement with NA-27

In the database used in this work, the first variant at any place of variation is the reading of the NA-27 text. The second and subsequent variants are the alternate readings listed in the NA-27 database. Table 4.7 lists how often the various alternate readings were found to be original. The evidence indicates that the autographic text reconstructed by the genealogical software agrees with the text of NA-27 209 times or $90.08 \%$ of the time, and differs from the NA-27 text 23 times or $9.92 \%$ of the time. Appendix E lists the 23 places where the Lachmann-10 text differs from that of NA-27.

Table 4.7
Frequency of Variants

| Variant 1 | 209 |
| :---: | :---: |
| Variant 2 | 20 |
| Variant 3 | 3 |
| Variant 4 | 0 |
| Variant 5 | 0 |
| Variant 6 | 0 |
| Variant 7 | 0 |
| Total | 232 |

## The Origin of the Variants

The software identifies the place of origin of every variant in the genealogical tree, accounting for every instance of a variant as being the result of genealogical descent, mixture, or initiation-that is, the software finds the one and only exemplar or extant witness in the genealogical history where each variant originated. ${ }^{33}$ Often, after the first initiation of a reading, it may have been introduced again in a later exemplar by means of mixture.

Exemplars Ex-144\$ through Ex-151\$, are children of the Autograph created by the software as sources for resolving same-generation mixture between the branches headed by the firstgeneration recensions, that is, for non-autographic readings that occur in more than one primary branch of the genealogical tree. These exemplars serve as virtual exemplars lost in the unrecoverable genealogical history between the Autograph and the assumed first-generation recensions. Of the 357 non-autographic variants, 274 are listed as originating in one of these virtual exemplars. Two possibilities exist for each of these variants: either it really originated only once in the earliest decades of unrecoverable history, or it originated independently in two or more major branches of the tree diagram of genealogical history; the latter case can be true for commonly occurring scribal errors, but not for the uncommon ones. Variants of the first kind are weakly distributed among the branches of the first-generation recensions and are of little genealogical significance individually; their distribution among the three most ancient recensions is weaker than that of their corresponding autographic reading.

## Egyptian Recension

First-generation exemplar Ex-141\# was the ancestral forefather of the Egyptian text tradition. This recension differs from the autograph by 16 secondary variants ${ }^{34}$ among which it uniquely originated the following 7 variants peculiar to this entire text tradition:

[^17]| Place of Variation | Reference | Variant |
| :---: | :---: | :---: |
| 23.2 | 1:11,1.2 |  |
| 65.2 | 2:5,4.2 | ${ }^{\circ} \mathrm{o} \mathrm{\mu}$ ¢ $\tau$ |
| 108.1 | 2:25,1.1 | ${ }^{\text {「 }} \lambda \lambda \alpha \nu \omega \mu \in \nu$ OL |
| 110.2 | 3:1,1.2 | "- |
| 188.1 | 4:15,3.1 |  |
| 192.2 | 4:17,1.2 | ${ }^{\circ}$ о $\mu \tau \tau$ |
| 217.1 | 5:9,4.1 | ${ }^{\circ} \tau \omega$ |

## Western Recension

First-generation Exemplar Ex-135\# was the Western recension, being the text from which most of the Old Latin translations were made. It differs from the autographic text by 15 secondary variants, ${ }^{35}$ among which it uniquely originated the following 9 variants peculiar to this entire text tradition:

| Place of Variation | Reference | Variant |
| :---: | :---: | :---: |
| 8.2 | 1:4,2.2 | $\epsilon \nu$ tols oup. |
| 36.2 | 1:18,1.2 | 21 |
| 48.3 | 1:24,3.3 | $\alpha \nu \theta \rho \omega \pi$ оv |
| 85.2 | 2:16,1.2 | 21 |
| 91.2 | 2:19,1.2 | $\pi \alpha \rho \alpha \tau \omega \quad \theta \in \omega$ |
| 92.2 | 2:19,2.2 | $\alpha \gamma \alpha \theta \eta \nu$ |
| 171.2 | 4:5,2.2 |  |
| 212.2 | 5:8,3.2 | тívo |
| 226.2 | 5:12,3.2 | $\epsilon \sigma \tau \eta \kappa \alpha \tau \epsilon$ |

## Antiochian Recension

Exemplar Ex-142\# was the Antiochian recension, being the text from which the Syrian and Antiochian witnesses were derived. It differs from the autographic text by 11 secondary variants, ${ }^{36}$ among which it uniquely originated the following 3 variants peculiar to this entire text tradition:

[^18]| Place of Variation | Reference | Variant |
| :---: | :---: | :--- |
| 77.2 | $2: 12,4.2$ | $-\sigma \alpha \nu \tau \epsilon \varsigma$ |
| 177.2 | $4: 11,1.2$ | $\omega \varsigma \quad \chi \circ \rho \eta \gamma \in\llcorner$ о $\theta \in \circ \varsigma$ |
| 221.1 | $5: 10,3.1$ | ${ }^{\prime} \kappa \alpha \tau \alpha \rho \tau\llcorner\sigma \in\llcorner\quad \sigma \tau \eta \rho\llcorner\xi \in\llcorner\quad \sigma \theta \in \nu \omega \sigma \in\llcorner\quad \theta \in \mu \in \lambda\llcorner\omega \sigma \in\llcorner$ |

## Tracing Variant History

For various reasons, it may be of interest to trace the history of the genealogical heritage of the alternate readings at particular places of variation. For each variant at the desired place, one may want to see where it originated in genealogical history and how it was subsequently distributed by genetic inheritance. Upon request, software program Lachmann-10 displays the genealogical history of the variants at any selected place of variation. It constructs the historical tree diagram (like the one in Appendix C) and displays on the monitor screen the generation and index number of the variant contained in each and every witness. The following section presents typical examples of possible studies of interest.

## Variants of Textual Interest

The genealogical history of some variants is more interesting than that of others because of their significance for translation. For example, words or phrases are missing in some witnesses ( $1: 22 ; 2: 13 ; 3: 9$ ); also, some places of variation have multiple options widely distributed among the witnesses (3:1); the genealogical history may help to decide which option is more likely original.

## Missing "Through the Spirit" in 1:22,1

1 Peter 1:22 reads: "Since you have purified your souls in obeying the truth through the Spirit in sincere love of the brethren, love one another fervently with a pure heart." Some witnesses have the phrase "through the Spirit" and some do not. The variants are:
(1) $\mathrm{o} \mu \mathrm{L} \tau$-omit
(2) $\delta \iota \alpha \pi \nu \in \cup \mu \alpha \tau 0 \varsigma-$ through the Spirit

Figure 4.1 displays the distribution of the variants throughout genealogical history. Variant 1 (omit "through the Spirit") has the consensus of all three of the first-generation recensions: Exemplar Ex-141\#, the recension from which the Egyptian text tradition was derived, Exemplar Ex142\#, the recension from which the Antiochian text tradition was derived, and Exemplar Ex-135\#, the recension from which the Western text tradition was derived; it was selected as the autographic reading on this basis with a probability of $100 \%$. It has the support of all the witnesses in the

Egyptian text tradition headed by first-generation Exemplar Ex-141\#. It has the support of all the witnesses in the Antiochian text tradition headed by first-generation Exemplar Ex-142\#, except for those in the branch headed by second-generation Exemplar Ex-140. It also has the support of all the witnesses in the Western text tradition headed by first-generation Exemplar Ex-135\#, except for those in the sub-branch headed by second-generation Exemplar Ex-127. It has the greatest antiquity, ${ }^{37}$ the broadest distribution, ${ }^{38}$ and good persistence.

Figure 4.1
Distribution of 1:22,1

${ }^{37}$ Antiquity is the characteristic of a reading being older than the witness in which it occurs. See the glossary of terms.
${ }^{38}$ Distribution is the characteristic of a reading occurring in more than one text tradition. An original reading occurs in more than one first-generation exemplar. See the glossary of terms.

Variant 2 ("through the Spirit") was first initiated in the Antiochian text tradition in the branch headed by second-generation Exemplar Ex-140, after which it persisted throughout the history of that branch. It was then initiated by mixture into the Western text tradition in the branch headed by second-generation Exemplar Ex-127, after which it persisted throughout the history of that branch. This reading lacks antiquity and adequate distribution, but it has good persistence once introduced.

## Missing "Therefore" in 2:13,1

1 Peter 2:13 reads: "Therefore submit yourselves to every ordinance of man for the Lord's sake, whether to the king as supreme." Some witnesses have the word "therefore" and some do not. The variants are:
(1) outг—omit
(2) ou -therefore

Figure 4.2 displays the distribution of the variants throughout genealogical history. Variant 1 (omit "therefore") has the consensus of two of the first-generation recensions: Exemplar Ex141\#, the recension from which the Egyptian text tradition was derived, and Exemplar Ex-135\#, the recension from which the Western text tradition was derived; it was selected as the autographic reading on this basis with a probability of $67 \%$. It has the support of all the witnesses in the Egyptian text tradition headed by first-generation Exemplar Ex-141\#. It also has the support of all the witnesses in the Western text tradition headed by first-generation Exemplar Ex-135\#, except for those in the branch headed by second-generation Exemplar Ex-127, and MS vg^b. It also occurs independently as singularities in MSS C* ${ }^{*} \mathrm{C}^{\wedge} 2$, and $81^{*}$ (some not shown). It has the greatest antiquity, the broadest distribution, and good persistence.

Variant 2 ("therefore") was first initiated in the Antiochian text tradition headed by firstgeneration Exemplar Ex-142\#, after which it persisted throughout the history of that branch, except for MSS C*, $\mathrm{C}^{\wedge} 2,81^{*}$ (some not shown). It was then initiated by mixture in the branch of the Western text tradition headed by second-generation Exemplar Ex-127 It also occurs independently as a singularity in MSS $\mathrm{vg}^{\wedge} \mathrm{b}$ and $\mathrm{sy}{ }^{\wedge} \mathrm{h}$ (not shown). This reading lacks antiquity and adequate distribution, but it has good persistence once introduced.


## Missing "Knowing" in 3:9,1

1 Peter 3:9 reads: "not returning evil for evil or reviling for reviling, but on the contrary blessing, knowing that you were called to this, that you may inherit a blessing." Some witnesses have the word "knowing" and some do not. The variants are:
(1) out $\tau$-omit
(2) $\in\llcorner\delta 0 \tau \in \varsigma$ —knowing

Figure 4.3 displays the genealogical distribution of these variants. Variant 1 (omit "knowing") has the consensus of two of the first-generation recensions: Exemplar Ex-141\#, the recension from which the Egyptian text tradition was derived, and Exemplar Ex-135\#, the recension from which the Western text tradition was derived; it was selected as the autographic reading on this
basis with a probability of $67 \%$. It has the support of all the witnesses in the Egyptian text tradition headed by first-generation Exemplar Ex-141\#, except for Family 13. It also has the support of all the witnesses in the Western text tradition headed by first-generation Exemplar Ex-135\#, except for those in the branch headed by second-generation Exemplar Ex-127. It also has the support by mixture of the witnesses in the sub-branch of the Antiochian text tradition headed by second-generation Exemplar Ex-129. It also occurs independently as singularities in MSS K*, 1505*, and $1505^{\wedge} \mathrm{c}$ (not shown). It has the greatest antiquity, the broadest distribution, and good persistence.

# Figure 4.3 <br> Distribution of 3:9,1 



Variant 2 ("knowing") was first initiated in the Antiochian text tradition headed by firstgeneration Exemplar Ex-142\#, after which it persisted throughout the history of that branch, except for those in the branch headed by second-generation Exemplar Ex- 129, and for MSS K*. It was then initiated by mixture in the branch of the Western text tradition headed by second-generation

Exemplar Ex-127, after which it persisted throughout the history of that branch. This reading lacks antiquity and adequate distribution, but it has good persistence once introduced.

## Missing Words in 4:14,3

1 Peter 4:14 reads: "If you are reproached for the name of Christ, blessed are you, for the Spirit of glory and of God rests upon you. On their part He is blasphemed, but on your part He is glorified." Some witnesses have the words "On their part He is blasphemed, but on your part He is glorified" and some do not. The variants are:
(1) $o \mu L \tau$-omit
 phemed, but on your part He is glorified

Figure 4.4 displays the genealogical distribution of these variants. Variant 1 (omit "On their part He is blasphemed, but on your part He is glorified") has the consensus of all three of the first-generation recensions: Exemplar Ex-141\#, the recension from which the Egyptian text tradition was derived, Exemplar Ex-142\#, the recension from which the Antiochian text tradition was derived, and Exemplar Ex-135\#, the recension from which the Western text tradition was derived; it was selected as the autographic reading on this basis with a probability of $100 \%$. It has the support of all the witnesses in the Egyptian text tradition headed by first-generation Exemplar Ex141\#. It has the support of all the witnesses in the Antiochian text tradition headed by first-generation Exemplar Ex-142\#, except for those in the branch headed by second-generation Exemplar Ex-140, but including those in fourth-generation Exemplar Ex-130. It also has the support of all the witnesses in the Western text tradition headed by first-generation Exemplar Ex-135\#, except for MSS 1505* and $1505^{\wedge}$ c (not shown) and except for those in the branch headed by secondgeneration Exemplar ex-126. It occurs independently as a singularity in MSS $\operatorname{vg}^{\wedge} \mathrm{cl}$, $\mathrm{vg}^{\wedge} \mathrm{st}$, and $\mathrm{Cl}^{\wedge} \mathrm{a} \%$ (not shown). It has the greatest antiquity, the broadest distribution, and good persistence.

Variant 2 ("On their part He is blasphemed, but on your part He is glorified") was first initiated in the Antiochian text tradition in the branch headed by second-generation Exemplar Ex140, after which it persisted throughout the history of that branch, except for those in the branch headed by fourth-generation Exemplar Ex-130. It was then initiated by mixture into the Western text tradition in the branch headed by second-generation Exemplar Ex-126, after which it persisted throughout the history of that branch, except for MSS $\operatorname{vg}^{\wedge} \mathrm{cl}, \mathrm{vg}^{\wedge} \mathrm{st}$, and $\mathrm{Cl} \wedge \mathrm{a} \%$. It occurs independently as a singularity in MSS K*, $1505^{*}, 1505^{\wedge} \mathrm{c}, \mathrm{bo}^{\wedge} \mathrm{b} \%$, and $\mathrm{sa} \wedge \mathrm{a} \%$ (some not shown). This reading lacks antiquity and adequate distribution, but it has good persistence once introduced.


## Non-NA-27 in 1:21,1

An example of where Lachmann-10 found that the autographic reading differed from that of NA-27 occurs in 1:21. 1 Peter 1:21 reads: "who through Him believe in God, who raised Him from the dead and gave Him glory, so that your faith and hope are in God." In the phrase "believe in God" some witnesses have the word "faithful" and some have "believing." The variants are:

(2) $\pi \iota \sigma \tau \epsilon v o \nu \tau \alpha \varsigma$-are believing (participle)


Figure 4.5 displays the genealogical distribution of these variants.

# Figure 4.5 <br> Distribution of $\mathbf{1 : 2 1 , 1}$ 



Variant 2 ("are believing") has the consensus of all three of the first-generation recensions: Exemplar Ex-141\#, the recension from which the Egyptian text tradition was derived, Exemplar Ex-142\#, the recension from which the Antiochian text tradition was derived, and Exemplar Ex135\#, the recension from which the Western text tradition was derived; it was selected as the autographic reading on this basis with a probability of $100 \%$. It has the support of all the witnesses in the Egyptian text tradition headed by first-generation Exemplar Ex-141\#, except for those in the branch headed by second-generation Exemplar Ex-139. It has the support of all the witnesses in the Antiochian text tradition headed by first-generation Exemplar Ex-142\#. It also has the support of all the witnesses in the Western text tradition headed by first-generation Exemplar Ex-135\#,
except for those in the branch headed by third-generation Exemplar Ex-124. It has the greatest antiquity, the broadest distribution, and good persistence.

Variant 1 ("are faithful") was first initiated in the Egyptian text tradition in the branch headed by second-generation Exemplar Ex-139, after which it persisted throughout the history of that branch, except for MS 33*. It was then initiated by mixture into the Western text tradition in the branch headed by third-generation Exemplar Ex-124, after which it persisted throughout the history of that branch. This reading lacks antiquity and adequate distribution, but it has good persistence once introduced.

Variant 3 ("shall be believing") occurs independently as a singularity only in MS 33*. It has no possibility of being original.

## Non-NA-27 in 3:16,2

1 Peter 3:16 reads: "having a good conscience, that when they defame you as evildoers, those who revile your good conduct in Christ may be ashamed." Some witnesses have the words "defame you as evildoers" and some have "slander you." The variants are:
(1) $\kappa \alpha \tau \alpha \lambda \alpha \lambda \in \iota \sigma \theta \epsilon$-slander you
(2) $\kappa \alpha \tau \alpha \lambda \alpha \lambda о v \sigma \iota \nu ~ \nu \mu \omega \nu ~ \omega \varsigma \kappa \alpha к о \pi о \iota \omega \nu-d e f a m e ~ y o u ~ a s ~ e v i l d o e r s ~$

Figure 4.6 displays the genealogical distribution of these variants. Variant 2 ("defame you as evildoers") has the consensus of all three of the first-generation recensions: Exemplar Ex-141\#, the recension from which the Egyptian text tradition was derived, Exemplar Ex-142\#, the recension from which the Antiochian text tradition was derived, and Exemplar Ex-135\#, the recension from which the Western text tradition was derived; it was selected as the autographic reading on this basis with a probability of $100 \%$. It has the support of all the witnesses in the Egyptian text tradition headed by first-generation Exemplar Ex-141\#, except for those in the branch headed by third-generation Exemplar Ex-133, and MSS sa^a\%, P^72, and NA-27. It has the support of all the witnesses in the Antiochian text tradition headed by first-generation Exemplar Ex-142\#, except for those in tge sub-branch headed by third-generation Exemplar Ex-121. It also has the support of all the witnesses in the Western text tradition headed by first-generation Exemplar Ex-135\#, except for those in the branches headed by second-generation Exemplar Ex-127 and third-generation Exemplar Ex-124, and MS 044*. It occurs independently as a singularity in MSS C $* \%, \mathrm{C}^{\wedge} 2 \%$, $323^{*}$, and 945 (not shown). It has the greatest antiquity, the broadest distribution, and good persistence.


Variant 1 ("slander you") was first initiated in the Western text tradition in the branch headed by second-generation Exemplar Ex-127, after which it persisted throughout the history of that branch. It was then initiated by mixture into the Western text tradition in the branch headed by third-generation Exemplar Ex-124, after which it persisted throughout the history of that branch. It was then initiated by mixture into the Antiochian text tradition in the branch headed by third-generation Exemplar Ex-121, after which it persisted throughout the history of that branch. It was then initiated by mixture into the Egyptian text tradition in the branch headed by thirdgeneration Exemplar Ex-133, after which it persisted throughout the history of that branch. It occurs independently as a singularity in MSS P^72, 044*, sa^a\% and strangely NA-27 (some not shown) This reading lacks antiquity and adequate distribution, but it has good persistence once introduced.

## Non-NA-27 in 5:11,2

1 Peter 5:11 reads: "To Him be the glory and the dominion forever and ever. Amen." Some witnesses have the words "and ever" and some do not. The variants are:
(1) $o \mu \iota \tau$-omit
(2) $\tau \omega \nu \alpha \iota \omega \nu \omega \nu$-and ever (lit. of the ages)

Figure 4.7 displays the genealogical distribution of these variants.
Figure 4.7
Distribution of 5:11,2


Variant 2 ("and ever") has the consensus of all three of the first-generation recensions: Exemplar Ex-141\#, the recension from which the Egyptian text tradition was derived, Exemplar Ex-142\#, the recension from which the Antiochian text tradition was derived, and Exemplar Ex-

135\#, the recension from which the Western text tradition was derived; it was selected as the autographic reading on this basis with a probability of $100 \%$. It has the support of all the witnesses in the Egyptian text tradition headed by first-generation Exemplar Ex-141\#, except for those in the branch headed by third-generation Exemplar Ex-133, and MSS bo^a\%, P^72, and NA-27. It has the support of all the witnesses in the Antiochian text tradition headed by first-generation Exemplar Ex-142\#. It also has the support of all the witnesses in the Western text tradition headed by firstgeneration Exemplar Ex-135\#. It has the greatest antiquity, the broadest distribution, and excellent persistence.

Variant 1 (omit "and ever") was first initiated in the Egyptian text tradition in the branch headed by third-generation Exemplar Ex-133, after which it persisted throughout the history of that branch. It occurs independently as a singularity in MSS P^72, bo^a\%, and strangely NA-27 (some not shown) This reading lacks antiquity and distribution, but it has good persistence once introduced.

## Multiple Variants in 3:1,2

1 Peter 3:1 reads: "Wives, likewise, be submissive to your own husbands, that even if some do not obey the word, they, without a word, may be won by the conduct of their wives." There are five different variations of the phrase "even if some" in this verse. The variants are:
(1) $K \alpha L \in L \tau \iota \nu \in \varsigma-$ even if some
(2) $\epsilon\llcorner\kappa \alpha \iota \tau \iota \nu \in \varsigma$-if even some
(3) $\epsilon \iota \tau \iota \nu \in \varsigma$ —if some
(4) oltıvec-whoever
(5) $\kappa \alpha \iota$ oıt $\downarrow \nu \in \varsigma$-and whoever

Figure 4.8 displays the genealogical distribution of these variants. Variant 1 ("even if some") has the consensus of two of the first-generation recensions: Exemplar Ex-141\#, the recension from which the Egyptian text tradition was derived, and Exemplar Ex-142\#, the recension from which the Antiochian text tradition was derived; it was selected as the autographic reading on this basis with a probability of $67 \%$. It has the support of all the witnesses in the Egyptian text tradition headed by first-generation Exemplar Ex-141\#, except for Family 13, and MSS P^81\%, $\mathrm{ac}^{*} \%, \mathrm{bo}^{\wedge} \mathrm{a} \%, \mathrm{bo}^{\wedge} \mathrm{b} \%, \mathrm{sa}^{\wedge} \mathrm{a} \%$, and $\mathrm{sa}^{\wedge} \mathrm{b} \%$, and except for those in the branch headed by thirdgeneration Exemplar Ex-133. It also has the support of all the witnesses in the Antiochian text tradition headed by first-generation Exemplar Ex-142\#, except for those in the branches headed by third-generation Exemplar Ex-121 and fourth-generation Ex-125, and except for MSS 81* and
$\mathrm{K}^{*}$. It also occurs by mixture in the branch of the Western text tradition headed by third-generation Exemplar Ex-124. It also occurs independently as singularities in MSS 044* and 323* (not shown). It has the greatest antiquity, the broadest distribution, and good persistence.

## Figure 4.8 <br> Distribution of 3:1,2



Variant 2 ("if even some") was first initiated in the Antiochian text tradition in the branch headed by third-generation Exemplar Ex-121, after which it persisted throughout the history of that branch. It occurs independently as a singularity in MSS K* and 69\% (not shown) This reading lacks antiquity and distribution, but it has good persistence once introduced.

Variant 3 ("if some") was first initiated in the Western text tradition in the first-generation Exemplar Ex-135\#, after which it persisted throughout the history of that branch, except for the witnesses in the branch headed by third-generation Exemplar Ex-124, and MSS sy^p\%, 1505*,
$1505^{\wedge} \mathrm{c}$, and $044^{*}$. It was then initiated by mixture in the Egyptian text tradition in the third-generation Exemplar Ex-133, after which it persisted throughout the history of that branch. It occurs independently as a singularity in MSS $\mathrm{P}^{\wedge} 81 \%$, $\mathrm{ac}^{*} \%, \mathrm{bo}^{\wedge} \mathrm{a} \%$, $\mathrm{bo}^{\wedge} \mathrm{b} \%$, $\mathrm{sa}^{\wedge} \mathrm{a} \%$, and $\mathrm{sa}^{\wedge} \mathrm{b} \%$ (not shown) This reading lacks antiquity and adequate distribution, but it has good persistence once introduced.

Variant 4 ("whoever") occurs independently as a singularity only in MSS 1505*, $1505^{\wedge} \mathrm{c}$, and $\mathrm{sy}{ }^{\wedge} \mathrm{p} \%$ (some not shown). It has no possibility of being original.

Variant 5 ("and whoever") was first initiated in the Antiochian text tradition in the branch headed by fourth-generation Exemplar Ex-125, after which it persisted throughout the history of that branch. It occurs independently as a singularity in MS 81*. This reading lacks antiquity and distribution, but it has good persistence once introduced.

## Multiple Variants in 2:19,1

1 Peter 2:19 reads: "For this is commendable, if because of conscience toward God one endures grief, suffering wrongfully." There are four different variations of the phrase "before God" that some witnesses add after the word "commendable" in this verse. The variants are:
(1) $\mathrm{o} \mathrm{\mu} \tau \tau-\mathrm{omit}$
(2) $\pi \alpha \rho \alpha \tau \omega \theta \in \omega$-before God
(3) $\theta \in \omega$-to God
(4) $\theta$ eou-of God

Figure 4.9 displays the genealogical distribution of these variants. Variant 1 (omit "before God") has the consensus of two of the first-generation recensions: Exemplar Ex-141\#, the recension from which the Egyptian text tradition was derived, and Exemplar Ex-142\#, the recension from which the Antiochian text tradition was derived; it was selected as the autographic reading on this basis with a probability of $67 \%$. It has the support of all the witnesses in the Egyptian text tradition headed by first-generation Exemplar Ex-141\#, except for Family 13, and MSS Cass^a\% and Cass^${ }^{\wedge} \%$ (some not shown). It also has the support of all the witnesses in the Antiochian text tradition headed by first-generation Exemplar Ex-142\#, except for those in the branches headed by third-generation Exemplar Ex-121 and fourth-generation Ex-128, and except for MS 2464; however, it was restored by mixture in the branch headed by fifth-generation Exemplar Ex-123. It also occurs in the branch of the Western text tradition headed by third-generation Exemplar Ex124. It also occurs independently as singularities in MSS it-h*, it-r, it-s, it-t, it-w, and it-z* (not shown). It has the greatest antiquity, the broadest distribution, and good persistence.


Variant 2 ("before God") was first initiated in the Western text tradition in first-generation Exemplar Ex-135\#, after which it persisted throughout the history of that branch, except for the witnesses in the branch headed by third-generation Exemplar Ex-124, and except for MSS $\mathrm{vg}^{\wedge} \mathrm{b}$, it-h*, it-r, it-s, it-t, it-w, and it-z* (not shown). It was then initiated by mixture in the Antiochian text tradition in third-generation Exemplar Ex-121, after which it persisted throughout the history of that branch. It occurs independently as a singularity in MSS $33^{*}$ and $\mathrm{vg}^{\wedge} \mathrm{b}$. This reading lacks antiquity and adequate distribution.

Variant 3 ("to God") occurs independently as a singularity only in MS 2464*. It has no possibility of being original.

Variant 4 ("of God") was first initiated in the Antiochian text tradition in the branch headed by fourth-generation Exemplar Ex-128, but it persisted for only one generation. It also occurs independently as a singularity in MSS Cass^^a\% and Cass^${ }^{\wedge} \%$. This reading lacks antiquity and distribution.

## Variants of Theological Interest

Although most textual variations have little or no practical theological significance, a number are found in theological discussions. For example, Bart D. Ehrman argued that the earliest form of the Greek New Testament was less "orthodox" than the canonical form that emerged at the end of the "proto-orthodox" debates that culminated in the dominance of the "orthodox" parties in the fourth century. He wrote:

> It was within this milieu of controversy that scribes sometimes changed their scriptural texts to make them say what they were already known to mean. In the technical parlance of textual criticism-which I retain for its significant ironies-these scribes "corrupted" their texts for theological reasons. ${ }^{39}$

He is right about the ante-Nicene debates over the various heretical issues of the time and the emerging dominance of the orthodox parties, but his thesis that the doctrine of the apostles and first-century church, and the earliest form of the New Testament text were less "orthodox" is purely hypothetical. Of course, he provided what he regards as evidence. However, my own evaluation of the evidence he presented to establish his thesis indicates that the readings supported by the "consensus of ancient independent witnesses" are genuinely orthodox as normally interpreted, and that his "orthodox corruptions"-those intended to make orthodox doctrine more explicit-are found only in peripheral sources having little chance of being textually authoritative. The same may be said of any alleged "unorthodox" variants. So, I must conclude that what Ehrman really means is that the traditional canons of textual criticism are of no value for understanding the early text, that the "canonical text" of the New Testament is an "orthodox corruption," and that the original text, if there ever was one original, is forever lost. The one thing he was sure of according to his "socio-historical" research is that the earliest text was not "orthodox" and the current form of the text (i.e., the NA-28 text) is a corruption of the original text, being altered by orthodox scribes for theological reasons.

Ehrman has a problem, however, because, by his own admission, he does not know what the original text was. So how can he know it was corrupted? Also, evidently, he does not know, or

[^19]at least he rejects, the fact that each existing witness has within its variants the history of its genealogical descent from the original text, and the fact that genealogical principles reconstruct the original text back to the first century, the time of the apostles. So, the reconstructed text is a first century event, not a fourth century one, and it is theologically orthodox, not a corruption. The following is the evidence he presented regarding doctrine in 1 Peter. He asserted that orthodox scribes changed references to Christ's suffering to references to His death instead:

One other textual phenomenon that is somewhat more difficult to assess is the occasional substitution of $\dot{\alpha} \pi \sigma \theta v \eta$ 亿́ $\sigma \kappa \omega$ for $\pi \alpha \dot{\alpha} \sigma \omega$ in passages that refer to Christ's salvific work; in the modified texts Christ is said not merely to have "suffered" but actually to have "died." Of course, the two words may simply have been confused because of their lexical similarity (cf. $\alpha, \sigma 0 \theta \alpha v \varepsilon i ̃ v / \pi \alpha \theta \varepsilon i ̃ v)$. But it is peculiar that when 1 Peter uses to refer to Christ's suffering, three out of four texts were changed ( $2: 21,3: 18,4: 1$; the exception is $2: 23$ ), whereas when it uses the same word to describe the suffering of Christians-eight occurrences in all—it is never changed ( $2: 19,20 ; 3: 14,17 ; 4: 1 \mathrm{~b}$ [?], 15, 19; 5:10). This appears to be more than an accident. Moreover, the changes can be traced back to the period of concern-directly in $3: 18$, with the attestation of $\mathfrak{P}^{72}$ and a wide range of early Greek and versional evidence; indirectly in 2:21 with codex Sinaiticus, the Palestinian Syriac, and a smattering of Greek, Latin, and Armenian witnesses. ${ }^{40}$

He claimed that the same change was made in three places: 2:21; $3: 18$; and 4:1.

## Changed Words in 2:21,3

1 Peter 2:21 reads: "For to this you were called, because Christ also suffered for us, leaving us an example, that you should follow His steps." Some witnesses have the word "suffered" and some have "died." The variants are:
(1) $\in \pi \alpha \theta \in \nu-$ suffered
(2) $\alpha \pi \in \theta \alpha \nu \in \nu$-died

Figure 4.10 displays the distribution of the variants throughout genealogical history. Variant 1 ("suffered") has the consensus of all three of the first-generation recensions: Exemplar Ex141\#, the recension from which the Egyptian text tradition was derived, Exemplar Ex-142\#, the recension from which the Antiochian text tradition was derived, and Exemplar Ex-135\#, the recension from which the Western text tradition was derived; it was selected as the autographic reading on this basis with a probability of $100 \%$. It has the support of all the witnesses in the Egyptian text tradition headed by first-generation Exemplar Ex-141\#, except for those in the branch headed by second-generation Exemplar Ex-131, and MS P^81\%. It has the support of all

[^20]the witnesses in the Antiochian text tradition headed by first-generation Exemplar Ex-142\#, except for MS $2464^{*}$, and except for the witnesses in the branch headed by fourth-generation Exemplar Ex-128, which exception persisted only one generation, variant 1 being restored by mixture in fifth-generation Exemplar Ex-123. It also has the support of all the witnesses in the Western text tradition headed by first-generation Exemplar Ex-135\#, except for MSS 044*, sy^p\%, and Ambr^b\% (some not shown), and except for the witnesses in the branch headed by second-generation Exemplar Ex-126, which exception persisted only one generation, variant 1 being restored by mixture in third-generation Exemplar Ex-124. It also occurs independently as a singularity in MSS it-h*, it-r, it-s, it-t, it-w, it-z*, and sy^h (not shown). It has the greatest antiquity, the broadest distribution, and excellent persistence.


Variant 2 ("died") was first initiated in the Egyptian text tradition into the branch headed by second-generation Exemplar Ex-131, after which it persisted throughout the history of that branch. It was then initiated by mixture into the Western text tradition in the branch headed by second-generation Exemplar Ex-126, persisting only one generation. It was then initiated by mixture into the Antiochian text tradition into the branch headed by fourth-generation Exemplar Ex128 , persisting only one generation. It occurs independently as a singularity in MSS $\mathrm{P}^{\wedge} 81 \%$, $2464^{*}$, and $\mathrm{sy}{ }^{\wedge} \mathrm{p} \%$ (not show). This reading lacks antiquity and distribution.

Ehrman was right; the changes were made; but they were relatively sparce and genealogically peripheral. They did not affect the reading of the canonical text.

## Changed Words in 3:18,2

1 Peter 3:18 reads: "For Christ also suffered once for sins, the just for the unjust, that He might bring us to God, being put to death in the flesh but made alive by the Spirit." Some witnesses have the word "suffered" and some have "died." There are 5 variants here:
(1) $\pi \epsilon \rho \iota \alpha \mu \alpha \rho \tau \iota \omega \nu \epsilon \pi \alpha \theta \epsilon \nu$-for sins He suffered
(2) ${ }^{n} \pi \epsilon \rho \iota \alpha \mu \alpha \rho \tau \iota \omega \nu \alpha \pi \epsilon \theta \alpha \nu \epsilon \nu$ —for sins He died
(3) $\pi \epsilon \rho \iota \alpha \mu \alpha \rho \tau \iota \omega \nu \quad v \pi \epsilon \rho \quad \eta \mu \omega \nu \alpha \pi \epsilon \theta \alpha \nu \epsilon \nu$-for sins for us He died
(4) $\pi \epsilon \rho \iota \nu \mu \omega \nu \quad v \pi \epsilon \rho \alpha \mu \alpha \rho \tau \iota \omega \nu \alpha \pi \epsilon \theta \alpha \nu \epsilon \nu$-for us for sins He died
(5) $\pi \epsilon \rho \iota \alpha \mu \alpha \rho \tau \iota \omega \nu \quad \nu \mu \omega \nu \alpha \pi \epsilon \theta \alpha \nu \in \nu$-for our sins He died

Figure 4.11 displays the distribution of the variants throughout genealogical history. Variant 3 ("for sins for us He died") has the consensus of all three of the first-generation recensions: Exemplar Ex-141\#, the recension from which the Egyptian text tradition was derived, Exemplar Ex-142\#, the recension from which the Antiochian text tradition was derived, and Exemplar Ex135\#, the recension from which the Western text tradition was derived; it was selected as the autographic reading on this basis with a probability of $100 \%$. It has the support of all the witnesses in the Egyptian text tradition headed by first-generation Exemplar Ex-141\#, except for those in the branch headed by third-generation Exemplar Ex-133, and MS NA-27. It has the support of all the witnesses in the Antiochian text tradition headed by first-generation Exemplar Ex-142\#, except for MS $323^{*}$, and except for the witnesses in the branch headed by second-generation Exemplar Ex-140. It also has the support of all the witnesses in the Western text tradition headed by firstgeneration Exemplar Ex-135\#, except for MSS 044* and sy^p\%, and except for the witnesses in the branch headed by third-generation Exemplar Ex-124. It also occurs independently as a
singularity in MS L020* (not shown). It has the greatest antiquity, the broadest distribution, but poor persistence.

Figure 4.11
Distribution of 3:18,2


Variant 1 ("for sins He suffered") was first initiated in the Antiochian text tradition into the branch headed by second-generation Exemplar Ex-140, after which it persisted throughout the history of that branch, except for MSS L020* and $\mathrm{Aug}^{\wedge} \mathrm{a} \%$. It was then initiated by mixture into the Egyptian text tradition in the branch headed by third-generation Exemplar Ex-133, after which it persisted throughout the history of that branch. It occurs independently as a singularity in MS 323* (not shown). This reading lacks antiquity and sufficient distribution.

Variant 2 ("for sins He died") was first initiated in the Western text tradition into the branch headed by third-generation Exemplar Ex-124, after which it persisted throughout the history of that branch, except for $\mathrm{MS} \mathrm{vg}^{\wedge} \mathrm{cl}$ (not shown). This reading lacks antiquity and distribution.

Variant 4 ("for us for sins He died") occurs independently as a singularity only in MS 044*. Likewise, variant 5 ("for our sins He died") occurs independently as a singularity only in MSS C*, $\mathrm{vg}^{\wedge} \mathrm{cl}, \mathrm{it}-\mathrm{z}^{*}, \mathrm{sy}^{\wedge} \mathrm{p} \%, \mathrm{Aug}^{\wedge} \mathrm{a} \%$, and $\mathrm{Cl}^{\wedge} \mathrm{lat} \%$ (not shown). These two readings have no possibility of being original.

Ehrman was right; changes were made; but in this case, the genealogical evidence indicates that variant 3 has $100 \%$ genealogical probability of being original. That is, the word $\alpha \pi \epsilon \theta \alpha \nu \in \nu$ " He died" was original, and that later scribes changed it to $\alpha \pi \epsilon \theta \alpha \nu \epsilon \nu$ "He suffered," contrary to Ehrman's hypothesis.

## Changed Words in 4:1,1

1 Peter 4:1 reads: "Therefore, since Christ suffered for us in the flesh, arm yourselves also with the same mind, for he who has suffered in the flesh has ceased from sin." Some witnesses have the word "suffered" in the phrase "suffered for us" and some have "died." There are 5 variants here:
(1) $\pi \alpha \theta о \nu \tau о \varsigma ~ \sigma \alpha \rho \kappa\llcorner$-suffered in the flesh
(2) $\pi \alpha \forall о \nu \tau о \varsigma ~ v \pi \epsilon \rho ~ \eta \mu \omega \nu \sigma \alpha \rho \kappa\llcorner$-suffered for us in the flesh
(3) $\pi \alpha Ө о \nu \tau о \varsigma ~ v \pi \epsilon \rho ~ \nu \mu \omega \nu \quad \sigma \alpha \kappa \iota-s u f f e r e d ~ f o r ~ y o u ~ i n ~ t h e ~ f l e s h ~$
(4) $\pi \alpha \forall о \nu \tau о \varsigma ~ \epsilon \nu ~ \sigma \alpha \rho \kappa\llcorner$-suffered in the flesh
(5) $\alpha \pi о \theta \alpha \nu о \nu \tau о \varsigma ~ v \pi \epsilon \rho ~ \nu \mu \omega \nu \sigma \alpha \rho \kappa \iota$-died for you in the flesh

Figure 4.12 displays the distribution of the variants throughout genealogical history. Variant 2 ("suffered for us in the flesh") has the consensus of all three of the first-generation recensions: Exemplar Ex-141\#, the recension from which the Egyptian text tradition was derived, Exemplar Ex-142\#, the recension from which the Antiochian text tradition was derived, and Exemplar Ex135\#, the recension from which the Western text tradition was derived; it was selected as the autographic reading on this basis with a probability of $100 \%$. It has the support of all the witnesses in the Egyptian text tradition headed by first-generation Exemplar Ex-141\#, except for those in the branch headed by third-generation Exemplar Ex-133, and MSS 01*, sa^a\%, P^72, 69*, and NA27 (some not shown). It has the support of all the witnesses in the Antiochian text tradition headed by first-generation Exemplar Ex-142\#, except for MSS 049*, and except for the witnesses in the branch headed by third-generation Exemplar Ex-121. It also has the support of all the witnesses in
the Western text tradition headed by first-generation Exemplar Ex-135\#, except for MSS 1505*, $1505^{\wedge} \mathrm{c}$, and $\mathrm{sy} \mathrm{s}^{\wedge} \%$ (some not shown), and except for the witnesses in the branch headed by thirdgeneration Exemplar Ex-124. It also occurs independently as a singularity in MSS P^72, 044*, and $0285 \%$ (some not shown). It has the greatest antiquity, the broadest distribution, and good persistence.


Variant 1 ("suffered in the flesh") was first initiated in the Egyptian text tradition into the branch headed by third-generation Exemplar Ex-133, after which it persisted throughout the history of that branch. It occurs independently as a singularity in MS 323* (not shown). This reading lacks antiquity and sufficient distribution.

Variant 4 ("suffered in the flesh") was first initiated in the Western text tradition into the branch headed by second-generation Exemplar Ex-126, after which it persisted throughout the history of that branch, except for MSS $044^{*}, 0285 \%$, and $\operatorname{vg}^{\wedge}$ (some not shown). It occurs independently as a singularity in MSS $049^{\wedge} \mathrm{c}$ and $\mathrm{sa}{ }^{\wedge} \mathrm{a} \%$ (not shown). This reading lacks antiquity and distribution.

Variant 3 ("suffered for you in the flesh") occurs independently as a singularity only in MSS $69 \%, 1505^{*}, 1505^{\wedge} \mathrm{c}, \mathrm{vg}^{\wedge} \mathrm{b}$, and $\mathrm{sy} \mathrm{p} \%$ (some not shown). Likewise, variant 5 ("died for you in the flesh") occurs independently as a singularity only in MS 01*. These two readings have no possibility of being original.

Ehrman was right, a change was made-only one singularity according to the NA-27 textual apparatus! While the change was made in a prominent and early witness (Codex Sinaiticus 01*, c AD 350), it is a witness known for diversity. It differs from the autograph by 63 readings, from NA-27 by 65, and from Codex Vaticanus ( $\mathrm{B}^{*}$ ) by 84 variants; besides this place of variation, MS 01* has a singularity in at least twelve other places (1:20,1; 2:1,3; 2:13,2; 3:5,1; 3:7,2; 3:7,3; $3: 13,3 ; 3: 16,4 ; 3: 18,1 ; 4: 2,2 ; 4: 5,1$; and $4: 16,2$ ).

In regard to variant 2 here, Ehrman stated:
A number of textual corruptions scattered throughout the tradition lay a comparable stress on the salvific necessity of Christ's suffering and death by interpolating such stock phrases as "for us," "for the sins of the world," or "for the forgiveness of sins" into passages that originally lacked them. In many instances these interpolations are brought over from parallel accounts. . . . So, too, in 1 Peter 4: 1, where Christ is said to have "suffered in the flesh," a vast array of witnesses among the Greek manuscripts, versions, and patristic sources, in a variety of ways, have inserted the same phrase to the same end, in order to show that Christ's sufferings were "for us." ${ }^{41}$

In this case, it is genealogically evident that the phrase "for us" is original, and that it was omitted in a few isolated sub-branches or independent witnesses which unfortunately did affect the canonical text (NA-27), but not the original text.

## Changed Words in 5:1,3

1 Peter 5:1 reads: "The elders who are among you I exhort, I who am a fellow elder and a witness of the sufferings of Christ, and also a partaker of the glory that will be revealed." Regarding this verse, Ehrman stated:

Another instance of an exchange of predicates occurs in $\mathrm{p}^{72}$, a witness whose anti-adoptionistic tendencies we already have observed. In 1 Peter 5:1, almost the entire textual tradition is

[^21]unified in speaking of Peter as a witness to "the sufferings of Christ" ( ( $\omega ̃ v$ тои̃ X $\rho \iota \sigma \tau о \tilde{\sim} \pi \alpha \theta \eta \mu \alpha \dot{\tau} \omega v$ ).
 with the striking result that now Peter is witness to the "sufferings of God" ( $\tau \tilde{\omega} v$ toũ $\theta \varepsilon o u$ $\pi \alpha Ө \eta \mu \alpha \dot{\alpha} \omega \nu)$. The change relates closely to references to "God's sufferings" (or "passion") in protoorthodox authors of the second and third centuries. ${ }^{42}$

There are two variants here:
(1) Xpıo七ou-Christ
(2) $\theta \in O v —$ God

Figure 4.13 displays the distribution of the variants throughout genealogical history.

## Figure 4.13 <br> Distribution of 5:1,3



[^22]Variant 1 ("Christ") has the consensus of all three of the first-generation recensions: Exemplar Ex-141\#, the recension from which the Egyptian text tradition was derived, Exemplar Ex142\#, the recension from which the Antiochian text tradition was derived, and Exemplar Ex-135\#, the recension from which the Western text tradition was derived; it was selected as the autographic reading on this basis with a probability of $100 \%$. It has the support of all the witnesses in the database except for MS P^72 alone.

Variant 2 ("God") occurs independently as a singularity in MS P^72 alone. It is hard for me to see why Ehrman would think this sole singularity could have any effect on the orthodoxy of the canonical text. While $\mathrm{P}^{\wedge} 72$ is early (c. AD 300), it quite diverse, differing from the autograph by 102 readings, from NA-27 by 92 , from $01^{*}$ by 129 , and from $B^{*}$ by 113 ; in addition, it has sole singularity readings in 35 places (see Appendix G).

## Tracing Any Variant

The above studies trace the history of variants of particular interest using the computer program Lachmann-10. But one may trace the history of any other desired variant using the information in Appendices D, F, and H. Take for example the variants at variation unit 221 at reference 5:10,3:

1 Peter 5:10 reads: "But may the God of all grace, who called us to His eternal glory by Christ Jesus, after you have suffered a while, perfect, establish, strengthen, and settle you." There are five variations of the phrase "perfect, establish, strengthen, and settle you" in this verse. To trace the genealogical distribution of these variants, walk through the following steps:

Step 1: Using Appendices D and F, find the variant readings.

## Appendix D reads:

| 221.3 | $5: 10,3.3$ | 123 | 0.67 |
| :--- | :--- | :--- | :--- |

That is, the autographic reading is the third variant (221.3), $123=$ " $\kappa \alpha \tau \alpha \rho \tau \iota \sigma \in\llcorner\quad \sigma \tau \eta \rho \iota \xi \in\llcorner$ $\sigma \theta \in \nu \omega \sigma \in\llcorner$ "(perfect, establish, strengthen); and that its probability is 0.67 ( $67 \%$ ); see variant 1 below.

Appendix F reads:

| 221.1 | 5:10,3.1 | Ex-142\# |  |
| :---: | :---: | :---: | :---: |
| 221.2 | 5:10,3.2 | Ex-144\$ | 124 |
| 221.4 | 5:10,3.4 | Ex-145\$ | к- $\tau \iota \sigma \alpha\llcorner\nu \mu \alpha \varsigma-\xi \in\llcorner$ - $\sigma \in\llcorner$ - $\sigma \in\llcorner$ |
| 221.5 | 5:10,3.5 | Ex-127 | - $\sigma \alpha \iota-\xi \alpha \iota-\sigma \alpha \iota-\sigma \alpha \iota$ |

Variant 1 is $\kappa \alpha \tau \alpha \rho \tau \iota \sigma \in\llcorner\sigma \tau \eta \rho \iota \xi \in\llcorner\sigma \theta \in \nu \omega \sigma \in\llcorner\quad \theta \in \mu \in \lambda\llcorner\omega \sigma \in L$ "perfect, establish, strengthen, settle" initiated in Exemplar Ex-142\#.
Variant 2 is $124=\kappa \alpha \tau \alpha \rho \tau \iota \sigma \in\llcorner\sigma \tau \eta \rho\llcorner\xi \in\llcorner\quad \theta \in \mu \in \lambda \iota \omega \sigma \in\llcorner$ "perfect, establish, settle" initiated in virtual Exemplar Ex-144\$.
Variant 4 is $\kappa \alpha \tau \alpha \rho \tau \iota \sigma \alpha \iota ~ \nu \mu \alpha \varsigma \quad \sigma \tau \eta \rho \iota \xi \in\llcorner\sigma \theta \in \nu \omega \sigma \in\llcorner\quad \theta \in \mu \in \lambda \iota \omega \sigma \in\llcorner$ "perfect you, establish, strengthen, settle" initiated in virtual Exemplar Ex-145\$.
Variant 5 is $\kappa \alpha \tau \alpha \rho \tau \iota \sigma \alpha \iota \quad \sigma \tau \eta \rho \iota \xi \alpha \iota \sigma \theta \in \nu \omega \sigma \alpha \iota \quad \theta \in \mu \in \lambda \iota \omega \sigma \alpha \iota$ "perfect, establish, strengthen, settle" initiated in Exemplar Ex-127.

Step 2: Using Appendix H, find where these variants were initiated in the history of the text.

Appendix H reads:

| 221.1 | 5:10,3.1 | $\begin{aligned} & {[33 *]<4>;[1852]<7>;[2464 *]<5>;[\text { NA- } 27]<3>;[\text { Ex-125 }]<4>;[\text { Ex-131 }]<2>; \text { Ex- }} \\ & 142 \#<1>; \end{aligned}$ |
| :---: | :---: | :---: |
| 221.2 | 5:10,3.2 | [ $\left.\mathrm{P}^{\wedge} 72\right]<3>$; [81*]<3>; [vg^b]<4>; [it-r]<3>; [it-t]<3>; Ex-144\$<1>; |
| 221.3 | 5:10,3.3 | Autograph; |
| 221.4 | 5:10,3.4 | [323*]<4>; [Ex-140]<2>; Ex-145\$<1>; |
| 221.5 | 5:10,3.5 | Ex-127<2>; |

That is, the first variant was initiated in Exemplar Ex-142\#, and then by mixture in Exemplars Ex-131 and Ex-125, and in MSS 33*, 1852, 2464*, and NA-27.

The second variant was initiated in virtual Exemplar Ex-144\$, and by mixture it was subsequently introduced in $\mathrm{P}^{\wedge} 72,81^{*}, \mathrm{vg}^{\wedge} \mathrm{b}$, it-r, and it-t.

The third variant was initiated in the Autograph alone.
The fourth variant was initiated in virtual Exemplar Ex-145\$, and by mixture in Exemplar Ex-140 and MS 323*.

The fifth variant was initiated in Exemplar Ex-127 alone.
Step 3: copy figure 3.2 from chapter 3 on a separate sheet of paper, as below, and write the variant numbers at the places on diagram where each variant was initiated; use green for the autographic reading (3), red for the first variant (1), blue for the second variant (2), purple for the fourth variant (4), and brown for the fifth variant (5) as illustrated in figure 4.14.

Step 4: Using its designated color, let each initiated variant extend by inheritance to all its descendants down to its extant terminal witnesses, or until changed by a new initiation, as shown
in figure 4.14. Witnesses marked with \% are fragmentary; their readings are often lacking; they may be ignored in this step.

Figure 4.14

## Illustrating Marking Places of Initiation At 1 Peter 5:10,3



Figure 4.15 displays the distribution of the variants throughout genealogical history. Variant 3 ("perfect, establish, strengthen") has the consensus of two of the first-generation recensions: Exemplar Ex-141\#, the recension from which the Egyptian text tradition was derived, and Exemplar Ex-135\#, the recension from which the Western text tradition was derived; it was selected as the autographic reading on this basis with a probability of $67 \%$. It has the support of all the witnesses in the Egyptian text tradition headed by first-generation Exemplar Ex-141\#, except for MSS NA-27 and 33*, and except for the witnesses in the sub-branch headed by second-generation

Exemplar Ex-131. It also has the support of all the witnesses in the Western text tradition headed by first-generation Exemplar Ex-135\#, except for MSS it-r (not shown) and $\mathrm{vg}^{\wedge} \mathrm{b}$, and except for those in the sub-branch headed by second-generation Exemplar Ex-127. It has the greatest antiquity, the broadest distribution, and good persistence.

Figure 4.15
Distribution of 1 Peter 5:10,3


Variant 1 ("perfect, establish, strengthen, settle") was first initiated in the branch of the Antiochian text tradition headed by first-generation Exemplar Ex-142\#, after which it persisted throughout the history of that branch, except for MS 81*, and except for the witnesses in secondgeneration Exemplar Ex-140. It was then initiated by mixture into the Egyptian text tradition in the branch headed by second-generation Exemplar Ex-131, after which it persisted throughout the history of that branch. It was then initiated by mixture again into the Antiochian text tradition in
the branch headed by fourth-generation Exemplar Ex-125, after which it persisted throughout the history of that branch. It also occurs independently as a singularity in the following MSS: 33*, 1852, 2464*, and NA-27 (some not shown). This reading lacks antiquity and adequate distribution and good persistence.

Variant 4 ("perfect you, establish, strengthen, settle") was first initiated in the branch of the Antiochian text tradition headed by second-generation Exemplar Ex-140, after which it persisted throughout the history of that branch, except for the witnesses in fourth-generation Exemplar Ex-125. It also occurs independently as a singularity in MS: 323* (not shown). This reading lacks antiquity and adequate distribution, but has good persistence once initiated.

Variant 5 ("perfect, establish, strengthen, settle") was first initiated in the branch of the Western text tradition headed by second-generation Exemplar Ex-127, after which it persisted throughout the history of that branch. This reading lacks antiquity and distribution, but has good persistence once initiated.

Variant 2 ("perfect, establish, settle") occurs independently as a singularity only in MSS $\mathrm{P}^{\wedge} 72,81^{*}, \mathrm{vg}^{\wedge} \mathrm{b}$, it-r, and it-t (some not shown). The reading has no chance genealogically of being original.

## Conclusion

This chapter identifies the autographic readings of the Greek text of the Book of 1 Peter and how they were determined. It provides the genealogical history of each variant reading, locating where each reading originated, and describing how each reading was distributed by inheritance throughout that history. It discusses the principal recensions, locating their origin in history, and identifying their characteristic readings.

## CHAPTER 5 SUMMARY AND CONCLUSIONS

The genealogical software, and the theory it emulates, were successful in reconstructing a genealogical history of the Greek text of the First Epistle of Peter. The software made use of a modified version of the textual apparatus in the $27^{\text {th }}$ edition of the Nestle-Aland Greek New Testament. Using index numbers to represent the variant readings in the witnesses to the text, the computer constructed a kind of genetic code for each witness based on its unique combination of variant readings. Then employing the basic principles of heredity, a relatively simple tree diagram was constructed representing the genealogical history of the text.

Heredity is the underlying principle of genealogical relationships. Because manuscripts of a text were copied from exemplars of earlier generations of the text, of necessity they have genealogical relationships. For manuscripts, quantitative affinity (consensus of variant readings) and a sibling gene, coupled with historical directionality constitute the variables for computing genealogical heredity. For variant readings, on the other hand, the domain of heredity is limited to their place of variation. There, heredity is determined by consensus among sibling sister witnesses and by what I call evidence of variant inheritance. ${ }^{1}$ The software uses the heredity of manuscripts and the heredity of variant readings to guide the reconstruction of a historical genealogical tree diagram.

Mixture occurred when a scribe copied from more than one exemplar-a primary parent exemplar and one or more secondary exemplars. The readings of a manuscript were inherited from its primary parent exemplar or borrowed by mixture from its secondary parent exemplars; otherwise, a variant was newly introduced by scribal error (either accidentally or intentionally) thus initiating a new line of heredity. A good number of witnesses had no mixture, but considerable mixture occurred in others. As it turned out, the presence of mixture does not affect the reconstruction of the genealogical tree, but it is very useful in identifying the places in genealogical history

[^23]where variants were initiated, in tracing the genealogical history of variants, and in identifying recensions.

## The Effect of Recensions

The genealogical theory and associated software were designed to reconstruct the genealogical history of texts where the copying process was simple, without any radical discontinuities. It was anticipated that the initiation and transmission of textual variants would be gradual and that the tree would develop three or four main branches corresponding to the commonly accepted text types. However, the theory and software also made provision for radical dislocations if they perchance had occurred. As it turned out radical dislocations did occur in the form of some major and minor recensions. ${ }^{2}$ Furthermore, the most radical recensions took place in the earliest generation that genealogical relationships could be reasonably determined. This information indicates that in the earliest days of New Testament history its text was in flux and its genealogical history for that time period cannot be confidently reconstructed. These details could have resulted in disappointment except that the earliest recensions, though diverse from one another, nevertheless had sufficient consensus to identify the autographic readings.

## Binary Branches

The genealogical tree diagram reconstructed by the software is often binary, that is, there are only two branches where the tree divides. Table 3.3 in Chapter 3 indicates that 19 out of 28 branches were binary. Critics of the genealogical theory claim that the methodology fails whenever there are only two branches, because no consensus can exist where there are only two alternatives. That would be true except for the principle of deferred ambiguity. In such cases, where ambiguity exists in one witness, its sister has the inherited reading.

A reading has evidence of variant inheritance when it is also found in witnesses of earlier generations. A reading will not be found in any witness dating in a generation prior to the one in which the reading first originated. Autographic readings have continual evidence of variant inheritance; all others acquire that evidence in the generation of their origin subsequent to the autograph. The evidence of variant inheritance usually decides between two equally probable readings; but where even that fails, a final appeal can be made indirectly to internal evidence. So, a binary construction does not turn out to be a crucial weakness. Still, some may be concerned that the earliest history of the text is determined by such diverse witnesses. However, Table 4.4 of Chapter 4

[^24]indicates that $98.08 \%$ of the textual decisions made in the reconstruction of the historical tree diagram were made on the basis of consensus or deferred ambiguity; so, diversity was not a significant deterrent. Furthermore, Table 4.5 of Chapter 4 indicates that 100 percent of the autographic readings were decided on the basis of consensus.

## So What!

Someone may ask: "After all those painstaking computations, what is now known that was not already known by means of traditional textual critical methodology?" The answer should be self-evident, but for the sake of review, here is a list of the more prominent bits of knowledge the computations provide:
(1) A rigorous construction of the genealogical history of the witnesses to the text, something that did not previously exist.
(2) A precise account of the genealogical history of each variant reading, including its place of origin and subsequent distribution, something that did not previously exist.
(3) The identity of the autographic readings based on an unbiased implementation of the laws of heredity, together with the mathematical probability of each one, instead of educated estimates.
(4) An accurate description of the content and structure of the traditional text types, and their internal and external genealogical relationships, instead of educated estimates.
(5) Hopefully a better understanding of the laws of heredity as they apply to manuscripts.

The laws of heredity have been applied to the factual evidence derived from the existing witnesses to the text of 1 Peter. They have been applied with mathematical precision apart for human intervention and bias. Hopefully the results provide a better understanding of the history of the text. In either case, no claim is made that the derived history and the text identified as autographic are free from uncertainty. The results are dependent on the validity of the underlying theory and its software implementation. Undoubtedly the future will bring forth improved theory and implementation.

James D. Price
September, 2021

# APPENDIX A <br> List of Extant Witnesses to the Greek Text of the First Epistle of Peter 

This appendix contains a list of the extant witnesses to the Greek text of the First Epistle of Peter. For each witness it lists its name, date, language, content (references where readings exist), number of readings, and percentage of completeness. In the content column, a verse is counted as long as it has at least one extant reading.

| Witness | Date | Language | Content | No. of Readings | Percent Complete |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $\mathrm{P}^{\wedge} 72$ | 300 | 0 | 1:1-8, 11-5:14 | 229 | 98.71\% |
| P^74\% | 650 | 0 | 1:1, 7-8, 11-19, 21, 23-25; 2:12, 18, 24; 3:4 | 35 | 15.09\% |
| P^81\% | 350 | 0 | 2:20-3:1; 3:4, 6-7, 9-10, 12 | 28 | 12.07\% |
| 01* | 350 | 0 | 1:1-5:14 | 232 | 100.00\% |
| $01^{\wedge} \mathrm{c}$ | 1150 | 0 | 1:1-19, 21-5:14 | 208 | 89.66\% |
| $01^{\wedge} 1$ | 550 | 0 | 1:1-19, 21-3:1; 3:3-4:3; 4:5-5:14 | 203 | 87.50\% |
| $01^{\wedge} 2$ | 650 | 0 | 1:1-3:1; 3:3-4:3; 4:5-5:14 | 224 | 96.55\% |
| A* | 450 | 0 | 1:1-5:14 | 232 | 100.00\% |
| $\mathrm{A}^{\wedge} \mathrm{c}$ | 550 | 0 | 1:1-5:14 | 232 | 100.00\% |
| B* | 350 | 0 | 1:1-5:14 | 232 | 100.00\% |
| $\mathrm{B}^{\wedge} 2$ | 600 | 0 | 1:1-5:14 | 232 | 100.00\% |
| C*\% | 450 | 0 | 1:3-4:4 | 167 | 71.98\% |
| $\mathrm{C}^{\wedge} 2 \%$ | 550 | 0 | 1:3-4:4 | 167 | 71.98\% |
| K* | 850 | 0 | 1:1-5:14 | 232 | 100.00\% |
| L020* | 850 | 0 | 1:1-5:14 | 232 | 100.00\% |
| P025* | 850 | 0 | 1:1-5:14 | 231 | 99.57\% |
| 044* | 1000 | 0 | 1:1-5:14 | 232 | 100.00\% |
| 48\% | 450 | 0 | 1:1-12 | 24 | 10.34\% |
| 049* | 850 | 0 | 1:1-5:14 | 232 | 100.00\% |
| $049{ }^{\wedge} \mathrm{c}$ | 900 | 0 | 1:1-5:14 | 232 | 100.00\% |
| 206\% | 350 | 0 | 5:5-13 | 20 | 8.62\% |
| 285\% | 550 | 0 | 3:18-4:1 | 18 | 7.76\% |
| 33* | 850 | 0 | 1:1-2:6; 2:8-4:3; 4:5-5:14 | 218 | 93.97\% |
| 36 | 1150 | 0 | 1:1-5:14 | 232 | 100.00\% |
| 81* | 1044 | 0 | 1:1-5:14 | 232 | 100.00\% |
| 241 | 1150 | 0 | 1:1-5:14 | 232 | 100.00\% |
| 242 | 1150 | 0 | 1:1-5:14 | 232 | 100.00\% |
| 322 | 1450 | 0 | 1:1-5:14 | 232 | 100.00\% |
| 323* | 1150 | 0 | 1:1-5:14 | 232 | 100.00\% |
| 429 | 1350 | 0 | 1:1-5:14 | 232 | 100.00\% |
| 440 | 1150 | 0 | 1:1-5:14 | 232 | 100.00\% |
| 460 | 1250 | 0 | 1:1-5:14 | 232 | 100.00\% |
| 614* | 1250 | 0 | 1:1-5:14 | 232 | 100.00\% |
| 623* | 1037 | 0 | 1:1-5:14 | 232 | 100.00\% |
| $623{ }^{\wedge}$ c | 1100 | 0 | 1:1-5:14 | 232 | 100.00\% |
| 630 | 1300 | 0 | 1:1-5:14 | 232 | 100.00\% |
| 945 | 1050 | 0 | 1:1-5:14 | 232 | 100.00\% |


| 1175* | 950 | 0 | 1:1-5:14 | 232 | 100.00\% |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1241* | 1150 | 0 | 1:1-5:14 | 232 | 100.00\% |
| 1243 | 1050 | 0 | 1:1-5:14 | 232 | 100.00\% |
| 1505* | 1150 | 0 | 1:1-5:14 | 232 | 100.00\% |
| $1505^{\wedge} \mathrm{c}$ | 1200 | 0 | 1:1-5:14 | 232 | 100.00\% |
| 1739* | 900 | 0 | 1:1-5:14 | 232 | 100.00\% |
| $1739 \wedge$ c | 950 | 0 | 1:1-5:14 | 231 | 99.57\% |
| 1838 | 1050 | 0 | 1:1-5:14 | 232 | 100.00\% |
| 1852 | 1250 | 0 | 1:1-5:14 | 232 | 100.00\% |
| 1881* | 1350 | 0 | 1:1-5:14 | 232 | 100.00\% |
| 1881^${ }^{\text {c }}$ | 1400 | 0 | 1:1-5:14 | 232 | 100.00\% |
| 2138 | 1072 | 0 | 1:1-5:14 | 232 | 100.00\% |
| 2298 | 1150 | 0 | 1:1-5:14 | 232 | 100.00\% |
| 2464* | 850 | 0 | 1:1-5:14 | 232 | 100.00\% |
| $\mathrm{pm}^{\wedge} \mathrm{a}$ | 850 | 0 | 1:1-5:14 | 232 | 100.00\% |
| $\mathrm{pm}{ }^{\wedge} \mathrm{b}$ | 850 | 0 | 1:1-5:14 | 232 | 100.00\% |
| TR | 1892 | 0 | 1:1-5:14 | 232 | 100.00\% |
| HF | 1982 | 0 | 1:1-5:14 | 232 | 100.00\% |
| RP | 1995 | 0 | 1:1-5:14 | 232 | 100.00\% |
| $v g^{\wedge} \mathrm{a}$ | 400 | 1 | 1:1-3:1; 3:3-4, 6-7, 9-10, 12-4:5; 4:8-5:14 | 197 | 84.91\% |
| $\mathrm{vg}^{\wedge} \mathrm{b}$ | 400 | 1 | 1:1-3:1; 3:3-4, 6-7, 9-10, 12-4:5; 4:8-5:14 | 199 | 85.78\% |
| $\mathrm{vg}^{\wedge} \mathrm{cl}$ | 1592 | 1 | 1:1-3:1; 3:3-4, 6-4:5; 4:8-5:14 | 213 | 91.81\% |
| $\mathrm{vg}^{\wedge} \mathrm{s}$ | 1590 | 1 | 1:1-3:1; 3:3-4, 6-7, 9-10, 12-4:5; 4:8-5:14 | 197 | 84.91\% |
| $\mathrm{vg}^{\wedge} \mathrm{st}$ | 1994 | 1 | 1:1-3:1; 3:3-4, 6-4:5; 4:8-5:14 | 211 | 90.95\% |
| $\mathrm{vg}^{\wedge}$ ww | 1889 | 1 | 1:1-3:1; 3:3-4, 6-4:5; 4:8-5:14 | 212 | 91.38\% |
| it-h* | 450 | 1 | 1:1-21, 23-2:25; 3:3-4, 6-4:5; 4:8-5:14 | 191 | 82.33\% |
| it-r | 700 | 1 | 1:1-21, 23-3:1; 3:3-4, 6-4:5; 4:8-5:14 | 193 | 83.19\% |
| it-s | 600 | 1 | 1:1-21, 23-2:25; 3:3-4, 6-4:5; 4:8-5:14 | 191 | 82.33\% |
| it-t | 1000 | 1 | 1:1-2:25; 3:3-4, 6-4:5; 4:8-5:14 | 196 | 84.48\% |
| it-w | 1400 | 1 | 1:1-21, 23-2:25; 3:3-4, 6-4:5; 4:8-5:14 | 187 | 80.60\% |
| it-z* | 750 | 1 | 1:1-21, 23-3:1; 3:3-4, 6-4:5; 4:8-5:14 | 198 | 85.34\% |
| sy^h | 616 | 1 | 1:1-2:15; 2:17-3:1; 3:3-4, 6-4:5; 4:8-5:14 | 195 | 84.05\% |
| sy^p\% | 425 | 1 | $1: 1-8,11-21,23-2: 5 ; 2: 7-9,12-15,17-19,21-3: 1 ; 3: 3-$ 4, 6-7, 10-4:3; 4:8, 11-5:14 | 150 | 64.66\% |
| ac*\% | 250 | 1 | $\begin{aligned} & 1: 1-8,11-2: 5 ; 2: 7-9,12-15,17-3: 1 ; 3: 3-4,6-4: 3 ; 4: 5, \\ & 8,11-12,16-5: 10 ; 5: 12-14 \end{aligned}$ | 158 | 68.10\% |
| bo^a\% | 250 | 1 | $\begin{aligned} & 1: 1-8,11-2: 9 ; 2: 12-15,17-3: 1 ; 3: 3-4,6-4: 3 ; 4: 5,8,11- \\ & 5: 14 \end{aligned}$ | 180 | 77.59\% |
| bo^b\% | 250 | 1 | $\begin{aligned} & 1: 1-2: 5 ; 2: 7-9,12-15,17-3: 1 ; 3: 3-4,6-4: 3 ; 4: 5,8,11- \\ & 14,16-5: 14 \end{aligned}$ | 163 | 70.26\% |
| $\mathrm{sa}{ }^{\wedge} \mathrm{a} \%$ | 250 | 1 | 1:1-2:15; 2:17-3:1; 3:3-4, 6-4:3; 4:5, 8, 11-5:14 | 178 | 76.72\% |


| sa^b\% | 250 | 1 | $\begin{aligned} & 1: 1-8,11-2: 9 ; 2: 12-15,17-3: 1 ; 3: 3-4,6-4: 3 ; 4: 5,8,11- \\ & 12,16-5: 10 ; 5: 12-14 \end{aligned}$ | 163 | 70.26\% |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1^249 | 850 | 0 | 1:1-5:14 | 232 | 100.00\% |
| 1^846 | 850 | 0 | 1:1-5:14 | 232 | 100.00\% |
| 13\% | 1250 | 0 | $\begin{aligned} & 1: 1-8,11-19,21,23-2: 5 ; 2: 8-9,12-15,17-18,21-25 ; \\ & 3: 3-4,6-7,10,12-4: 3 ; 4: 8,11-12,16-5: 10 ; 5: 12-14 \end{aligned}$ | 126 | 54.31\% |
| 69\% | 1450 | 0 | $\begin{aligned} & 1: 1-8,11-21,23-2: 6 ; 2: 8-9,12-18,20-3: 1 ; 3: 3-4,6-7, \\ & 10-4: 3 ; 4: 8,11-12,15-5: 14 \end{aligned}$ | 150 | 64.66\% |
| 346\% | 1150 | 0 | $\begin{aligned} & 1: 1-8,11-19,21,23-2: 5 ; 2: 8-9,12-15,17-18,21-25 ; \\ & 3: 3-4,6-7,10,12-4: 3 ; 4: 8,11-12,16-5: 10 ; 5: 12-14 \\ & \hline \end{aligned}$ | 126 | 54.31\% |
| 543\% | 1150 | 0 | $\begin{aligned} & 1: 1-8,11-19,21,23-2: 5 ; 2: 8-9,12-15,17-18,21-25 ; \\ & 3: 3-4,6-7,10,12-4: 3 ; 4: 8,11-12,16-5: 10 ; 5: 12-14 \end{aligned}$ | 126 | 54.31\% |
| 788\% | 1050 | 0 | 1:1-8, 11-19, 21, 23-2:5; 2:8-9, 12-15, 17-18, 21-25; $3: 3-4,6-7,10,12-4: 3 ; 4: 8,11-12,16-5: 10 ; 5: 12-14$ | 126 | 54.31\% |
| 826\% | 1150 | 0 | $\begin{aligned} & 1: 1-8,11-19,21,23-2: 5 ; 2: 8-9,12-15,17-18,21-25 ; \\ & 3: 3-4,6-7,10,12-4: 3 ; 4: 8,11-12,16-5: 10 ; 5: 12-14 \end{aligned}$ | 126 | 54.31\% |
| 828\% | 1150 | 0 | $\begin{aligned} & 1: 1-8,11-19,21,23-2: 5 ; 2: 8-9,12-15,17-18,21-25 ; \\ & 3: 3-4,6-7,10,12-4: 3 ; 4: 8,11-12,16-5: 10 ; 5: 12-14 \end{aligned}$ | 126 | 54.31\% |
| 983\% | 1150 | 0 | $\begin{aligned} & 1: 1-8,11-19,21,23-2: 5 ; 2: 8-9,12-15,17-18,21-25 ; \\ & 3: 3-4,6-7,10,12-4: 3 ; 4: 8,11-12,16-5: 10 ; 5: 12-14 \end{aligned}$ | 126 | 54.31\% |
| 1\% | 1150 | 0 | $\begin{aligned} & 1: 1-19,21,23-2: 5 ; 2: 8-9,12-15,17-18,21-25 ; 3: 3-4, \\ & 6-7,10,12-4: 3 ; 4: 8,11-12,16-5: 10 ; 5: 12-14 \end{aligned}$ | 129 | 55.60\% |
| NA-27 | 1979 | 0 | 1:1-5:14 | 232 | 100.00\% |
| Ambr^a\% | 397 | 1 | 2:1, 5, 20, 24; 3:7 | 7 | 3.02\% |
| Ambr^b\% | 397 | 1 | 2:1, 5, 20-21, 24; 3:7 | 8 | 3.45\% |
| Ambst\% | 366 | 1 | 2:21; 3:19 | 2 | 0.86\% |
| Ath\% | 373 | 0 | 4:14 | 1 | 0.43\% |
| Aug^a\% | 430 | 1 | 1:1-3, 6, 8-9, 24; 2:1, 5, 21, 24; 3:7, 18-19, 22; 5:7 | 15 | 6.47\% |
| Aug^b\% | 430 | 1 | 1:24; 2:23; 4:1, 3 | 5 | 2.16\% |
| Beda\% | 735 | 1 | 1:7; 3:16 | 2 | 0.86\% |
| Cass^${ }^{\text {a }}$ \% | 580 | 1 | 1:3; 2:5, 19; 3:22 | 4 | 1.72\% |
| Cass^b\% | 580 | 1 | 1:3; 2:5, 19; 3:22 | 4 | 1.72\% |
| Cl^a\% | 215 | 0 | $\begin{aligned} & 1: 6-9,16 ; 2: 1-3,5,12,15-16 ; 3: 1-3,8,13-16 ; 4: 3,8 \text {, } \\ & 14 \end{aligned}$ | 37 | 15.95\% |
| C^^^at\% | 215 | 1 | 1:3, 9, 20, 23; 2:23; 3:18; $4: 5$ | 11 | 4.74\% |
| Сур^а ${ }^{\text {¢ }}$ | 258 | 1 | 2:12, 23; 3:18; 4:14 | 6 | 2.59\% |
| Cyr^a\% | 444 | 0 | 1:11; 2:2-3, 5, 21; 3:18; 4:1, 14 | 8 | 3.45\% |
| Did^a\% | 398 | 0 | 1:12, 22; 4:1; 5:2 | 4 | 1.72\% |
| Eus^a\% | 339 | 0 | 2:02 | 1 | 0.43\% |
| Hier^a\% | 420 | 1 | 1:3, 9, 12, 23; 3:7, 14; 4:1-3; 5:1 | 10 | 4.31\% |
| Hier^b\% | 420 | 1 | 5:08 | 1 | 0.43\% |
| Hil^a\% | 367 | 1 | 2:05 | 1 | 0.43\% |
| Irlat^a\% | 395 | 1 | 1:08 | 1 | 0.43\% |
| Nic\% | 414 | 1 | 4:01 | 1 | 0.43\% |
| Or^a\% | 254 | 0 | 1:6-8 | 4 | 1.72\% |


| Or^$^{\wedge} \%$ | 254 | 0 | $2: 02$ | 1 | $0.43 \%$ |
| :---: | :--- | :--- | :--- | :--- | :--- |
| Or^lat^$\wedge \mathrm{a} \%$ | 254 | 1 | $1: 9 ; 2: 1,14$ | 3 | $1.29 \%$ |
| Oros\% | 418 | 1 | $1: 04$ | 1 | $0.43 \%$ |
| Prim $\%$ | 567 | 1 | $2: 06$ | 1 | $0.43 \%$ |
| Prisc\% | 385 | 1 | $1: 22-23$ | 2 | $0.86 \%$ |
| Spec\% | 450 | 0 | $1: 22 ; 2: 17-19 ; 3: 1,7,16 ; 4: 8 ; 5: 6$ | 10 | $4.31 \%$ |
| Tert^a $\%$ | 220 | 1 | $2: 21 ; 4: 14$ | 3 | $1.29 \%$ |

## APPENDIX B

## List of the References Associated with Each Place of Variation

This appendix contains a list of the references associated with each place of variation. The number to the left of the hyphen is the index number of the place of variation, and the numbers to the right constitute the reference. The reference indicates the chapter, verse, and ordered rank of the place of variation in that verse. For example, 6-1:3,4 indicates that the $6^{\text {th }}$ place of variation occurs in chapter 1 , verse 3 , and is the $4^{\text {th }}$ place of variation in that verse.

Reference at Each Place of Variation

| 1-1:1,1 | 2-1:1,2 | 3-1:3,1 | 4-1:3,2 | 5-1:3,3 | 6-1:3,4 | 7-1:4,1 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 8-1:4,2 | 9-1:4,3 | 10-1:5,1 | 11-1:6,1 | 12-1:6,2 | 13-1:6,3 | 14-1:6,4 |
| 15-1:7,1 | 16-1:7,2 | 17-1:7,3 | 18-1:7,4 | 19-1:7,5 | 20-1:8,1 | 21-1:8,2 |
| 22-1:9,1 | 23-1:11,1 | 24-1:11,2 | 25-1:11,3 | 26-1:12,1 | 27-1:12,2 | 28-1:14,1 |
| 29-1:16,1 | 30-1:16,2 | 31-1:16,3 | 32-1:16,4 | 33-1:16,5 | 34-1:17,1 | 35-1:17,2 |
| 36-1:18,1 | 37-1:19,1 | 38-1:20,1 | 39-1:21,1 | 40-1:21,2 | 41-1:22,1 | 42-1:22,2 |
| 43-1:23,1 | 44-1:23,2 | 45-1:23,3 | 46-1:24,1 | 47-1:24,2 | 48-1:24,3 | 49-1:24,4 |
| 50-1:24,5 | 51-1:25,1 | 52-1:25,2 | 53-2:1,1 | 54-2:1,2 | 55-2:1,3 | 56-2:2,1 |
| 57-2:2,2 | 58-2:3,1 | 59-2:3,2 | 60-2:3,3 | 61-2:4,1 | 62-2:5,1 | 63-2:5,2 |
| 64-2:5,3 | 65-2:5,4 | 66-2:6,1 | 67-2:6,2 | 68-2:7,1 | 69-2:7,2 | 70-2:8,1 |
| 71-2:8,2 | 72-2:9,1 | 73-2:11,1 | 74-2:12,1 | 75-2:12,2 | 76-2:12,3 | 77-2:12,4 |
| 78-2:12,5 | 79-2:13,1 | 80-2:13,2 | 81-2:14,1 | 82-2:14,2 | 83-2:15,1 | 84-2:15,2 |
| 85-2:16,1 | 86-2:17,1 | 87-2:17,2 | 88-2:18,1 | 89-2:18,2 | 90-2:18,3 | 91-2:19,1 |
| 92-2:19,2 | 93-2:20,1 | 94-2:20,2 | 95-2:20,3 | 96-2:21,1 | 97-2:21,2 | 98-2:21,3 |
| 99-2:21,4 | 100-2:21,5 | 101-2:21,6 | 102-2:23,1 | 103-2:23,2 | 104-2:24,1 | 105-2:24,2 |
| 106-2:24,3 | 107-2:24,4 | 108-2:25,1 | 109-2:25,2 | 110-3:1,1 | 111-3:1,2 | 112-3:2,1 |
| 113-3:3,1 | 114-3:3,2 | 115-3:4,1 | 116-3:5,1 | 117-3:6,1 | 118-3:6,2 | 119-3:7,1 |
| 120-3:7,2 | 121-3:7,3 | 122-3:7,4 | 123-3:7,5 | 124-3:8,1 | 125-3:9,1 | 126-3:10,1 |
| 127-3:10,2 | 128-3:10,3 | 129-3:11,1 | 130-3:12,1 | 131-3:13,1 | 132-3:13,2 | 133-3:13,3 |
| 134-3:14,1 | 135-3:14,2 | 136-3:15,1 | 137-3:15,2 | 138-3:15,3 | 139-3:16,1 | 140-3:16,2 |
| 141-3:16,3 | 142-3:16,4 | 143-3:18,1 | 144-3:18,2 | 145-3:18,3 | 146-3:18,4 | 147-3:18,5 |
| 148-3:18,6 | 149-3:18,7 | 150-3:19,1 | 151-3:19,2 | 152-3:20,1 | 153-3:20,2 | 154-3:20,3 |
| 155-3:21,1 | 156-3:21,2 | 157-3:22,1 | 158-3:22,2 | 159-4:1,1 | 160-4:1,2 | 161-4:1,3 |
| 162-4:2,1 | 163-4:2,2 | 164-4:2,3 | 165-4:3,1 | 166-4:3,2 | 167-4:3,3 | 168-4:3,4 |
| 169-4:4,1 | 170-4:5,1 | 171-4:5,2 | 172-4:7,1 | 173-4:8,1 | 174-4:8,2 | 175-4:8,3 |
| 176-4:9,1 | 177-4:11,1 | 178-4:11,2 | 179-4:11,3 | 180-4:11,4 | 181-4:11,5 | 182-4:12,1 |
| 183-4:14,1 | 184-4:14,2 | 185-4:14,3 | 186-4:15,1 | 187-4:15,2 | 188-4:15,3 | 189-4:16,1 |
| 190-4:16,2 | 191-4:16,3 | 192-4:17,1 | 193-4:17,2 | 194-4:18,1 | 195-4:18,2 | 196-4:19,1 |
| 197-4:19,2 | 198-5:1,1 | 199-5:1,2 | 200-5:1,3 | 201-5:2,1 | 202-5:2,2 | 203-5:3,1 |
| 204-5:5,1 | 205-5:5,2 | 206-5:5,3 | 207-5:6,1 | 208-5:7,1 | 209-5:7,2 | 210-5:8,1 |
| 211-5:8,2 | 212-5:8,3 | 213-5:8,4 | 214-5:9,1 | 215-5:9,2 | 216-5:9,3 | 217-5:9,4 |
| 218-5:9,5 | 219-5:10,1 | 220-5:10,2 | 221-5:10,3 | 222-5:11,1 | 223-5:11,2 | 224-5:12,1 |
| 225-5:12,2 | 226-5:12,3 | 227-5:13,1 | 228-5:13,2 | 229-5:14,1 | 230-5:14,2 | 231-5:14,3 |
| 232-5:14,4 |  |  |  |  |  |  |

# Appendix C <br> The Genealogical Tree Diagram of <br> The Textual History of the First Epistle <br> of Peter 

This appendix contains the tree diagram of the genealogical history of the Greek text of the Epistle to the 1 Peter. The tree is displayed vertically rather than horizontally. That is, the autograph in the upper left corner with succeeding generations indented from the left progressively downward. Sibling daughter descendants are linked by vertical lines. For example, the first-generation descendants of the autograph are Ex-135\#, ${ }^{45}$ Ex-141\#, and Ex-142\#. Only the primary exemplars are displayed, so no mixture connections are shown. The diagram spills over onto succeeding pages, but the lowercase letters at the page breaks show where the lines from one page connect to those of the next.

The format of the information on each line is as follows: (1) the name of the witness; (2) the genealogical affinity of the witness with its primary parent exemplar, enclosed in square brackets []; (3) generation from the autograph, enclosed in angular brackets <>; (4) date, enclosed in curly brackets $\}$; (5) the number of variants the witness differs from its primary parent, enclosed in slant marks //; (6) The number of variants in the sibling gene; and (7) the number of parents the witness has.


[^25]
## Genealogical Tree of Galatians

Autograph[0.00]<0> \{AD 75\}/0/0/0
|-Ex-135\#[0.94]<1>\{AD 95\}/15/15/3
--sy^p\%[0.83]<2>\{AD 425\}/25/15/4
|-Ex-127[0.84]<2>\{AD 165\}/36/15/5
|-630[0.95]<3>\{AD 1300\}/11/36/5
$\mid-614 *[0.94]<3>\{$ AD 1250\}/15/36/5
| $\mid-1505 *[0.83]<3>\{$ AD 1150\}/39/36/9
$\mid-1505^{\wedge}$ c $[0.84]<3>\{$ AD 1200 $\} / 38 / 36 / 10$
--Cl^lat\%[0.73]<3>\{AD 215\}/3/36/3
-Eus^a\%[1.00]<3> \{AD 339\}/0/36/1
| $-\mathrm{Or}^{\wedge} \mathrm{b} \%[1.00]<3>\{$ AD 254\}/0/36/1
| |-Or^lat^a\%[0.33]<3>\{AD 254\}/2/36/3
--Spec\%[0.50]<3>\{AD 450\}/5/36/6
|-Ex-126[0.84]<2>\{AD 115\}/36/15/6
|-it-w[0.88]<3>\{AD 1400\}/23/36/4
$\mid-044 *[0.92]<3>\{$ AD 1000 $\} / 19 / 36 / 5$
-it-h*[0.87]<3>\{AD 450\}/25/36/5
|-it-r[0.85]<3>\{AD 700\}/29/36/5
-it-s[0.86]<3>\{AD 600\}/26/36/6
|-it-t[0.80]<3>\{AD 1000\}/40/36/6
|-it-z*[0.84]<3>\{AD 750\}/32/36/6
|-sy^h[0.75]<3>\{AD 616\}/49/36/6
$\mid-0285 \%[0.83]<3>\{$ AD 550 \}/3/36/3
|-Ambr^b\%[0.38]<3>\{AD 397\}/5/36/3
|-Ex-124[0.81]<3>\{AD 165\}/41/36/7
$\mid-\operatorname{vg} \wedge \mathrm{s}[0.99]<4>\{$ AD 1590 $/ / 1 / 41 / 2$
$\mid-v g^{\wedge} \mathrm{a}[0.99]<4>\{$ AD 400 $/ 1 / 41 / 3$
$\mid-\mathrm{vg} \wedge \mathrm{b}[0.79]<4>\{$ AD 400 \}/41/41/10
|-vg^ww[0.98]<4>\{AD 1889\}/4/41/5
$\mid-\mathrm{vg}^{\wedge} \mathrm{cl}[0.94]<4>\{$ AD 1592\}/13/41/5
$\mid-\mathrm{vg} \wedge \mathrm{st}[0.98]<4>\{$ AD 1994 \}/5/41/4
|-Cl^a\% $\%[0.52]<4>\{$ AD 215\}/15/41/5
|-Cyp^a\%[0.67]<4>\{AD 258\}/2/41/3
|-Ex-141\#[0.93]<1>\{AD 200\}/16/16/3
$\mid-048 \%[0.83]<2>\{$ AD 450 $\} / 4 / 16 / 2$
|-0206\% [0.75]<2> \{AD 350\}/5/16/3
-ac*\%[0.96]<2>\{AD 250\}/7/16/4
|-bo^a\%[0.88]<2>\{AD 250\}/21/16/5
|-bo^b\%[0.90]<2>\{AD 250\}/17/16/5
$\mid-\mathrm{sa} \wedge \mathrm{a} \%[0.88]<2>\{$ AD 250 $\} / 21 / 16 / 6$
|-sa^b\%[0.91]<2>\{AD 250\}/14/16/5
|-13\%[0.99]<2>\{AD 1250\}/1/16/2
a b

```
a b
    |-346%[0.99]<2> {AD 1150}/1/16/2
    |-543%[0.99]<2>{AD 1150}/1/16/2
    |-788%[0.99]<2> {AD 1050}/1/16/2
    |-826%[0.99]<2>{AD 1150}/1/16/2
    |-828%[0.99]<2>{AD 1150}/1/16/2
    |-983%[0.99]<2> {AD 1150}/1/16/2
    |-1%[0.95]<2>{AD 1150}/6/16/3
    |-Irlat^a%[1.00]<2>{AD 395}/0/16/1
    |-Ex-131[0.91]<2>{AD 300}/22/16/6
    -01*[0.88]<3>{AD 350}/28/22/3
    |-Ambst%[0.50]<3>{AD 366}/1/22/2
    |-Cass^a%[0.25]<3>{AD 580}/3/22/3
    |-Cass^b%[0.25]<3> {AD 580}/3/22/3
    |-Ex-122[0.96]<3>{AD 394}/10/22/4
            |-01^c[1.00]<4> {AD 1150}/0/10/1
            |-01^1[1.00]<4> {AD 550}/1/10/2
            |-01^2[0.99]<4> {AD 650}/2/10/3
            --Cyr^a%[0.75]<4>{AD 444}/2/10/3
    |-Ex-139[0.97]<2>{AD 250}/8/16/2
        |-P^72[0.58]<3> {AD 300}/97/8/4
        |-P^81%[0.79]<3>{AD 350}/6/8/4
        |-69%[0.80]<3>{AD 1450}/30/8/7
        |-NA-27[0.93]<3>{AD 1979}/17/8/6
        --Did^a%[0.75]<3>{AD 398}/1/8/2
        |-Ex-133[0.85]<3> {AD 300}/35/8/5
        | |-B*[0.99]<4>{AD 350}/2/35/2
        |-B^2[0.99]<4>{AD 600}/2/35/3
        | |-Hier^a%[0.40]<4>{AD 420}/6/35/4
        | |-Hier^b%[1.00]<4>{AD 420}/0/35/1
        | |-Nic%[1.00]<4>{AD 414}/0/35/1
        |-Ex-136[0.95]<3> {AD 350}/12/8/7
        |-33*[0.90]<4> {AD 850}/21/12/9
        |-Ex-132[0.94]<4> {AD 400}/13/12/5
            |-A*[0.99]<5>{AD 450}/2/13/3
            --A^c[0.99]<5>{AD 550}/3/13/3
|-Ex-142#[0.95]<1>{AD 80}/11/11/2
    --P^74%[1.00]<2>{AD 650}/0/11/1
    -Ath%[1.00]<2>{AD 373}/0/11/1
    -Hil^a%[1.00]<2>{AD 367}/0/11/1
    --Or^a%[0.50]<2> {AD 254}/2/11/3
    -Oros%[0.00]<2> {AD 418}/1/11/2
    |-Prim%[0.00]<2>{AD 567}/1/11/1
    a
```

```
a
|-Ex-129[0.97]<2> {AD 297}/7/11/3
    |-81*[0.93]<3>{AD 1044}/17/7/6
|-Ex-121[0.86]<3>{AD 347}/33/7/9
        |-1739*[0.99]<4>{AD 900}/3/33/2
        |-323*[0.89]<4>{AD 1150}/25/33/9
        |-945[0.91]<4> {AD 1050}/20/33/9
        |-1241*[0.91]<4>{AD 1150}/20/33/7
        |-1739^c[0.98]<4> {AD 950}/4/33/3
    |-C*%[0.79]<4> {AD 450}/35/33/7
    --C^2%[0.80]<4>{AD 550}/34/33/11
    |-Ambr^a%[0.43]<4>{AD 397}/4/33/4
|-Ex-140[0.84]<2>{AD 100}/38/11/5
    |-Prisc%[1.00]<3>{AD 385}/0/38/1
    --Ex-138[0.99]<3>{AD 120}/3/38/3
        |-Ex-134[0.99]<4> {AD 800}/2/3/3
        |-1243[0.92]<5> {AD 1050}/19/2/9
        |-2464*[0.94]<5> {AD 850}/13/2/7
        |-Ex-130[0.96]<4> {AD 170}/10/3/4
        |-049^c[0.99]<5>{AD 900}/3/10/3
        |-K*[0.91]<5>{AD 850}/20/10/7
        |-049*[0.98]<5>{AD 850}/4/10/3
        |-Tert^a%[1.00]<5> {AD 220}/0/10/1
    |-Ex-137[0.99]<3>{AD 230}/2/38/3
        |-Ex-125[0.92]<4> { AD 380}/19/2/9
        | |-1881^c[0.99]<5>{AD 1400}/2/19/2
        | |-1881*[1.00]<5>{AD 1350}/0/19/1
        | |-Aug^b%[0.60]<5>{AD 430}/2/19/3
        |-Ex-128[0.96]<4> {AD 280}/10/2/5
            |-623^c[1.00]<5>{AD 1100}/0/10/1
            -623*[0.99]<5>{AD 1037}/3/10/3
            |-Ex-123[0.95]<5>{AD 330}/12/10/5
                |-440[1.00]<6>{AD 1150}/1/12/1
                |-L020*[0.94]<6>{AD 850}/14/12/10
                |-P025*[0.93]<6>{AD 850}/17/12/7
                |-322[0.97]<6>{AD 1450}/8/12/5
                |-460[1.00]<6>{AD 1250}/1/12/1
                |-1175*[1.00]<6> {AD 950}/1/12/2
                |-1838[1.00]<6> {AD 1050}/1/12/1
                |-2138[0.99]<6> {AD 1072}/3/12/3
                |-2298[0.95]<6>{AD 1150}/11/12/6
                |-pm^b[0.99]<6>{AD 850}/3/12/4
                |-TR[0.93]<6>{AD 1892}/16/12/6
                    a
```

```
a
|-HF[0.99]<6> {AD 1982}/2/12/3
|-RP[1.00]<6> {AD 1995}/0/12/1
|-Ex-116[0.96]<6>{AD 380}/9/12/4
    |-1^249[1.00]<7>{AD 850}/0/9/1
| |-1^846[1.00]<7>{AD 850}/0/9/1
| |-Aug^a%[0.33]<7> {AD 430}/10/9/5
| |-Beda%[1.00]<7>{AD 735}/0/9/1
|-Ex-120[1.00]<6>{AD 650}/1/12/2
        |-429[1.00]<7> {AD 1350}/0/1/1
        |-1852[0.90]<7> {AD 1250}/24/1/14
        |-Ex-119[1.00]<7>{AD 700}/1/1/2
            -242[1.00]<8> {AD 1150}/1/1/1
            |-Ex-118[1.00]<8> {AD 750}/0/1/1
            |-241[1.00]<9> {AD 1150}/1/0/2
            |-Ex-117[1.00]<9>{AD 800}/0/0/1
                    |-36[1.00]<10> {AD 1150}/1/0/1
                    |-pm^a[1.00]<10>{AD 850}/0/0/1
```


# Appendix D <br> List of Autographic Readings 

## For 1 Peter

This appendix contains the list of autographic readings for the Greek text of the First Epistle of Peter as determined by the genealogical method described in this book. The list contains the index of each place of variation (variation unit), the associated reference, the Greek reading at that place, and the probability that the reading is autographic.

| Place of Variation | Reference | Autographic Reading | Probability |
| :---: | :---: | :---: | :---: |
| 1.1 | 1：1，1．1 | ${ }^{\top}$ о $\mu \tau \tau$ | 1 |
| 2.1 | 1：1，2．1 |  | 1 |
| 3.1 | 1：3，1．1 | ${ }^{\circ}$ тo | 1 |
| 4.1 | 1：3，2．1 | ＇$\alpha$ U̇tov $\in \lambda \in O \varsigma$ | 1 |
| 5.1 | 1：3，3．1 |  | 1 |
| 6.1 | 1：3，4．1 | ${ }^{\text {F }} \zeta \omega \sigma \alpha \nu$ | 1 |
| 7.1 | 1：4，1．1 | ＇＇¢ $\mu\llcorner\alpha \nu \tau о \nu \kappa \alpha \iota \dot{\alpha} \mu \alpha \rho \alpha \nu \tau о \nu$ | 1 |
| 8.1 | 1：4，2．1 | ${ }^{\prime}$＇̇v oủpavols | 0.67 |
| 9.1 | 1：4，3．1 | ${ }^{\text {г }}$ ¢ $\mu \alpha$ ¢ | 1 |
| 10.1 | 1：5，1．1 | ＇$\delta$ ¢ $\nu \alpha \mu \in \iota$ Өєou | 1 |
| 11.1 | 1：6，1．1 | ${ }^{\prime} \in \nu \omega \dot{\alpha} \gamma \alpha \lambda \lambda \iota \alpha \sigma \theta \epsilon$ | 1 |
| 12.1 | 1：6，2．1 | ${ }^{\circ}$ ¢бо兀レข | 1 |
| 13.1 | 1：6，3．1 | ${ }^{\text {「 } \lambda \cup \Pi \Pi \eta \theta \in \nu \tau \in \zeta ~}$ | 1 |
| 14.1 | 1：6，4．1 |  | 1 |
| 15.1 | 1：7，1．1 | 「סокццьоข | 1 |
| 16.1 | 1：7，2．1 | ${ }^{s}$ U $\mu \omega \nu \tau \eta \varsigma \pi \tau \sigma \tau \epsilon \omega \varsigma^{\top}$ | 1 |
| 17.1 | 1：7，3．1 |  | 1 |
| 18.1 | 1：7，4．1 | ＇$\delta \iota \alpha$ пupos $\delta \epsilon$ | 1 |
| 19.1 | 1：7，5．1 | ${ }^{\prime} \delta о \xi \alpha \nu$ к $\alpha \iota ~ \tau \iota \mu \eta \nu$ | 1 |
| 20.2 | 1：8，1．2 | $\epsilon\llcorner\delta 0 \tau \in \zeta$ | 0.67 |
| 21.1 | 1：8，2．1 | ${ }^{\prime} \dot{\alpha} \gamma \alpha \lambda \lambda \lambda \alpha \sigma \theta \epsilon$ | 1 |
| 22.1 | 1：9，1．1 | ${ }^{\text {「 }}$ ¢ $\mu \omega \nu$ | 1 |
| 23.1 | 1：11，1．1 | ＇¢̇ঠク入ou то | 0.67 |
| 24.1 | 1：11，2．1 | ${ }^{\circ} \mathrm{X} \rho \stackrel{\text { ¢ }}{ }{ }^{\text {¢ }}$ ¢ои | 1 |
| 25.1 | 1：11，3．1 | 「тронкртиронєขоข | 1 |
| 26.1 | 1：12，1．1 |  | 1 |
| 27.1 | 1：12，2．1 | ${ }^{\circ} \mathrm{\epsilon} \nu$ | 1 |
| 28.1 | 1：14，1．1 |  | 1 |
| 29.1 | 1：16，1．1 | ＇סıo $\frac{1}{} \gamma \in \gamma \rho \alpha \pi \tau \alpha \iota$ | 1 |
| 30.2 | 1：16，2．2 | ${ }^{\circ}$ out $\tau$ | 1 |
| 31.1 | 1：16，3．1 | ${ }^{\text {「 }} \in \sigma \in \sigma \theta \epsilon$ | 1 |
| 32.1 | 1：16，4．1 | ${ }^{\text {Fotı }}$ | 1 |
| 33.1 | 1：16，5．1 | ${ }^{\circ}$ ¢ $¢$ ¢ $\mu \mathrm{L}$ | 0.67 |
| 34.1 | 1：17，1．1 | ${ }^{\prime} \in \pi<\kappa \alpha \lambda \epsilon \epsilon \sigma \theta \epsilon$ | 1 |
| 35.1 | 1：17，2．1 | ${ }^{\top}$ о $\mu \tau \tau$ | 1 |
| 36.1 | 1：18，1．1 |  | 0.67 |
| 37.1 | 1：19，1．1 | ${ }^{\top}$ о $\mu \tau \tau$ | 1 |
| 38.1 | 1：20，1．1 | ＇＇єбх＜兀оט $\tau \omega \nu \chi \rho \circ \nu \omega \nu$ | 0.67 |


| 39.2 | 1：21，1．2 | $\pi \iota \sigma \tau \in \cup 0 \nu \tau \alpha \varsigma$ | 1 |
| :---: | :---: | :---: | :---: |
| 40.1 | 1：21，2．1 | ${ }^{\top}$ out | 1 |
| 41.1 | 1：22，1．1 | ${ }^{\top}$ оиıт | 1 |
| 42.1 | 1：22，2．1 | ＇к $\alpha \theta \alpha \rho \alpha \varsigma$ к $\alpha \rho \delta$ ¢ $\alpha ¢$ | 1 |
| 43.1 | 1：23，1．1 | ＇є̌к $\sigma \pi$ ора¢ | 1 |
| 44.1 | 1：23，2．1 | ${ }^{\text {＇}}$ ¢ $\omega \nu$ tos $\theta \in$ ou | 1 |
| 45.1 | 1：23，3．1 | ${ }^{\top}$ oulv | 1 |
| 46.1 | 1：24，1．1 | 「סьоть | 1 |
| 47.1 | 1：24，2．1 | ${ }^{\circ} \omega \varsigma$ | 0.67 |
| 48.1 | 1：24，3．1 | ${ }^{\text {F }}$ ¢ ${ }^{\text {citns }}$ | 0.67 |
| 49.1 | 1：24，4．1 | ${ }^{\circ}$ Xoptou | 1 |
| 50.1 | 1：24，5．1 | ${ }^{\top}$ оиı | 0.67 |
| 51.1 | 1：25，1．1 | $\square_{\tau о} \rho \eta \mu \alpha$ то | 1 |
| 52.1 | 1：25，2．1 |  | 1 |
| 53.1 | 2：1，1．1 | 「บтокрьөеıs | 1 |
| 54.1 | 2：1，2．1 | ${ }^{\text {「 }}$ ¢ovous | 1 |
| 55.1 | 2：1，3．1 | ${ }^{\top} \pi \alpha \sigma \alpha \varsigma \kappa \alpha \tau \alpha \lambda \alpha \lambda \iota \alpha \varsigma$ | 1 |
| 56.1 | 2：2，1．1 | ${ }^{\top}$ oult | 1 |
| 57.1 | 2：2，2．1 | ${ }^{\square}$ ¢i¢ $\sigma \omega \tau \eta \rho\llcorner\alpha \nu$ | 1 |
| 58.2 | 2：3，1．2 | $\epsilon!\pi \in \rho$ | 0.67 |
| 59.1 | 2：3，2．1 | ${ }^{\top}$ о ${ }^{\text {¢ }}$ | 1 |
| 60.1 | 2：3，3．1 | ${ }^{\text {「} \chi \rho \eta \sigma \tau о \varsigma ~}$ | 1 |
| 61.1 | 2：4，1．1 | Гито | 1 |
| 62.1 | 2：5，1．1 |  | 1 |
| 63.1 | 2：5，2．1 | ${ }^{\circ} \mathrm{\epsilon}$ i¢ | 1 |
| 64.1 | 2：5，3．1 |  | 1 |
| 65.1 | 2：5，4．1 | ${ }^{\circ} \tau \omega$ | 0.67 |
| 66.3 | 2：6，1．3 | $\dot{\eta}$ | 0.67 |
| 67.1 | 2：6，2．1 |  | 1 |
| 68.1 | 2：7，1．1 |  | 1 |
| 69.2 | 2：7，2．2 | $\lambda 1$ өov | 0.67 |
| 70.1 | 2：8，1．1 |  | 1 |
| 71.1 | 2：8，2．1 | ${ }^{\circ} \mathrm{O}$ | 1 |
| 72.1 | 2：9，1．1 | ${ }^{\circ}$ 人ı̇tou | 1 |
| 73.1 | 2：11，1．1 | 「迹 $\chi \in \sigma \theta \alpha \iota$ | 1 |
| 74.1 | 2：12，1．1 |  | 1 |
| 75.1 | 2：12，2．1 | ${ }^{\text {K }}$ ¢ $\alpha \alpha \lambda \alpha \lambda$ оuбレ $\nu$ | 1 |
| 76.1 | 2：12，3．1 | ${ }^{\text {T }}$ out $\tau$ | 1 |
| 77.1 | 2：12，4．1 | Г＇̇поттєvovtes | 0.67 |

Appendix D：
List of Autographic Readings

| 78.1 | 2：12，5．1 | ${ }^{\top}$ \％ $\mathrm{o} \mu \tau \tau$ | 1 |
| :---: | :---: | :---: | :---: |
| 79.1 | 2：13，1．1 | ${ }^{\top}$ out $\tau$ | 0.67 |
| 80.1 | 2：13，2．1 | ${ }^{\prime} \dot{\alpha} \nu \theta \rho \omega \pi \iota \nu \eta$ к $\tau \iota \sigma \in \iota$ | 1 |
| 81.1 | 2：14，1．1 | ${ }^{\top}$ о $\mu \tau \tau$ | 1 |
| 82.1 | 2：14，2．1 |  | 1 |
| 83.1 | 2：15，1．1 | ${ }^{\top}$ о $\mu$ ¢ $\tau$ | 1 |
| 84.1 | 2：15，2．1 | 「 $\alpha \gamma \nu \omega \sigma$ ¢ $\alpha$ | 1 |
| 85.1 | 2：16，1．1 | ＇$Ө$ ¢ou סou入ol | 0.67 |
| 86.1 | 2：17，1．1 | 「 $¢ \gamma \alpha \pi \alpha \tau \epsilon$ | 0.67 |
| 87.1 | 2：17，2．1 | ${ }^{\top}$ о ${ }^{\text {c }}$ ¢ $\tau$ | 1 |
| 88.1 | 2：18，1．1 |  | 1 |
| 89.1 | 2：18，2．1 | ${ }^{\top} \mathrm{o} \mu \tau \tau$ | 1 |
| 90.1 | 2：18，3．1 | ${ }^{\circ} \mathrm{K} \alpha \iota$ | 1 |
| 91.1 | 2：19，1．1 | ${ }^{\top}$ out $\tau$ | 0.67 |
| 92.1 | 2：19，2．1 | $\ulcorner\bullet$ ¢ou | 0.67 |
| 93.1 | 2：20，1．1 | ${ }^{\text {＇к } \alpha \iota ~ к о \lambda \alpha \phi \iota \zeta о \mu \epsilon \nu о \iota ~}$ | 0.67 |
| 94.1 | 2：20，2．1 |  | 0.67 |
| 95.1 | 2：20，3．1 |  | 1 |
| 96.1 | 2：21，1．1 | ${ }^{\top}$ о $\quad$ ¢ $\tau$ | 1 |
| 97.1 | 2：21，2．1 | ${ }^{\circ} \mathrm{K} \alpha \iota$ | 1 |
| 98.1 | 2：21，3．1 | ${ }^{\ulcorner } \in \pi \alpha \theta \in \nu$ | 1 |
| 99.1 | 2：21，4．1 | ${ }^{\text {F }}$ UTte $\rho$ | 1 |
| 100.1 | 2：21，5．1 | ${ }^{\text {＇}}$ ¢ $\mu \omega \nu$ v $\mu \mathrm{L} \nu$ | 1 |
| 101.1 | 2：21，6．1 | ${ }^{\text {「 } \cup \pi о \lambda}$ ¢ $\lrcorner \mu \pi \alpha \nu \omega \nu$ | 1 |
| 102.1 | 2：23，1．1 | ${ }^{\text {「 }}$ ¢ $¢$ | 1 |
| 103.1 | 2：23，2．1 | ${ }^{\top} \delta \iota \kappa \alpha \iota \omega \varsigma$ | 1 |
| 104.1 | 2：24，1．1 | 「 $\eta \mu \omega \nu$ | 1 |
| 105.1 | 2：24，2．1 |  | 1 |
| 106.1 | 2：24，3．1 | ${ }^{\top}$ out $\tau$ | 1 |
| 107.1 | 2：24，4．1 | 「$\grave{\alpha} \theta \eta \tau \epsilon$ | 1 |
| 108.2 | 2：25，1．2 | －$\mu \in \nu \alpha$ | 0.67 |
| 109.1 | 2：25，2．1 | ${ }^{\top} \mathrm{v} \mu \omega \nu$ | 1 |
| 110.1 | 3：1，1．1 | ${ }^{\text {「 }}$ ¢ $\downarrow$ | 0.67 |
| 111.1 | 3：1，2．1 | ＇K $K \downarrow$ ¢ | 0.67 |
| 112.1 | 3：2，1．1 | 「¢попт | 1 |
| 113.1 | 3：3，1．1 |  | 1 |
| 114.1 | 3：3，2．1 | ${ }^{\circ}{ }^{\text {}}$ ¢ $\downarrow \chi \omega \nu$ | 1 |
| 115.1 | 3：4，1．1 |  | 1 |
| 116.1 | 3：5，1．1 | ＇ ils ¢ $\theta$ ¢ov | 1 |


| 117.1 | 3：6，1．1 |  | 1 |
| :---: | :---: | :---: | :---: |
| 118.1 | 3：6，2．1 | 「тгоךбьข | 1 |
| 119.1 | 3：7，1．1 | ${ }^{\circ} \Pi \iota$ | 1 |
| 120.1 | 3：7，2．1 | ＇бuvoıкоข $\tau \tau \in \varsigma$ к $\alpha \tau \alpha \gamma \nu \omega \sigma \iota \nu$ | 1 |
| 121.2 | 3：7，3．2 | －гоноь | 0.67 |
| 122.1 | 3：7，4．1 | ${ }^{\prime} \chi \alpha \rho \iota \tau о \varsigma \zeta \omega \eta$ ¢ | 1 |
| 123.1 | 3：7，5．1 | ＇$\tau \alpha \varsigma$ пробє $\chi^{\prime} \alpha \varsigma$ | 1 |
| 124.1 | 3：8，1．1 | ${ }^{\text {「 } \tau \alpha \pi \epsilon \iota \nu о ф \rho о \nu є \varsigma ~}$ | 1 |
| 125.1 | 3：9，1．1 | ${ }^{\top}$ out ${ }^{\text {a }}$ | 1 |
| 126.2 | 3：10，1．2 | $\alpha$ บтou | 1 |
| 127.1 | 3：10，2．1 | ${ }^{\top}$ \％ $\mathrm{o} \mu \tau \tau$ | 1 |
| 128.1 | 3：10，3．1 | ${ }^{\text {「 } \lambda \alpha \lambda \eta \sigma \alpha \iota}$ | 1 |
| 129.2 | 3：11，1．2 | ${ }^{\circ}$ оцı七 | 1 |
| 130.1 | 3：12，1．1 | ${ }^{\top}$ о ${ }^{\text {¢ }}$ ¢ $\tau$ | 1 |
| 131.1 | 3：13，1．1 | ${ }^{\text {「 }}$ ¢ $\alpha \nu$ | 1 |
| 132.1 | 3：13，2．1 | ${ }^{\text {F }} \zeta \eta \lambda \omega \tau \tau \alpha$ | 0.67 |
| 133.1 | 3：13，3．1 | ${ }^{\text {「 }} \boldsymbol{\gamma} \boldsymbol{\prime}$ | 1 |
| 134.1 | 3：14，1．1 | ${ }^{\top}$ о $\mu \tau \tau$ | 1 |
| 135.1 | 3：14，2．1 | ${ }^{\square} \mu \eta \delta \epsilon \tau \alpha \rho \alpha \alpha \chi \eta \eta \tau \epsilon$ | 1 |
| 136.1 | 3：15，1．1 |  | 0.67 |
| 137.1 | 3：15，2．1 | ${ }^{\text {F }} \dot{\alpha} \times 1$ | 1 |
| 138.1 | 3：15，3．1 | 「 ${ }^{\text {¢ }}$ ¢оuvtı | 1 |
| 139.1 | 3：16，1．1 | ${ }^{\circ} \dot{\alpha} \lambda \lambda \alpha$ | 1 |
| 140.2 | 3：16，2．2 |  | 1 |
| 141.1 | 3：16，3．1 | ${ }^{\text {K }}<\alpha \tau \alpha<\sigma \chi \nu \nu \theta \omega \sigma \iota \nu$ | 1 |
| 142.1 | 3：16，4．1 |  | 1 |
| 143.1 | 3：18，1．1 | ${ }^{\text {「K } \alpha \iota}$ | 1 |
| 144.3 | 3：18，2．3 | $\pi \epsilon \rho \iota \alpha \mu . ~ v \pi \epsilon \rho ~ \eta \mu \omega \nu \quad \alpha \pi \epsilon \theta$ ． | 1 |
| 145.1 | 3：18，3．1 |  | 1 |
| 146.2 | 3：18，4．2 | $\eta \mu \alpha \varsigma$ | 1 |
| 147.1 | 3：18，5．1 |  | 1 |
| 148.1 | 3：18，6．1 | ${ }^{\circ} \mu \in \nu$ | 1 |
| 149.1 | 3：18，7．1 | ${ }^{\top}$ о ${ }^{\text {¢ }}$ ¢ $\tau$ | 1 |
| 150.1 | 3：19，1．1 | 「фидакп | 1 |
| 151.1 | 3：19，2．1 | ${ }^{\text {F}} \pi \nu \in \nu \mu \alpha \sigma \iota \nu$ | 1 |
| 152.1 | 3：20，1．1 | $\ulcorner\dot{\alpha} \pi \epsilon \xi \in \delta \in \chi \in \tau 0$ | 1 |
| 153.2 | 3：20，2．2 | o $\lambda \iota \gamma \alpha \iota$ | 0.67 |
| 154.1 | 3：20，3．1 | ${ }^{\circ}$ Óк兀 $\omega$ | 1 |
| 155.1 | 3：21，1．1 | ${ }^{\circ} \mathrm{O}$ | 1 |

Appendix D：
List of Autographic Readings

| 156.1 | 3：21，2．1 | ${ }^{\text {F }}$ ט $\mu \alpha \varsigma$ | 1 |
| :---: | :---: | :---: | :---: |
| 157.1 | 3：22，1．1 | ${ }^{\circ}$ тov | 1 |
| 158.1 | 3：22，2．1 | ${ }^{\top}$ out $\tau$ | 1 |
| 159.2 | 4：1，1．2 | $\pi . \nu \pi \epsilon \rho \eta \mu \omega \nu \sigma$ ． | 1 |
| 160.1 | 4：1，2．1 | ${ }^{\top}$ о $\quad$ ¢ $\tau$ | 0.67 |
| 161.1 | 4：1，3．1 | ${ }^{\text {「 }}$ ¢ $\mu \alpha \rho \tau \iota \alpha \varsigma$ | 1 |
| 162.1 | 4：2，1．1 |  | 1 |
| 163.1 | 4：2，2．1 | ${ }^{\ulcorner } \boldsymbol{\theta}$ ¢ои | 1 |
| 164.1 | 4：2，3．1 | ${ }^{\text {＇}}$＇$\dagger \omega \sigma \alpha \iota$ | 1 |
| 165.1 | 4：3，1．1 | ${ }^{\top}$ out $\tau$ | 1 |
| 166.1 | 4：3，2．1 | ${ }^{\text {T }}$ out $\tau$ | 1 |
| 167.1 | 4：3，3．1 | ${ }^{\text {「 }}$ ¢ои $\lambda \eta \mu \alpha$ | 1 |
| 168.1 | 4：3，4．1 |  | 1 |
| 169.1 | 4：4，1．1 |  | 1 |
| 170.1 | 4：5，1．1 |  | 1 |
| 171.1 | 4：5，2．1 | ${ }^{\text {＇} є \tau о \iota \mu \omega \varsigma ~ ¢ \chi О \nu \tau \iota ~ к \rho \iota \nu \alpha \iota ~}$ | 0.67 |
| 172.1 | 4：7，1．1 | ${ }^{\top}$ о $\mu \tau \tau$ | 1 |
| 173.1 | 4：8，1．1 | ${ }^{\top}$ \％${ }^{\top}$ ¢ ${ }^{\text {c }}$ | 0.67 |
| 174.1 | 4：8，2．1 | ${ }^{\text {「eautous }}$ | 1 |
| 175.1 | 4：8，3．1 | ${ }^{\prime} \mathrm{K} \alpha \lambda \cup \pi \tau \tau \in L$ | 1 |
| 176.1 | 4：9，1．1 |  | 1 |
| 177.1 | 4：11，1．1 | ＇$\eta \varsigma$ Хорпүєє о $ө \in \bigcirc \varsigma$ | 0.67 |
| 178.1 | 4：11，2．1 | ${ }^{\prime} \delta 0 \xi \alpha \zeta \eta \tau \alpha \downarrow$ о $\theta \in \bigcirc \varsigma$ | 1 |
| 179.1 | 4：11，3．1 | ${ }^{\circ} \eta$ | 1 |
| 180.1 | 4：11，4．1 | ${ }^{\circ}$ ¢о | 1 |
| 181.1 | 4：11，5．1 | ${ }^{\square} \tau \omega \nu \alpha i \omega \nu \omega \nu$ | 1 |
| 182.1 | 4：12，1．1 | ${ }^{\top}$ о $\mu \tau \tau$ | 1 |
| 183.2 | 4：14，1．2 |  | 1 |
| 184.2 | 4：14，2．2 | $\epsilon \pi \alpha \nu \alpha \pi-$ | 0.67 |
| 185.1 | 4：14，3．1 | ${ }^{\top}$ о $\mu \tau \tau$ | 1 |
| 186.1 | 4：15，1．1 | ${ }^{\top}$ о $\quad$ ¢ $\tau$ | 1 |
| 187.1 | 4：15，2．1 |  | 1 |
| 188.2 | 4：15，3．2 | $\alpha \lambda \lambda$ отрto $¢$ \％． | 0.67 |
| 189.1 | 4：16，1．1 | ${ }^{\circ} \omega \varsigma$ | 1 |
| 190.1 | 4：16，2．1 |  | 1 |
| 191.1 | 4：16，3．1 | 「ovounct | 1 |
| 192.1 | 4：17，1．1 | ${ }^{\circ} \mathrm{O}$ | 0.67 |
| 193.1 | 4：17，2．1 | ${ }^{\ulcorner } \eta \mu \omega \nu$ | 1 |
| 194.1 | 4：18，1．1 | ${ }^{\top}$ o $\mu \tau \tau$ | 1 |


| 195.1 | 4：18，2．1 |  | 1 |
| :---: | :---: | :---: | :---: |
| 196.1 | 4：19，1．1 |  | 1 |
| 197.1 | 4：19，2．1 | 「 $\dot{\alpha} \gamma \alpha$ Өотоьь $\alpha$ | 1 |
| 198.1 | 5：1，1．1 | 「ouv | 0.67 |
| 199.1 | 5：1，2．1 | ${ }^{\circ} \mathrm{O}$ | 1 |
| 200.1 | 5：1，3．1 | ${ }^{\text {「 }}$ Х $\rho$ ıбтои | 1 |
| 201.1 | 5：2，1．1 |  | 1 |
| 202.1 | 5：2，2．1 | $\ulcorner\mu \eta \delta \epsilon$ | 1 |
| 203.1 | 5：3，1．1 |  тоц $\mu \nu$ เои | 1 |
| 204.1 | 5：5，1．1 | ${ }^{\text { }}$ о $\mu \tau \tau$ | 1 |
| 205.1 | 5：5，2．1 | 「这 $\lambda \lambda \eta \lambda$ ols | 1 |
| 206.1 | 5：5，3．1 | ${ }^{\circ} \mathrm{O}$ | 1 |
| 207.1 | 5：6，1．1 | ${ }^{\top}$ out $\tau$ | 1 |
| 208.1 | 5：7，1．1 |  | 1 |
| 209.1 | 5：7，2．1 | ${ }^{\text {＇}}$ ¢ $\mu \omega \nu$ | 1 |
| 210.1 | 5：8，1．1 | ${ }^{\top}$ о ${ }^{\text {TL }}$ ¢ | 0.67 |
| 211.1 | 5：8，2．1 | ${ }^{\text {F }}$ o o ¢ $\tau$ | 1 |
| 212.1 | 5：8，3．1 | ${ }^{\text {「 } \tau \iota \nu \alpha}$ | 0.67 |
| 213.1 | 5：8，4．1 | ${ }^{5} \mathrm{~K} \alpha \tau \alpha \pi \pi \iota \in\llcorner\nu$ | 1 |
| 214.1 | 5：9，1．1 | ${ }^{\circ} \omega$ | 1 |
| 215.1 | 5：9，2．1 |  | 1 |
| 216.1 | 5：9，3．1 | ${ }^{\text { }}$ out $\tau$ | 1 |
| 217.2 | 5：9，4．2 | ${ }^{\circ} \mathrm{o} \mathrm{\mu} \mathrm{\nu} \mathrm{\tau}$ | 0.67 |
| 218.1 | 5：9，5．1 | ${ }^{\text {F }}$ ¢ $\pi \iota \tau \in \lambda \in\llcorner\sigma \theta \alpha \iota$ | 0.67 |
| 219.1 | 5：10，1．1 | ${ }^{\text {「Uиа¢ }}$ | 1 |
| 220.1 | 5：10，2．1 |  | 1 |
| 221.3 | 5：10，3．3 | 123 | 0.67 |
| 222.1 | 5：11，1．1 | ＇тo кратоб | 1 |
| 223.2 | 5：11，2．2 | ＊$\tau \omega \nu \alpha \iota \omega \nu \omega \nu$ | 1 |
| 224.1 | 5：12，1．1 | ＇$\delta \iota$＇ò $\lambda \iota \gamma \omega \nu$ | 1 |
| 225.1 | 5：12，2．1 | ${ }^{\circ}$ тou | 1 |
| 226.1 | 5：12，3．1 | ${ }^{\text {「 } \sigma \tau \eta \tau \epsilon}$ | 0.67 |
| 227.1 | 5：13，1．1 | ${ }^{\text {「 }} \mathrm{B} \alpha \beta \nu \lambda \omega \nu \iota$ | 1 |
| 228.1 | 5：13，2．1 | ${ }^{\top}$ out $\tau$ | 1 |
| 229.1 | 5：14，1．1 | 「 $\alpha \gamma \alpha \pi \eta$ ¢ | 1 |
| 230.1 | 5：14，2．1 |  | 1 |
| 231.2 | 5：14，3．2 | I $\rceil$ бou | 1 |
| 232.2 | 5：14，4．2 | $\alpha \mu \eta \nu$ | 1 |

## Appendix E

List of the Places the Lachmann-10 Text
Differs from the NA-27 Text for the First Epistle of Peter

| Ref． |  | NA－27 Reading |  | Lochmann Reading | Prob． |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1：8，1．2 | Replace NA－27＝＞ | 「 $\iota \delta o \nu \tau \epsilon \varsigma$ | with＝＞ | $\epsilon \iota \delta o \tau \epsilon \zeta$ | ［0．67］ |
| 1：16，2．2 | Omit NA－27＝＞ | ${ }^{\circ}$ Oп८ |  |  | ［1．00］ |
| 1：21，1．2 | Replace NA－27＝＞ |  | with＝＞ | $\pi \iota \sigma \tau \in \cup 0 \nu \tau \alpha \varsigma$ | ［1．00］ |
| 2：3，1．2 | Replace NA－27＝＞ | 「 「＇l $^{\text {c }}$ | with $=>$ | $\epsilon \iota \pi \epsilon \rho$ | ［0．67］ |
| 2：6，1．3 | Replace NA－27＝＞ | ${ }^{\prime} \epsilon \nu$ | with＝＞ | $\dot{\eta}$ | ［0．67］ |
| 2：7，2．2 | Replace NA－27＝＞ | ${ }^{\text {F }} \lambda \iota \theta$ Oऽ | with＝＞ | $\lambda \iota \theta о \nu$ | ［0．67］ |
| 2：25，1．2 | Replace NA－27＝＞ | ${ }^{\text {「 }}$ 「 $\lambda \alpha \nu \omega \mu \in \nu 0 \iota$ | with＝＞ | －$\mu \in \nu \alpha$ | ［0．67］ |
| 3：7，3．2 | Replace NA－27＝＞ | 「оуүклпророноьऽ | with＝＞ | －$о$ оооь | ［0．67］ |
| 3：10，1．2 | At NA－27＝＞ | ${ }^{\top}$ ouı $\tau$ | insert＝＞ | $\alpha \cup \tau 0 \cup$ | ［1．00］ |
| 3：11，1．2 | Omit NA－27＝＞ | ${ }^{\circ} \delta \epsilon$ |  |  | ［1．00］ |
| 3：16，2．2 | Replace NA－27＝＞ | ${ }{ }^{\prime} \alpha \alpha \tau \alpha \lambda \alpha \lambda \epsilon \iota \sigma \theta \epsilon$ | with＝＞ | $\kappa \alpha \tau \alpha \lambda \alpha \lambda o v \sigma \iota \nu \quad \nu \mu \omega \omega \varsigma$ $\kappa \alpha к о \pi о \iota \omega \nu$ | ［1．00］ |
| 3：18，2．3 | Replace NA－27＝＞ | ${ }^{\prime} \pi \epsilon \rho \iota \alpha \mu \alpha \rho \tau \iota \omega \nu \quad \epsilon \pi \alpha \theta \epsilon \nu$ | with＝＞ | $\pi \epsilon \rho \iota \alpha \mu . v \pi \epsilon \rho \quad \eta \mu \omega \nu \quad \alpha \pi \epsilon \theta$ ． | ［1．00］ |
| 3：18，4．2 | Replace NA－27＝＞ | ${ }^{\text {「 }}$＇$\mu \alpha$ ¢ | with＝＞ | $\eta \mu \alpha \varsigma$ | ［1．00］ |
| 3：20，2．2 | Replace NA－27＝＞ |  | with＝＞ |  | ［0．67］ |
| 4：1，1．2 | Replace NA－27＝＞ | ${ }^{\text {＇} \pi \alpha \theta о \nu \tau о \varsigma ~} \sigma \alpha \rho \kappa \iota$ | with $=>$ | $\pi$ ．vтє $\eta \mu \omega \nu \sigma$ ． | ［1．00］ |
| 4：14，1．2 | Replace NA－27＝＞ | ＇к $\kappa$ ¢ тo тov $\theta \in O \cup$ | with＝＞ |  | ［1．00］ |
| 4：14，2．2 | Replace NA－27＝＞ | 「 $\alpha \nu \alpha \pi \alpha \nu \epsilon \tau \alpha \iota$ | with＝＞ | $\epsilon \pi \alpha \nu \alpha \pi-$ | ［0．67］ |
| 4：15，3．2 | Replace NA－27＝＞ |  | with＝＞ | $\alpha \lambda \lambda о \tau \rho\llcorner\circ \epsilon \pi$ ． | ［0．67］ |
| 5：9，4．2 | Omit NA－27＝＞ | ${ }^{\circ} \tau \omega$ |  |  | ［0．67］ |
| 5：10，3．3 | Replace NA－27＝＞ | ${ }^{\prime} \kappa \alpha \tau \alpha \rho \tau \iota \sigma \epsilon \iota \quad \sigma \tau \eta \rho\llcorner\xi \in \iota$ $\sigma \theta \epsilon \nu \omega \sigma \epsilon \iota \quad \theta \epsilon \mu \in \lambda \iota \omega \sigma \epsilon \iota$ | with＝＞ | 123 | ［0．67］ |
| 5：11，2．2 | At NA－27＝＞ | ${ }^{\top}$ о $\quad \mu \iota \tau$ | insert＝＞ | ＂$\tau \omega \nu \alpha \iota \omega \nu \omega \nu$ | ［1．00］ |
| 5：14，3．2 | At NA－27＝＞ | ${ }^{\top}$ о $о \iota \tau$ | insert＝＞ | İбov | ［1．00］ |
| 5：14，4．2 | At NA－27＝＞ | ${ }^{\top}$ \％$o \mu \iota \tau$ | insert＝＞ | $\alpha \mu \eta \nu$ | ［1．00］ |

## Appendix F

Places Where the Non-Autographic Variants Were Initiated Only Once in the Textual History of 1 Peter Arranged in Order by Reference

This appendix lists the place in the genealogical history of the text of the Book of 1 Peter where each non-original textual variant was first initiated, arranged in order by reference. For each variant, the table lists (1) the place of variation in the text where the variation occurred, (2) the associated reference, (3) the exemplar or extant witness in which the variant was initiated, and (4) the text of the variant. For example, the following line means:

| 8.2 | $1: 4,2.2$ | Ex-135\# | $\epsilon \nu$ toıs oup. |
| :--- | :--- | :--- | :--- |

(1) 8.2 refers to the second variant at variation unit 8.
(2) $1: 4,2.2$ is the reference where this place of variation occurs: chapter 1 , verse 4 , the second place of variation in this verse, the second variant there.
(3) This variant was initiated in Exemplar Ex-135\#.
(4) The variant reads: $\in \nu$ tots oup. (in the hea[vens])
(5) Since the variant was first initiated in an exemplar, one can presume that the variant was inherited by all of the descendants of that exemplar (Ex-135\#) unless otherwise altered in one of its subsequent branches.

The following line means:

| 11.2 | $1: 6,1.2$ | $\mathrm{P}^{\wedge} 72$ | $\alpha \gamma \alpha \lambda \lambda \iota \alpha \sigma \alpha \nu \tau \epsilon \zeta$ |
| :--- | :--- | :--- | :--- |

(1) 11.2 refers to the second variant at variation unit 11.
(2) $1: 6,1.2$ is the reference where this place of variation occurs: chapter 1 , verse 6 , the first place of variation in this verse, the second variant there.
(3) This variant was initiated in fragmentary terminal witness MS $\mathrm{P}^{\wedge} 72$.
(4) The variant reads: $\alpha \gamma \alpha \lambda \lambda \iota \alpha \sigma \alpha \nu \tau \epsilon \varsigma$ (greatly rejoicing)

Since the variant was initiated in a terminal witness, it is a singularity with no inheritance. The following line means:

| 6.2 | $1: 3,4.2$ | Ex-144\$ | $\zeta \omega \eta \varsigma$ |
| :--- | :--- | :--- | :--- |

(1) 6.1 refers to the first variant at variation unit 6.
(2) 1:3,4.2 is the reference where this place of variation occurs: chapter 1 , verse 3 , the fourth place of variation in this verse, the second variant there.
(3) This variant was initiated in exemplar Ex-144\$, a virtual exemplar, a source of mixture.
(4) The variant reads: $\zeta \omega \eta \varsigma$ (life).

| VarUnit | Reference | Source | Reading |
| :---: | :---: | :---: | :---: |
| 1.2 | 1：1，1．2 | Ex－144\＄ | $\kappa \alpha \iota$ |
| 2.2 | 1：1，2．2 | Aug＾a\％ | 13 |
| 2.3 | 1：1，2．3 | B＊ | 1 |
| 2.4 | 1：1，2．4 | Ex－144\＄ | 23 |
| 2.5 | 1：1，2．5 | Ex－145\＄ | $\kappa \alpha \iota$ A．$\kappa \alpha \iota$ |
| 3.2 | 1：3，1．2 | P＾72 | ${ }^{\circ} \mathrm{o} \mu \tau \tau$ |
| 4.2 | 1：3，2．2 | Ex－144\＄ | 21 |
| 4.3 | 1：3，2．3 | $\mathrm{vg}^{\wedge} \mathrm{b}$ | 2 |
| 5.2 | 1：3，3．2 | 1241＊ | v $\mu \alpha \varsigma$ |
| 5.3 | 1：3，3．3 | $\mathrm{P}^{\wedge} 72$ | － |
| 6.2 | 1：3，4．2 | Ex－144\＄ | $\zeta \omega \eta$ ¢ |
| 7.2 | 1：4，1．2 | Ex－144\＄ | 321 |
| 7.3 | 1：4，1．3 | Ex－149\＄ | 1 |
| 8.2 | 1：4，2．2 | Ex－135\＃ | $\epsilon \nu$ tols oup． |
| 8.3 | 1：4，2．3 | Ex－131 | $\epsilon \nu-\nu \omega$ |
| 9.2 | 1：4，3．2 | Ex－144\＄ | $\eta \mu \alpha \varsigma$ |
| 10.2 | 1：5，1．2 | P＾72 | 1 |
| 11.2 | 1：6，1．2 | $\mathrm{P}^{\wedge} 72$ | $\alpha \gamma \alpha \lambda \lambda \iota \alpha \sigma \alpha \nu \tau \epsilon \zeta$ |
| 11.3 | 1：6，1．3 | $\mathrm{C}^{\wedge} 2 \%$ | 3 |
| 12.2 | 1：6，2．2 | Ex－144\＄ | ${ }^{\circ}{ }^{\circ} \mu$ ¢ $\tau$ |
| 13.2 | 1：6，3．2 | Ex－145\＄ | $-\theta \in \nu \tau \alpha \varsigma$ |
| 13.3 | 1：6，3．3 | Ex－149\＄ | －$\theta \eta \nu \alpha\llcorner$ |
| 13.4 | 1：6，3．4 | 048\％ | $\eta \mu \alpha \varsigma-\theta \in \nu \tau \in \varsigma$ |
| 14.2 | 1：6，4．2 | P＾72 | тод入оıs |
| 15.2 | 1：7，1．2 | Ex－144\＄ | бокццо⿱ |
| 16.2 | 1：7，2．2 | Ex－144\＄ | 231 |
| 17.2 | 1：7，3．2 | Ex－144\＄ | －бou |
| 18.2 | 1：7，4．2 | Ex－145\＄ | 12 |
| 18.3 | 1：7，4．3 | Ex－146\＄ | $\kappa \alpha \downarrow \delta \iota \alpha \pi$ ． |
| 19.2 | 1：7，5．2 | Ex－145\＄ | 321 |
| 19.3 | 1：7，5．3 | $\mathrm{Cl}^{\wedge} \mathrm{a} \%$ | 1 |
| 19.4 | 1：7，5．4 | Ex－146\＄ | т．к．$\epsilon \iota ¢ \delta$ ． |
| 20.1 | 1：8，1．1 | Ex－149\＄ | 「iठovtes |
| 21.2 | 1：8，2．2 | Ex－144\＄ | $\alpha \gamma \alpha \lambda \lambda L \alpha \tau \epsilon$ |
| 22.2 | 1：9，1．2 | Ex－144\＄ | －－ |
| 22.3 | 1：9，1．3 | Ex－145\＄ | $\eta \mu \omega \nu$ |
| 23.2 | 1：11，1．2 | Ex－141\＃ | ¢́ $\delta \eta \lambda$ ¢и̂тo |
| 24.2 | 1：11，2．2 | Ex－133 | ${ }^{\circ}$ о $\mu \tau \tau$ |
| 25.2 | 1：11，3．2 | Ex－144\＄ | －ооинєขоv |
| 26.2 | 1：12，1．2 | Ex－144\＄ | ou $\in \in \alpha \cup . \eta \mu \tau \nu \delta$ ． |
| 26.3 | 1：12，1．3 | 33＊ | $\kappa \alpha \nu \chi \alpha \sigma \theta \alpha\llcorner$ ou $\epsilon \alpha \cup \tau \omega \nu$ u $\mu \iota \nu \delta \epsilon \kappa \alpha \iota$ |
| 27.2 | 1：12，2．2 | Ex－149\＄ | ${ }^{\circ}$ о $\mu \tau \tau$ |


| 28.2 | 1：14，1．2 | Ex－144\＄ | 134 |
| :---: | :---: | :---: | :---: |
| 28.3 | 1：14，1．3 | P＾72 | 34 |
| 28.4 | 1：14，1．4 | 1241＊ | － |
| 29.2 | 1：16，1．2 | Ex－144\＄ | $\delta \iota 0 \gamma$ ． |
| 29.3 | 1：16，1．3 | Ex－145\＄ | － |
| 30.1 | 1：16，2．1 | Ex－144\＄ | ${ }^{\circ}$ Oть |
| 31.2 | 1：16，3．2 | Ex－145\＄ | $\gamma \in \nu \in \sigma \theta \epsilon$ |
| 31.3 | 1：16，3．3 | Ex－140 | $\gamma \iota \nu \in \sigma \theta \epsilon$ |
| 32.2 | 1：16，4．2 | Ex－144\＄ | ठıo七ı |
| 32.3 | 1：16，4．3 | Ex－145\＄ | $\kappa \alpha \theta \omega \varsigma$ |
| 33.2 | 1：16，5．2 | Ex－149\＄ | ${ }^{\circ} \mathrm{o} \mathrm{\mu} \tau \tau$ |
| 34.2 | 1：17，1．2 | P＾72 | $\kappa \alpha \lambda \in \iota \tau \epsilon$ |
| 34.3 | 1：17，1．3 | Ex－144\＄ | $\alpha \iota \tau \in\llcorner\sigma \theta \epsilon$ |
| 35.2 | 1：17，2．2 | P＾72 | ouv |
| 36.2 | 1：18，1．2 | Ex－135\＃ | 21 |
| 37.2 | 1：19，1．2 | Ex－144\＄ | $\tau \omega$ |
| 38.2 | 1：20，1．2 | Ex－149\＄ | －$\tau \omega \nu$ г．$\chi \rho$. |
| 38.3 | 1：20，1．3 | 69\％ | －$\tau \omega \nu$ т．$\eta \mu \in \rho \omega \nu$ |
| 38.4 | 1：20，1．4 | Ex－145\＄ | －tou tou $\chi$ ¢ovou |
| 39.1 | 1：21，1．1 | Ex－144\＄ | ${ }^{\text {「mıotous }}$ |
| 39.3 | 1：21，1．3 | 33＊ | －$\sigma \alpha \nu \tau \alpha \varsigma$ |
| 40.2 | 1：21，2．2 | Ex－144\＄ | $\tau \eta \nu$ |
| 41.2 | 1：22，1．2 | Ex－144\＄ | $\delta \iota \alpha \pi \nu \in \cup \mu \alpha \tau O \varsigma$ |
| 42.2 | 1：22，2．2 | Ex－149\＄ | ${ }^{*} 2$ |
| 42.3 | 1：22，2．3 | Ex－122 | $\kappa \alpha \rho . \alpha \lambda \eta \theta$ L $\nu \eta s$ |
| 43.2 | 1：23，1．2 | Ex－144\＄ | 2 |
| 43.3 | 1：23，1．3 | Ex－145\＄ | $\epsilon \mathrm{K} \phi \theta \mathrm{o} \mathrm{\rho} \mathrm{\alpha}$ ¢ |
| 44.2 | 1：23，2．2 | Ex－126 | 21 |
| 44.3 | 1：23，2．3 | 36 | 1 |
| 45.2 | 1：23，3．2 | Ex－145\＄ | $\epsilon \iota \zeta$ тov $\alpha\llcorner\omega \nu \alpha$ |
| 45.3 | 1：23，3．3 | 1838 | $\epsilon \mathrm{L}$ ¢ tous $\alpha$ L $\omega \nu \alpha$ ¢ |
| 46.2 | 1：24，1．2 | P＾72 | o兀l |
| 46.3 | 1：24，1．3 | Ex－145\＄ | סьo |
| 47.2 | 1：24，2．2 | Ex－149\＄ | ${ }^{\circ} \mathrm{o} \mathrm{\mu} \mathrm{\iota} \mathrm{\tau}$ |
| 48.2 | 1：24，3．2 | Ex－145\＄ | $\alpha$ тоu |
| 48.3 | 1：24，3．3 | Ex－135\＃ | $\alpha \nu \theta \rho \omega \pi$ ou |
| 48.4 | 1：24，3．4 | Ex－146\＄ | － |
| 49.2 | 1：24，4．2 | P＾72 | ${ }^{\circ} \mathrm{o} \mu \tau \tau$ |
| 50.2 | 1：24，5．2 | Ex－149\＄ | 人utou |
| 51.2 | 1：25，1．2 | Ex－132 | ${ }^{\square}$ out |
| 52.2 | 1：25，2．2 | Ex－144\＄ | 231 |
| 53.2 | 2：1，1．2 | Ex－144\＄ | －$¢\llcorner$ |
| 54.2 | 2：1，2．2 | Ex－144\＄ | －vov |


| 54.3 | 2:1,2.3 | Ex-133 | фovous |
| :---: | :---: | :---: | :---: |
| 55.2 | 2:1,3.2 | Ex-144\$ | 2 |
| 55.3 | 2:1,3.3 | 01* | $\pi \alpha \sigma \alpha \nu-\lambda \iota \alpha \nu$ |
| 55.4 | 2:1,3.4 | $\mathrm{Cl}^{\wedge} \mathrm{a} \%$ | - $\lambda \iota \alpha \nu$ |
| 56.2 | 2:2,1.2 | Ex-144\$ | к $\alpha$, |
| 57.2 | 2:2,2.2 | Ex-140 | ${ }^{\square}$ out $\tau$ |
| 58.1 | 2:3,1.1 | Ex-149\$ |  |
| 59.2 | 2:3,2.2 | P^72 | $\epsilon \pi เ \sigma \tau \epsilon \cup \sigma \alpha \tau \epsilon$ |
| 59.3 | 2:3,2.3 | sy^p\% | $\kappa \alpha \iota ~ \epsilon\llcorner\delta \epsilon \tau \epsilon$ |
| 60.2 | 2:3,3.2 | Ex-144\$ | $\chi$ ¢ьбтоя |
| 61.2 | 2:4,1.2 | Ex-144\$ | $\alpha \pi \%$ |
| 61.3 | 2:4,1.3 | Ex-128 | UT $\in \rho$ |
| 62.2 | 2:5,1.2 | Ex-144\$ | $\epsilon$ єогк- |
| 63.2 | 2:5,2.2 | Ex-145\$ | ${ }^{\circ} \mathrm{o} \mathrm{\mu} \mathrm{\nu} \mathrm{\tau}$ |
| 64.2 | 2:5,3.2 | Ex-125 | 21 |
| 64.3 | 2:5,3.3 | P^72 | 1 |
| 64.4 | 2:5,3.4 | Ex-131 | 2 |
| 65.2 | 2:5,4.2 | Ex-141\# | ${ }^{\circ} \mathrm{o} \mathrm{\mu} \mathrm{\nu} \mathrm{\tau}$ |
| 66.1 | 2:6,1.1 | Ex-149\$ | $\stackrel{\ulcorner }{\text { 「 } V}$ |
| 66.2 | 2:6,1.2 | Ex-140 | $\epsilon \nu \tau \eta$ |
| 67.2 | 2:6,2.2 | Ex-144\$ | ${ }^{*} 213$ |
| 67.3 | 2:6,2.3 | Prim\% | 13 |
| 67.4 | 2:6,2.4 | Ex-125 | 23 |
| 68.2 | 2:7,1.2 | Ex-144\$ | $\alpha \pi \in\llcorner\theta$ - |
| 69.1 | 2:7,2.1 | Ex-149\$ |  |
| 70.2 | 2:8,1.2 | Ex-133 | $\alpha \pi \iota \sigma \tau-$ |
| 70.3 | 2:8,1.3 | 1852 | $\alpha \pi \epsilon\llcorner$ Өoũı $\nu$ |
| 70.4 | 2:8,1.4 | 1241* | $\alpha \pi \epsilon\llcorner$ Өouv |
| 71.2 | 2:8,2.2 | Ex-127 |  |
| 72.2 | 2:9,1.2 | Ex-144\$ | ${ }^{\circ}$ оць $\tau$ |
| 73.2 | 2:11,1.2 | Ex-149\$ | - $\alpha \pi \epsilon \chi \in \sigma \theta \epsilon$ |
| 74.2 | 2:12,1.2 | Ex-127 |  |
| 75.2 | 2:12,2.2 | Ex-144\$ | - $\omega \sigma \iota \nu$ |
| 75.3 | 2:12,2.3 | Ex-125 | кхкотоьоибьข |
| 76.2 | 2:12,3.2 | Ex-144\$ | u $\mu \omega \nu$ |
| 77.2 | 2:12,4.2 | Ex-142\# | - $\sigma \alpha \nu \tau \in \varsigma$ |
| 78.2 | 2:12,5.2 | P^72 | $\nu \mu \omega \nu$ |
| 79.2 | 2:13,1.2 | Ex-149\$ | ouv |
| 80.2 | 2:13,2.2 | Ex-144\$ | 21 |
| 80.3 | 2:13,2.3 | 01* | 2 |
| 80.4 | 2:13,2.4 | Ex-145\$ | $\phi \cup \sigma \in\llcorner\sim \nu \theta \rho-$ |
| 81.2 | 2:14,1.2 | Ex-144\$ | $\mu \in \nu$ |
| 82.2 | 2:14,2.2 | Ex-144\$ | ${ }^{\square}$ о $\mu$ し $\tau$ |


| 83.2 | 2:15,1.2 | Ex-144\$ | ט $\mu \alpha \varsigma^{\prime}$ |
| :---: | :---: | :---: | :---: |
| 84.2 | 2:15,2.2 | P^72 | $\alpha \gamma \nu 0 \iota \alpha \nu$ |
| 84.3 | 2:15,2.3 | Ex-144\$ | $\epsilon \rho \gamma \alpha \sigma \iota \alpha \nu$ |
| 85.2 | 2:16,1.2 | Ex-135\# | 21 |
| 85.3 | 2:16,1.3 | 049* | 2 |
| 85.4 | 2:16,1.4 | 460 | $\phi \iota \lambda$ оı $\theta$. |
| 86.2 | 2:17,1.2 | Ex-149\$ | $\alpha \gamma \alpha \pi \eta \sigma \alpha \tau \epsilon$ |
| 87.2 | 2:17,2.2 | Ex-144\$ | $\delta \epsilon$ |
| 88.2 | 2:18,1.2 | Ex-145\$ | 21 |
| 89.2 | 2:18,2.2 | Ex-144\$ | $\nu \mu \omega \nu$ |
| 90.2 | 2:18,3.2 | Ex-144\$ | ${ }^{\circ}$ оиьт |
| 91.2 | 2:19,1.2 | Ex-135\# | $\pi \alpha \rho \alpha \tau \omega \theta \epsilon \omega$ |
| 91.3 | 2:19,1.3 | 2464* | $\theta \in \omega$ |
| 91.4 | 2:19,1.4 | Ex-149\$ | $\theta \in$ ou |
| 92.2 | 2:19,2.2 | Ex-135\# | $\alpha \gamma \alpha \theta \eta \nu$ |
| 92.3 | 2:19,2.3 | Ex-149\$ | $\alpha \gamma \alpha \theta \eta \nu$ өєou |
| 93.2 | 2:20,1.2 | Ex-149\$ | к $\alpha\left\llcorner\right.$ ко $\lambda \alpha \zeta$ онє $\nu_{\text {оь }}$ |
| 93.3 | 2:20,1.3 | 69\% |  |
| 94.2 | 2:20,2.2 | Ex-149\$ | - $\mu \in \nu \in \tau \epsilon$ |
| 95.2 | 2:20,3.2 | Ex-145\$ | $-\mu \epsilon \nu \in \tau \epsilon$ |
| 95.3 | 2:20,3.3 | Ex-146\$ | - |
| 96.2 | 2:21,1.2 | Ex-145\$ | $\kappa \alpha\llcorner$ |
| 97.2 | 2:21,2.2 | Ex-144\$ | ${ }^{\circ} \mathrm{o} \mathrm{\mu} \mathrm{\tau} \mathrm{\tau}$ |
| 98.2 | 2:21,3.2 | Ex-145\$ | $\alpha \pi \epsilon \theta \alpha \nu \in \nu$ |
| 99.2 | 2:21,4.2 | Ex-144\$ | $\pi \epsilon \rho\llcorner$ |
| 100.2 | 2:21,5.2 | Ex-144\$ | $\eta \mu-\eta \mu-$ |
| 100.3 | 2:21,5.3 | Ex-145\$ | $\eta \mu-v \mu-$ |
| 101.2 | 2:21,6.2 | P^72 | $\alpha \pi 0 \lambda$. |
| 101.3 | 2:21,6.3 | P025* | ขпо $\lambda \alpha \mu \beta \alpha \nu \omega \nu$ |
| 102.2 | 2:23,1.2 | Ex-144\$ | - |
| 102.3 | 2:23,1.3 | $\mathrm{P}^{\wedge} 81 \%$ | $\delta \in$ тоข тотоข |
| 102.4 | 2:23,1.4 | Ex-145\$ | $\delta \in \epsilon$ ¢иutov |
| 102.5 | 2:23,1.5 | Ex-146\$ | $\tau \epsilon$ |
| 103.2 | 2:23,2.2 | Ex-144\$ | $\alpha \delta \iota \kappa \omega \varsigma$ |
| 104.2 | 2:24,1.2 | Ex-144\$ | $\nu \mu \omega \nu$ |
| 105.2 | 2:24,2.2 | Ex-144\$ | $\sigma \nu \zeta \eta \sigma \omega \mu \in \nu$ |
| 106.2 | 2:24,3.2 | Ex-144\$ | $\alpha$ <tov |
| 107.2 | 2:24,4.2 | Ex-144\$ | $-\theta \eta \mu \in \nu$ |
| 108.1 | 2:25,1.1 | Ex-141\# | ${ }^{\text {r }}$ - $\lambda \alpha \nu \omega \mu \in \nu$ OL |
| 109.2 | 2:25,2.2 | Ex-144\$ | $\eta \mu \omega \nu$ |
| 110.2 | 3:1,1.2 | Ex-141\# | "- |
| 110.3 | 3:1,1.3 | Ex-145\$ | K $\alpha$, |
| 111.2 | 3:1,2.2 | Ex-145\$ | 213 |


| 111.3 | 3：1，2．3 | Ex－150\＄ | 23 |
| :---: | :---: | :---: | :---: |
| 111.4 | 3：1，2．4 | Ex－149\＄ | OLTLDES |
| 111.5 | 3：1，2．5 | Ex－148\＄ | к $\alpha$ L ot |
| 112.2 | 3：2，1．2 | Ex－145\＄ | －¢טovtes |
| 113.2 | 3：3，1．2 | Ex－145\＄ | єкт入окпऽ |
| 114.2 | 3：3，2．2 | Ex－145\＄ | ${ }^{\circ}$ о $\mu \tau \tau$ |
| 115.2 | 3：4，1．2 | Ex－145\＄ | 21 |
| 116.2 | 3：5，1．2 | Ex－145\＄ | $\epsilon \pi \iota \theta$ ． |
| 116.3 | 3：5，1．3 | Ex－146\＄ | $\epsilon \pi\llcorner$ тov $\theta$ ． |
| 116.4 | 3：5，1．4 | Ex－147\＄ | $\epsilon \iota \varsigma$ тov $\theta$ ． |
| 117.2 | 3：6，1．2 | P＾72 | 231 |
| 117.3 | 3：6，1．3 | Ex－144\＄ | טாп¢коиє $\tau$ ¢ $\omega$ |
| 118.2 | 3：6，2．2 | Ex－144\＄ | $\pi \tau \omega \sigma \iota \nu$ |
| 118.3 | 3：6，2．3 | Ex－145\＄ |  |
| 119.2 | 3：7，1．2 | Ex－144\＄ | ${ }^{\circ}$ оцı $\tau$ |
| 120.2 | 3：7，2．2 | 01＊ |  |
| 121.1 | 3：7，3．1 | Ex－150\＄ | 「бuүк入пророноь¢ |
| 121.3 | 3：7，3．3 | 01＊ | —vorous |
| 121.4 | 3：7，3．4 | Ex－149\＄ | －$\nu$ о $\omega \omega$ |
| 122.2 | 3：7，4．2 | Ex－144\＄ | тоькı入пs $\chi$ ．$\zeta$ ． |
| 122.3 | 3：7，4．3 | Ex－145\＄ | $\chi \cdot \zeta . \alpha\llcorner\omega \nu$ Lou |
| 123.2 | 3：7，5．2 | Ex－144\＄ | $\tau \alpha\llcorner\varsigma-\chi \alpha \iota \varsigma$ |
| 124.2 | 3：8，1．2 | Ex－145\＄ | ф८лоф $\rho$－ |
| 124.3 | 3：8，1．3 | Ex－149\＄ | ф $\llcorner\lambda о \phi \rho-\tau \alpha \pi \epsilon\llcorner\nu о \phi \rho-$ |
| 125.2 | 3：9，1．2 | Ex－145\＄ | $\epsilon\llcorner$ ¢отєऽ |
| 126.1 | 3：10，1．1 | Ex－144\＄ | ${ }^{\top}$ out $\tau$ |
| 127.2 | 3：10，2．2 | Ex－145\＄ | ＜utou |
| 128.2 | 3：10，3．2 | P＾72 | $\lambda \alpha \lambda \in \tau \nu$ |
| 129.1 | 3：11，1．1 | Ex－144\＄ | ${ }^{\circ} \delta \epsilon$ |
| 130.2 | 3：12，1．2 | Ex－144\＄ |  |
| 131.2 | 3：13，1．2 | Ex－144\＄ | $\epsilon \mathrm{l}$ |
| 132.2 | 3：13，2．2 | Ex－149\＄ | $\mu \mu \eta \tau \alpha \downarrow$ |
| 133.2 | 3：13，3．2 | Ex－126 | $\epsilon \sigma \tau \epsilon$ |
| 133.3 | 3：13，3．3 | Ex－133 | $\gamma \in \nu$ оь $\sigma \theta \epsilon$ |
| 133.4 | 3：13，3．4 | Ex－145\＄ | $\gamma \in \nu \in \sigma \theta \epsilon$ |
| 134.2 | 3：14，1．2 | Ex－144\＄ | $\epsilon \sigma \tau \epsilon$ |
| 135.2 | 3：14，2．2 | Ex－144\＄ | ${ }^{\square}$ о $\mu \tau \tau$ |
| 136.2 | 3：15，1．2 | Ex－149\＄ | $\theta \in O \nu$ |
| 137.2 | 3：15，2．2 | Ex－145\＄ | $\delta \in \alpha \in L$ |
| 138.2 | 3：15，3．2 | Ex－145\＄ | $\alpha \pi \alpha \iota \tau$ |
| 139.2 | 3：16，1．2 | Ex－144\＄ | ${ }^{\circ}{ }^{\circ} \mathrm{\mu} \mu \tau$ |
| 140.1 | 3：16，2．1 | Ex－144\＄ | ${ }^{\text {「 }}$ ¢ $\alpha \tau \alpha \lambda \alpha \lambda \epsilon \iota \sigma \theta \epsilon$ |
| 141.2 | 3：16，3．2 | P＾72 | $\alpha\llcorner\sigma \chi$－ |


| 142.2 | 3：16，4．2 | Ex－144\＄ | 231 |
| :---: | :---: | :---: | :---: |
| 142.3 | 3：16，4．3 | Ex－145\＄ | $\epsilon \nu$ X．$\alpha \gamma \nu \eta \nu$ |
| 142.4 | 3：16，4．4 | 01＊ | $\alpha \gamma \alpha \theta \eta \nu$ єı¢ Xpıo亢ov |
| 143.2 | 3：18，1．2 | P＾72 | ó |
| 143.3 | 3：18，1．3 | 242 | K $\alpha$ ı ó |
| 143.4 | 3：18，1．4 | Ex－144\＄ | － |
| 144.1 | 3：18，2．1 | Ex－144\＄ | ${ }^{\prime} \pi \epsilon \rho\llcorner\alpha \mu \alpha \rho \tau \iota \omega \nu$ 水 $\alpha \theta \in \nu$ |
| 144.2 | 3：18，2．2 | Ex－124 | ＇$\pi \epsilon \rho\llcorner\alpha \mu . \alpha \pi \epsilon \theta \alpha \nu \in \nu$ |
| 144.4 | 3：18，2．4 | 044＊ | $\pi \epsilon \rho\llcorner$ v $\mu \omega \nu$ v $\pi \in \rho \alpha \mu . \alpha \pi \epsilon \theta$ ． |
| 144.5 | 3：18，2．5 | Ex－145\＄ | $\pi \epsilon \rho\llcorner\alpha \mu . \eta \mu . \alpha \pi \epsilon \theta$ ． |
| 145.2 | 3：18，3．2 | Ex－126 | ${ }^{\square}$ оит $\tau$ |
| 146.1 | 3：18，4．1 | Ex－144\＄ | ${ }^{\text {＇u }}$ ¢ $\alpha$ ¢ |
| 146.3 | 3：18，4．3 | 01＊ | － |
| 147.2 | 3：18，5．2 | Ex－144\＄ | 2 |
| 147.3 | 3：18，5．3 | 440 | $\tau \omega \pi \alpha \tau \rho \iota$ |
| 147.4 | 3：18，5．4 | Ex－133 | － |
| 148.2 | 3：18，6．2 | Ex－145\＄ | ${ }^{\circ}$ оиьт |
| 149.2 | 3：18，7．2 | P＾72 | $\epsilon \nu$ |
| 149.3 | 3：18，7．3 | 81＊ | $\tau \omega$ |
| 150.2 | 3：19，1．2 | Ex－144\＄ | $\tau \omega \alpha \delta \eta$ |
| 150.3 | 3：19，1．3 | Ex－145\＄ | фид $\alpha \kappa \eta$ к $\alpha \tau \alpha \kappa \lambda \in\llcorner\sigma \mu \in \nu 0\llcorner\varsigma$ |
| 151.2 | 3：19，2．2 | Ex－144\＄ | －$\mu \alpha \tau \iota$ |
| 152.2 | 3：20，1．2 | Ex－144\＄ | $\alpha \pi \alpha \xi \in \delta \in \chi$－ |
| 153.1 | 3：20，2．1 | Ex－149\＄ | 「ȯ̀ıүoı |
| 154.2 | 3：20，3．2 | P＾72 | ${ }^{\circ}$ out $\tau$ |
| 155.2 | 3：21，1．2 | Ex－144\＄ | $\omega$ |
| 155.3 | 3：21，1．3 | Ex－145\＄ | － |
| 156.2 | 3：21，2．2 | Ex－144\＄ | $\eta \mu-$ |
| 157.2 | 3：22，1．2 | Ex－144\＄ | ${ }^{\circ} \mathrm{o} \mathrm{\mu} \mathrm{\iota} \mathrm{\tau}$ |
| 158.2 | 3：22，2．2 | Ex－144\＄ |  |
| 159.1 | 4：1，1．1 | Ex－144\＄ |  |
| 159.3 | 4：1，1．3 | Ex－150\＄ | $\pi . \nu \pi \epsilon \rho$ v $\mu \omega \nu \sigma$. |
| 159.4 | 4：1，1．4 | Ex－149\＄ | $\pi . \in \nu \sigma$ ． |
| 159.5 | 4：1，1．5 | 01＊ |  |
| 160.2 | 4：1，2．2 | Ex－149\＄ | $\epsilon \nu$ |
| 161.2 | 4：1，3．2 | Ex－144\＄ | －$\tau \iota \alpha \iota \varsigma$ |
| 161.3 | 4：1，3．3 | Ex－145\＄ | $\alpha \pi 0$－$\tau \iota \alpha \varsigma$ |
| 162.2 | 4：2，1．2 | Ex－145\＄ | 21 |
| 162.3 | 4：2，1．3 | Ex－126 | $\alpha \nu \theta . \alpha \mu \alpha \rho \tau \iota \alpha \iota \varsigma$ |
| 163.2 | 4：2，2．2 | 01＊ | $\alpha \nu \theta \rho \omega \pi$ о |
| 164.2 | 4：2，3．2 | P＾72 | $\sigma \omega \sigma \alpha \iota$ |
| 165.2 | 4：3，1．2 | Ex－144\＄ | u $\mu \mathrm{L} \nu$ |
| 165.3 | 4：3，1．3 | Ex－145\＄ | $\eta \mu \iota \nu$ |


| 166.2 | 4：3，2．2 | Ex－144\＄ | тou $\beta$ ıou |
| :---: | :---: | :---: | :---: |
| 167.2 | 4：3，3．2 | Ex－144\＄ | $\theta \in \lambda \eta \mu \alpha$ |
| 168.2 | 4：3，4．2 | Ex－144\＄ | торєионєขоия |
| 169.2 | 4：4，1．2 | Ex－144\＄ | к $\alpha \iota \beta \lambda \alpha \sigma \phi \eta \mu 0 \cup \sigma \iota \nu$ |
| 170.2 | 4：5，1．2 | P＾72 | 12 |
| 170.3 | 4：5，1．3 | 01＊ | － |
| 171.2 | 4：5，2．2 | Ex－135\＃ | $\epsilon \tau . \mathrm{k} \mathrm{\rho} \mathrm{\iota} \mathrm{\nu о} \mathrm{\nu} \mathrm{\tau} \mathrm{\iota}$ |
| 171.3 | 4：5，2．3 | Ex－145\＄ | $\epsilon \tau о \iota \mu \omega$ крь८んı |
| 172.2 | 4：7，1．2 | Ex－144\＄ | $\tau \alpha \varsigma$ |
| 173.2 | 4：8，1．2 | Ex－149\＄ | $\delta \epsilon$ |
| 174.2 | 4：8，2．2 | Ex－144\＄ | $\alpha \cup \tau-$ |
| 175.2 | 4：8，3．2 | Ex－144\＄ | －ט |
| 176.2 | 4：9，1．2 | Ex－144\＄ | －$\sigma \mu \omega \nu$ |
| 177.2 | 4：11，1．2 | Ex－142\＃ |  |
| 177.3 | 4：11，1．3 | Ex－127 | $\chi$ орך $\gamma$ ¢ $\alpha \nu$ |
| 178.2 | 4：11，2．2 | Ex－145\＄ | 231 |
| 178.3 | 4：11，2．3 | Ex－126 | 1 |
| 179.2 | 4：11，3．2 | P＾72 | ${ }^{\circ}$ out $\tau$ |
| 180.2 | 4：11，4．2 | P＾72 | ${ }^{\circ}$ out $\tau$ |
| 181.2 | 4：11，5．2 | Ex－145\＄ | ${ }^{\square}$ out $\tau$ |
| 182.2 | 4：12，1．2 | P＾72 | $\epsilon \pi \iota$ |
| 183.1 | 4：14，1．1 | Ex－144\＄ | ＇к $\kappa\llcorner$ to tov $\theta \in$ ou |
| 183.3 | 4：14，1．3 | Ex－146\＄ |  |
| 184.1 | 4：14，2．1 | Ex－149\＄ |  |
| 184.3 | 4：14，2．3 | Ex－145\＄ | $\alpha \nu \alpha \pi \epsilon \pi \alpha \cup \tau \alpha \downarrow$ |
| 184.4 | 4：14，2．4 | Ex－130 | $\alpha \nu \alpha \pi \pi \epsilon \pi \epsilon \epsilon \tau \alpha \downarrow$ |
| 185.2 | 4：14，3．2 | Ex－145\＄ |  |
| 186.2 | 4：15，1．2 | Ex－144\＄ | $\omega \varsigma$ |
| 187.2 | 4：15，2．2 | Ex－144\＄ | $\varsigma$ |
| 188.1 | 4：15，3．1 | Ex－141\＃ | 「え入入入отрıєпьбкотоऽ |
| 188.3 | 4：15，3．3 | Ex－144\＄ | $\alpha \lambda \lambda$ от $\rho$ Loc $\epsilon \pi$ ． |
| 188.4 | 4：15，3．4 | P＾72 | $\alpha \lambda \lambda$ отpıoı¢ $\epsilon \pi$ ． |
| 189.2 | 4：16，1．2 | P＾72 | ${ }^{\circ}$ оиь $\tau$ |
| 190.2 | 4：16，2．2 | 01＊ | X $\quad \eta \sigma \tau-$ |
| 191.2 | 4：16，3．2 | Ex－144\＄ | $\mu \in \rho \in\llcorner$ |
| 192.2 | 4：17，1．2 | Ex－141\＃ | ${ }^{\circ}$ оиьт |
| 193.2 | 4：17，2．2 | Ex－144\＄ | u $\mu$－ |
| 194.2 | 4：18，1．2 | Ex－144\＄ | $\mu \in \nu$ |
| 195.2 | 4：18，2．2 | Ex－145\＄ | 321 |
| 195.3 | 4：18，2．3 | Ex－146\＄ | ${ }^{*} \delta \in \alpha \sigma . \mathrm{k} . \alpha \mu$ ． |
| 196.2 | 4：19，1．2 | Ex－133 | 1 |
| 196.3 | 4：19，1．3 | Ex－144\＄ | $\epsilon \alpha \cup \tau \omega \nu \psi$ ． |
| 197.2 | 4：19，2．2 | Ex－144\＄ | －ı $\alpha \iota \varsigma$ |


| 198.2 | 5:1,1.2 | Ex-144\$ | ouv tous |
| :---: | :---: | :---: | :---: |
| 198.3 | 5:1,1.3 | Ex-149\$ | tous |
| 198.4 | 5:1,1.4 | Ex-146\$ | - |
| 199.2 | 5:1,2.2 | Ex-144\$ | $\omega \varsigma$ |
| 200.2 | 5:1,3.2 | P^72 | $\theta \in$ ou |
| 201.2 | 5:2,1.2 | Ex-144\$ | * 2-7 |
| 201.3 | 5:2,1.3 | Ex-145\$ | 2-5 |
| 201.4 | 5:2,1.4 | Ex-140 | 1-5 |
| 202.2 | 5:2,2.2 | Ex-144\$ | $\mu \eta$ |
| 203.2 | 5:3,1.2 | Ex-133 | ${ }^{\square} \mathrm{o} \mathrm{\mu}$ ¢ $\tau$ |
| 204.2 | 5:5,1.2 | Ex-145\$ | $\delta \epsilon$ |
| 204.3 | 5:5,1.3 | Ex-146\$ | $\delta \in$ ol |
| 204.4 | 5:5,1.4 | Ex-147\$ | $\delta \in \kappa \alpha \downarrow$ oı |
| 205.2 | 5:5,2.2 | Ex-144\$ | $\epsilon \nu \alpha \lambda \lambda$. |
| 205.3 | 5:5,2.3 | Ex-145\$ | $\alpha \lambda \lambda$. vтот $\alpha \sigma \sigma о \mu \in \nu$ оا |
| 205.4 | 5:5,2.4 | Ex-146\$ | $\alpha \lambda \lambda$. vпоо $\alpha \gamma \omega \mu \in \nu$ |
| 205.5 | 5:5,2.5 | 044* | $\alpha \lambda \lambda \eta \lambda$ Ou¢ $\alpha \gamma \alpha \pi \eta \sigma \alpha \tau \epsilon$ |
| 206.2 | 5:5,3.2 | Ex-139 | ${ }^{\circ} \mathrm{o} \mathrm{\mu} \mathrm{\tau} \mathrm{\tau}$ |
| 207.2 | 5:6,1.2 | Ex-145\$ | $\epsilon \pi เ \sigma \kappa 0 \pi \eta$ ¢ |
| 208.2 | 5:7,1.2 | P^72 | $\alpha \pi о \rho \iota \psi \alpha \nu \tau \epsilon \varsigma$ |
| 208.3 | 5:7,1.3 | Ex-144\$ | $\epsilon \pi\llcorner\rho\llcorner\psi \alpha \tau \epsilon$ |
| 209.2 | 5:7,2.2 | Ex-144\$ | $\eta \mu$ - |
| 210.2 | 5:8,1.2 | Ex-149\$ | oтı |
| 211.2 | 5:8,2.2 | Ex-144\$ | ó |
| 212.2 | 5:8,3.2 | Ex-135\# | ríva |
| 212.3 | 5:8,3.3 | Ex-145\$ | - |
| 213.2 | 5:8,4.2 | Ex-145\$ | $\alpha \tau \alpha \pi \iota \eta$ |
| 214.2 | 5:9,1.2 | P^72 | ${ }^{\circ}$ оиı $\tau$ |
| 215.2 | 5:9,2.2 | P^72 | $\epsilon \delta \rho \alpha\llcorner$ ıו |
| 216.2 | 5:9,3.2 | Ex-144\$ | оть |
| 217.1 | 5:9,4.1 | Ex-141\# | ${ }^{\circ} \tau \omega$ |
| 218.2 | 5:9,5.2 | Ex-150\$ | - $\lambda \in \iota \sigma \theta \epsilon$ |
| 218.3 | 5:9,5.3 | P^72 | - $\lambda \in \iota \tau \alpha \downarrow$ |
| 218.4 | 5:9,5.4 | Ex-149\$ | $\epsilon \pi \iota \mu \in \lambda \in \tau \sigma \theta \epsilon$ |
| 219.2 | 5:10,1.2 | Ex-144\$ | $\eta \mu-$ |
| 220.2 | 5:10,2.2 | Ex-144\$ | " 12 |
| 220.3 | 5:10,2.3 | Ex-133 | $\epsilon \nu \tau \omega \mathrm{X} \rho$. |
| 220.4 | 5:10,2.4 | 945 | - |
| 221.1 | 5:10,3.1 | Ex-142\# |  |
| 221.2 | 5:10,3.2 | Ex-144\$ | 124 |
| 221.4 | 5:10,3.4 | Ex-145\$ | к- $\tau \iota \sigma \alpha \iota \quad \nu \mu \alpha \varsigma-\xi \in \iota-\sigma \epsilon\llcorner$ - $\sigma \in \iota$ |
| 221.5 | 5:10,3.5 | Ex-127 | - $\sigma \alpha \iota-\xi \alpha \iota-\sigma \alpha \iota$ - $\sigma \alpha \iota$ |
| 222.2 | 5:11,1.2 | Ex-144\$ | $\eta \delta$ о $\xi \alpha$ к $\alpha \iota$ то $\kappa \rho$. |


| 222.3 | 5：11，1．3 | Ex－130 | $\eta \delta$ о $\chi^{\prime}$ к $\rho$. |
| :---: | :---: | :---: | :---: |
| 222.4 | 5：11，1．4 | Ex－145\＄ | то кр．к $\alpha \iota \eta$ ठо $\alpha^{\prime}$ |
| 223.1 | 5：11，2．1 | Ex－144\＄ | ${ }^{\top}$ out $\tau$ |
| 224.2 | 5：12，1．2 | P＾72 | $\delta \iota \alpha \beta p \alpha \chi \epsilon \omega \nu$ |
| 225.2 | 5：12，2．2 | Ex－145\＄ | ${ }^{\circ}$ одı七 |
| 226.2 | 5：12，3．2 | Ex－135\＃ | $\epsilon \sigma \tau \eta \kappa \alpha \tau \epsilon$ |
| 226.3 | 5：12，3．3 | Ex－144\＄ | $\epsilon \sigma \tau \epsilon$ |
| 226.4 | 5：12，3．4 | 044＊ | $\alpha \iota \tau \in ⿺ \tau ⿻$ |
| 227.2 | 5：13，1．2 | 2138 | $\mathrm{P} \omega \mu \eta$ |
| 228.2 | 5：13，2．2 | Ex－144\＄ | єкк $\dagger \eta \sigma \iota \alpha$ |
| 229.2 | 5：14，1．2 | Ex－144\＄ | $\alpha \gamma \iota \omega$ |
| 230.2 | 5：14，2．2 | P＾72 | ${ }^{\square}$ о $\mu \tau \tau$ |
| 231.1 | 5：14，3．1 | Ex－144\＄ |  |
| 232.1 | 5：14，4．1 | Ex－144\＄ | ${ }^{\top} \mathrm{o}$ o $\mu \tau$ |

## Appendix G

Places Where the Non-Autographic Variants Were Initiated in the Textual History of 1 Peter

Arranged in Order by Witness

## List of Places Where Non-Autographic Variants Were Initiated in the Genealogical History, Arranged in Order by Witness

| Witness | Place of Variation | Reference | Variant Reading |
| :---: | :---: | :---: | :---: |
| P^72 | 3.2 | 1:3,1.2 | ${ }^{\circ}$ out |
| P^72 | 5.3 | 1:3,3.3 | - |
| P^72 | 10.2 | 1:5,1.2 | 1 |
| P^72 | 11.2 | 1:6,1.2 | $\alpha \gamma \alpha \lambda \lambda L \alpha \sigma \alpha \nu \tau \in \zeta$ |
| P^72 | 14.2 | 1:6,4.2 | то八доıऽ |
| P^72 | 28.3 | 1:14,1.3 | 34 |
| P^72 | 34.2 | 1:17,1.2 | $\kappa \alpha \lambda \in \iota \tau \epsilon$ |
| P^72 | 35.2 | 1:17,2.2 | ouv |
| P^72 | 46.2 | 1:24,1.2 | otl |
| P^72 | 49.2 | 1:24,4.2 | ${ }^{\circ}$ о $\mu$ ¢ |
| P^72 | 59.2 | 2:3,2.2 | $\epsilon \pi\llcorner\sigma \tau \in \cup \sigma \alpha \tau \epsilon$ |
| P^72 | 64.3 | 2:5,3.3 | 1 |
| P^72 | 78.2 | 2:12,5.2 | $\nu \mu \omega \nu$ |
| P^72 | 84.2 | 2:15,2.2 | $\alpha \gamma \nu 01 \alpha \nu$ |
| P^72 | 101.2 | 2:21,6.2 | $\alpha \pi 0 \lambda$. |
| P^72 | 117.2 | 3:6,1.2 | 231 |
| P^72 | 128.2 | 3:10,3.2 | $\lambda \alpha \lambda \in \iota \nu$ |
| P^72 | 141.2 | 3:16,3.2 | $\alpha\llcorner\sigma \chi$ - |
| P^72 | 143.2 | 3:18,1.2 | ó |
| P^72 | 149.2 | 3:18,7.2 | $\epsilon \nu$ |
| P^72 | 154.2 | 3:20,3.2 |  |
| P^72 | 164.2 | 4:2,3.2 | $\sigma \omega \sigma \alpha\llcorner$ |
| P^72 | 170.2 | 4:5,1.2 | 12 |
| P^72 | 179.2 | 4:11,3.2 | ${ }^{\circ}$ о ${ }^{\text {oft }}$ |
| P^72 | 180.2 | 4:11,4.2 | ${ }^{\circ}{ }^{\circ} \mathrm{\mu} \mu \tau$ |
| P^72 | 182.2 | 4:12,1.2 | $\epsilon \pi \iota$ |
| P^72 | 188.4 | 4:15,3.4 | $\alpha \lambda \lambda$ отplots $\epsilon \pi$. |
| P^72 | 189.2 | 4:16,1.2 | ${ }^{\circ}$ о ${ }^{\text {¢ }}$ ¢ |
| P^72 | 200.2 | 5:1,3.2 | $\theta \in$ ou |
| P^72 | 208.2 | 5:7,1.2 | $\alpha \pi о р\llcorner\psi \alpha \nu \tau \in \zeta$ |
| P^72 | 214.2 | 5:9,1.2 | ${ }^{\circ}$ оциє |
| P^72 | 215.2 | 5:9,2.2 | $\epsilon \delta \rho \alpha$ Loı |
| P^72 | 218.3 | 5:9,5.3 | - $\lambda \in \iota \tau \alpha \downarrow$ |
| P^72 | 224.2 | 5:12,1.2 | $\delta \iota \alpha \beta p \alpha \chi \epsilon \omega \nu$ |
| P^72 | 230.2 | 5:14,2.2 | ${ }^{\square}$ о $\mu \tau \tau$ |



| Total for $33^{*}=2$ |  |  |  |
| :---: | :---: | :---: | :---: |
| 36 | 44.3 | 1:23,2.3 | 1 |
| Total for $36=1$ |  |  |  |
| 81* | 149.3 | 3:18,7.3 | $\tau \omega$ |
| Total for $81^{*}=1$ |  |  |  |
| 242 | 143.3 | 3:18,1.3 | K $\alpha \mathrm{L}$ ó |
| Total for $242=1$ |  |  |  |
|  |  |  |  |
| 440 | 147.3 | 3:18,5.3 | $\tau \omega \pi \alpha \tau \rho \iota$ |
| Total for $440=1$ |  |  |  |
|  |  |  |  |
| 460 | 85.4 | 2:16,1.4 | $\phi \iota \lambda$ oı $\theta$. |
| Total for $460=1$ |  |  |  |
|  |  |  |  |
| 945 | 220.4 | 5:10,2.4 | - |
| Total for $945=1$ |  |  |  |
|  |  |  |  |
| 1241* | 5.2 | 1:3,3.2 | v $\mu \alpha \varsigma$ |
| 1241* | 28.4 | 1:14,1.4 | - |
| 1241* | 70.4 | 2:8,1.4 | $\alpha \pi \epsilon \iota$ Oouv |
| Total for $1241 *=3$ |  |  |  |
|  |  |  |  |
| 1838 | 45.3 | 1:23,3.3 | єL¢ tous $\alpha$ L $\omega \nu \alpha$ ¢ |
| Total for $1838=1$ |  |  |  |
|  |  |  |  |
| 1852 | 70.3 | 2:8,1.3 | $\alpha \pi \epsilon\llcorner$ Oovaı $\nu$ |
| Total for $1852=1$ |  |  |  |
|  |  |  |  |
| 2138 | 227.2 | 5:13,1.2 | $P \omega \mu \eta$ |
| Total for $2138=1$ |  |  |  |
|  |  |  |  |
| 2464* | 91.3 | 2:19,1.3 | $\theta \in \omega$ |
| Total for $2464^{*}=1$ |  |  |  |
|  |  |  |  |
| $\mathrm{vg}^{\wedge} \mathrm{b}$ | 4.3 | 1:3,2.3 | 2 |
| Total for $\mathrm{vg}^{\wedge} \mathrm{b}=1$ |  |  |  |


|  |  |  |  |
| :---: | :---: | :---: | :---: |
| sy^p\% | 59.3 | 2:3,2.3 | $K \alpha L \in\llcorner\delta \in \tau \epsilon$ |
| Total for $\mathrm{sy}^{\wedge} \mathrm{p} \%=1$ |  |  |  |
|  |  |  |  |
| 69\% | 38.3 | 1:20,1.3 | - $\tau \omega \nu \tau . \eta \mu \epsilon \rho \omega \nu$ |
| 69\% | 93.3 | 2:20,1.3 |  |
| Total for $69 \%=2$ |  |  |  |
|  |  |  |  |
| Aug^a\% | 2.2 | 1:1,2.2 | 13 |
| Total for $\operatorname{Aug}^{\wedge} \mathrm{a} \%=1$ |  |  |  |
|  |  |  |  |
| $\mathrm{Cl}{ }^{\wedge} \mathrm{a} \%$ | 19.3 | 1:7,5.3 | 1 |
| $\mathrm{Cl}{ }^{\wedge} \mathrm{a} \%$ | 55.4 | 2:1,3.4 | - $\lambda \iota \alpha \nu$ |
| $\mathrm{Cl}{ }^{\wedge} \mathrm{a} \%$ | 77.2 | 2:12,4.2 |  |
| Total for $\mathrm{Cl} \wedge \mathrm{a} \%=3$ |  |  |  |
|  |  |  |  |
| Prim\% | 67.3 | 2:6,2.3 | 13 |
| Total for Prim\% = 1 |  |  |  |
|  |  |  |  |
| Ex-122 | 42.3 | 1:22,2.3 | $\kappa \alpha \rho . \alpha \lambda \eta \theta \iota \nu \eta s^{\prime}$ |
| Total for Ex-122 = 1 |  |  |  |
|  |  |  |  |
| Ex-124 | 144.2 | 3:18,2.2 | ${ }^{*} \pi \epsilon \rho\llcorner\alpha \mu . \alpha \pi \in \theta \alpha \nu \in \nu$ |
| Total for Ex-124 = 1 |  |  |  |
|  |  |  |  |
| Ex-125 | 64.2 | 2:5,3.2 | 21 |
| Ex-125 | 67.4 | 2:6,2.4 | 23 |
| Ex-125 | 75.3 | 2:12,2.3 | какотоьоибı้ |
| Total for Ex-125 = 3 |  |  |  |
|  |  |  |  |
| Ex-126 | 44.2 | 1:23,2.2 | 21 |
| Ex-126 | 133.2 | 3:13,3.2 | $\epsilon \sigma \tau \epsilon$ |
| Ex-126 | 145.2 | 3:18,3.2 | ${ }^{\square}$ о $\mu \tau \tau$ |
| Ex-126 | 162.3 | 4:2,1.3 | $\alpha \nu \theta . \alpha \mu \alpha \rho \tau \iota \alpha \iota \varsigma$ |
| Ex-126 | 178.3 | 4:11,2.3 | 1 |
| Total for Ex-126=5 |  |  |  |
|  |  |  |  |
| Ex-127 | 71.2 | 2:8,2.2 |  |
| Ex-127 | 74.2 | 2:12,1.2 | $\pi \alpha \rho \alpha \kappa \alpha \lambda \omega \delta \epsilon \kappa \alpha \iota$ тоuто $\tau \eta \nu \epsilon \nu \tau$ тоเऽ $\epsilon \theta \nu$. $\nu \mu \omega \nu \alpha \nu \alpha \sigma \tau$. $\epsilon \chi \in \iota \nu \kappa \alpha \lambda \eta \nu$ |


| Ex－127 | 177.3 | 4：11，1．3 | $\chi$ ор $\eta \gamma\llcorner\alpha \nu$ |
| :---: | :---: | :---: | :---: |
| Ex－127 | 221.5 | 5：10，3．5 | －$\sigma \alpha \iota-\xi \alpha \iota-\sigma \alpha \iota-\sigma \alpha \iota$ |
| Total for Ex－127＝ 4 |  |  |  |
|  |  |  |  |
| Ex－128 | 61.3 | 2：4，1．3 | $v \pi \in \rho$ |
| Total for Ex－128＝ 1 |  |  |  |
|  |  |  |  |
| Ex－130 | 184.4 | 4：14，2．4 | $\alpha \nu \alpha \pi \epsilon \mu \pi \epsilon \tau \alpha \iota$ |
| Ex－130 | 222.3 | 5：11，1．3 | $\eta$ бо $\beta_{\alpha} \kappa \rho$. |
| Total for Ex－130＝ 2 |  |  |  |
|  |  |  |  |
| Ex－131 | 8.3 | 1：4，2．3 | $\epsilon \nu-\nu \omega$ |
| Ex－131 | 64.4 | 2：5，3．4 | 2 |
| Total for Ex－131＝ 2 |  |  |  |
|  |  |  |  |
| Ex－132 | 51.2 | 1：25，1．2 | ${ }^{\square}$ o $\mu \tau \tau$ |
| Total for Ex－132＝ 1 |  |  |  |
|  |  |  |  |
| Ex－133 | 24.2 | 1：11，2．2 | ${ }^{\circ}$ оцı七 |
| Ex－133 | 54.3 | 2：1，2．3 | фovous |
| Ex－133 | 70.2 | 2：8，1．2 | $\alpha \pi\llcorner\sigma \tau-$ |
| Ex－133 | 133.3 | 3：13，3．3 | $\gamma \in \nu$ оьの日є |
| Ex－133 | 147.4 | 3：18，5．4 | － |
| Ex－133 | 196.2 | 4：19，1．2 | 1 |
| Ex－133 | 203.2 | 5：3，1．2 | ${ }^{\square} \mathrm{o} \mathrm{\mu} \tau \tau$ |
| Ex－133 | 220.3 | 5：10，2．3 | $\epsilon \nu \tau \omega \mathrm{X} \rho$ ． |
| Total for Ex－133＝ 8 |  |  |  |
|  |  |  |  |
| Ex－135\＃ | 8.2 | 1：4，2．2 | $\epsilon \nu$ tols oup． |
| Ex－135\＃ | 36.2 | 1：18，1．2 | 21 |
| Ex－135\＃ | 48.3 | 1：24，3．3 | $\alpha \nu \theta \rho \omega \pi 0 v$ |
| Ex－135\＃ | 85.2 | 2：16，1．2 | 21 |
| Ex－135\＃ | 91.2 | 2：19，1．2 | $\pi \alpha \rho \alpha \sim \omega \quad \theta \epsilon \omega$ |
| Ex－135\＃ | 92.2 | 2：19，2．2 | $\alpha \gamma \alpha \theta \eta \nu$ |
| Ex－135\＃ | 171.2 | 4：5，2．2 |  |
| Ex－135\＃ | 212.2 | 5：8，3．2 | тív $\alpha$ |
| Ex－135\＃ | 226.2 | 5：12，3．2 | $\epsilon \sigma \tau \eta к \alpha \tau \epsilon$ |
| Total for Ex－135\＃＝ 9 |  |  |  |
|  |  |  |  |


| Ex-139 | 206.2 | 5:5,3.2 | ${ }^{\circ} \mathrm{o} \mathrm{\mu} \tau \tau$ |
| :---: | :---: | :---: | :---: |
| Total for Ex-139 = 1 |  |  |  |
|  |  |  |  |
| Ex-140 | 31.3 | 1:16,3.3 | $\gamma \iota \nu \in \sigma \theta \epsilon$ |
| Ex-140 | 57.2 | 2:2,2.2 | ${ }^{\square}$ out $\tau$ |
| Ex-140 | 66.2 | 2:6,1.2 | $\epsilon \nu \tau \eta$ |
| Ex-140 | 201.4 | 5:2,1.4 | 1-5 |
| Total for Ex-140 $=4$ |  |  |  |
|  |  |  |  |
| Ex-141\# | 23.2 | 1:11,1.2 | ¢́ठŋ $\lambda$ оиิтo |
| Ex-141\# | 65.2 | 2:5,4.2 |  |
| Ex-141\# | 108.1 | 2:25,1.1 | ${ }^{\text {「 }}$ / $\lambda \alpha \nu \omega \mu \mu \nu 0$ ¢ |
| Ex-141\# | 110.2 | 3:1,1.2 | "- |
| Ex-141\# | 188.1 | 4:15,3.1 |  |
| Ex-141\# | 192.2 | 4:17,1.2 | ${ }^{\circ}$ out $\tau$ |
| Ex-141\# | 217.1 | 5:9,4.1 | ${ }^{\circ} \tau \omega$ |
| Total for Ex-141\# = 7 |  |  |  |
|  |  |  |  |
| Ex-142\# | 77.2 | 2:12,4.2 | - $\sigma \alpha \nu \tau \in \varsigma$ |
| Ex-142\# | 177.2 | 4:11,1.2 |  |
| Ex-142\# | 221.1 | 5:10,3.1 |  |
| Total for Ex-142\# = 3 |  |  |  |
|  |  |  |  |
| Ex-144\$ | 1.2 | 1:1,1.2 | $\kappa \alpha \downarrow$ |
| Ex-144\$ | 2.4 | 1:1,2.4 | 23 |
| Ex-144\$ | 4.2 | 1:3,2.2 | 21 |
| Ex-144\$ | 6.2 | 1:3,4.2 | $\zeta \omega \eta \zeta$ |
| Ex-144\$ | 7.2 | 1:4,1.2 | 321 |
| Ex-144\$ | 9.2 | 1:4,3.2 | $\eta \mu \alpha \varsigma$ |
| Ex-144\$ | 12.2 | 1:6,2.2 | ${ }^{\circ}$ о $\mu \tau \tau$ |
| Ex-144\$ | 15.2 | 1:7,1.2 | бокццо⿱ |
| Ex-144\$ | 16.2 | 1:7,2.2 | 231 |
| Ex-144\$ | 17.2 | 1:7,3.2 | -oou |
| Ex-144\$ | 21.2 | 1:8,2.2 | $\alpha \gamma \alpha \lambda \lambda \iota \alpha \tau \epsilon$ |
| Ex-144\$ | 22.2 | 1:9,1.2 | "- |
| Ex-144\$ | 25.2 | 1:11,3.2 | - $о$ ои $\mu \in \nu$ о $\nu$ |
| Ex-144\$ | 26.2 | 1:12,1.2 | ou $\chi \in \alpha \cup . \eta \mu\llcorner\nu \delta$. |
| Ex-144\$ | 28.2 | 1:14,1.2 | 134 |
| Ex-144\$ | 29.2 | 1:16,1.2 | $\delta$ ıo $\gamma$. |


| Ex-144\$ | 30.1 | 1:16,2.1 | ${ }^{\circ} \mathrm{O}$ ¢ |
| :---: | :---: | :---: | :---: |
| Ex-144\$ | 32.2 | 1:16,4.2 | סıotı |
| Ex-144\$ | 34.3 | 1:17,1.3 | $\alpha \iota \tau \in\llcorner\sigma \theta \epsilon$ |
| Ex-144\$ | 37.2 | 1:19,1.2 | $\tau \omega$ |
| Ex-144\$ | 39.1 | 1:21,1.1 | 「тıбтous |
| Ex-144\$ | 40.2 | 1:21,2.2 | $\tau \eta \nu$ |
| Ex-144\$ | 41.2 | 1:22,1.2 | $\delta \iota \alpha \pi \nu \in \cup \mu \alpha \tau 0 \varsigma$ |
| Ex-144\$ | 43.2 | 1:23,1.2 | 2 |
| Ex-144\$ | 52.2 | 1:25,2.2 | 231 |
| Ex-144\$ | 53.2 | 2:1,1.2 | - $-\downarrow$ |
| Ex-144\$ | 54.2 | 2:1,2.2 | -vov |
| Ex-144\$ | 55.2 | 2:1,3.2 | 2 |
| Ex-144\$ | 56.2 | 2:2,1.2 | $\kappa \alpha \downarrow$ |
| Ex-144\$ | 60.2 | 2:3,3.2 | $\chi$ ¢ьбтоऽ |
| Ex-144\$ | 61.2 | 2:4,1.2 | $\alpha \pi \%$ |
| Ex-144\$ | 62.2 | 2:5,1.2 | єтогк- |
| Ex-144\$ | 67.2 | 2:6,2.2 | * 213 |
| Ex-144\$ | 68.2 | 2:7,1.2 | $\alpha \pi \epsilon 1 \theta$ - |
| Ex-144\$ | 72.2 | 2:9,1.2 | ${ }^{\circ}$ оц८т |
| Ex-144\$ | 75.2 | 2:12,2.2 | - $\omega \sigma \iota \nu$ |
| Ex-144\$ | 76.2 | 2:12,3.2 | $\nu \mu \omega \nu$ |
| Ex-144\$ | 80.2 | 2:13,2.2 | 21 |
| Ex-144\$ | 81.2 | 2:14,1.2 | $\mu \in \nu$ |
| Ex-144\$ | 82.2 | 2:14,2.2 | ${ }^{\square}$ о $\mu \mathrm{L} \mathrm{\tau}$ |
| Ex-144\$ | 83.2 | 2:15,1.2 |  |
| Ex-144\$ | 84.3 | 2:15,2.3 | $\epsilon \rho \gamma \alpha \sigma \iota \alpha \nu$ |
| Ex-144\$ | 87.2 | 2:17,2.2 | $\delta \epsilon$ |
| Ex-144\$ | 89.2 | 2:18,2.2 | $\nu \mu \omega \nu$ |
| Ex-144\$ | 90.2 | 2:18,3.2 | ${ }^{\circ}$ out $\tau$ |
| Ex-144\$ | 97.2 | 2:21,2.2 | ${ }^{\circ}$ о $\mu \mathrm{L} \tau$ |
| Ex-144\$ | 99.2 | 2:21,4.2 | $\pi \in \rho\llcorner$ |
| Ex-144\$ | 100.2 | 2:21,5.2 | $\eta \mu-\eta \mu-$ |
| Ex-144\$ | 102.2 | 2:23,1.2 | - |
| Ex-144\$ | 103.2 | 2:23,2.2 | $\alpha \delta \iota \kappa \omega \varsigma$ |
| Ex-144\$ | 104.2 | 2:24,1.2 | u $\mu \omega \nu$ |
| Ex-144\$ | 105.2 | 2:24,2.2 | $\sigma \nu \zeta \eta \sigma \omega \mu \mu \nu$ |
| Ex-144\$ | 106.2 | 2:24,3.2 | $\alpha$ ข兀ou |
| Ex-144\$ | 107.2 | 2:24,4.2 | $-\theta \eta \mu \in \nu$ |
| Ex-144\$ | 109.2 | 2:25,2.2 | $\eta \mu \omega \nu$ |


| Ex－144\＄ | 117.3 | 3：6，1．3 | vாףкоиєข $\tau \omega$ |
| :---: | :---: | :---: | :---: |
| Ex－144\＄ | 118.2 | 3：6，2．2 | $\pi \tau \omega \sigma \iota \nu$ |
| Ex－144\＄ | 119.2 | 3：7，1．2 | ${ }^{\circ}$ оцı七 |
| Ex－144\＄ | 122.2 | 3：7，4．2 | тоькı $\lambda \eta$ ¢ $\chi$ ．$\zeta$ ． |
| Ex－144\＄ | 123.2 | 3：7，5．2 | $\tau \alpha \iota \varsigma$－$\chi \alpha \iota \varsigma$ |
| Ex－144\＄ | 126.1 | 3：10，1．1 | ${ }^{\top}$ out ${ }^{\text {d }}$ |
| Ex－144\＄ | 129.1 | 3：11，1．1 | ${ }^{\circ} \delta \epsilon$ |
| Ex－144\＄ | 130.2 | 3：12，1．2 |  |
| Ex－144\＄ | 131.2 | 3：13，1．2 | $\epsilon \mathrm{L}$ |
| Ex－144\＄ | 134.2 | 3：14，1．2 | $\epsilon \sigma \tau \epsilon$ |
| Ex－144\＄ | 135.2 | 3：14，2．2 | ${ }^{\square}$ о $\mu \tau$ |
| Ex－144\＄ | 139.2 | 3：16，1．2 | ${ }^{\circ}$ о $\mu \tau \tau$ |
| Ex－144\＄ | 140.1 | 3：16，2．1 | ${ }^{\prime} K \alpha \tau \alpha \lambda \alpha \lambda \in\llcorner\sigma \theta \epsilon$ |
| Ex－144\＄ | 142.2 | 3：16，4．2 | 231 |
| Ex－144\＄ | 143.4 | 3：18，1．4 | － |
| Ex－144\＄ | 144.1 | 3：18，2．1 | ${ }^{\prime} \pi \in \rho \iota \alpha \mu \alpha \rho \tau \iota \omega \nu \in \pi \alpha \theta \in \nu$ |
| Ex－144\＄ | 146.1 | 3：18，4．1 | ${ }^{\top} \mathrm{v} \mu \alpha{ }^{\text {c }}$ |
| Ex－144\＄ | 147.2 | 3：18，5．2 | 2 |
| Ex－144\＄ | 150.2 | 3：19，1．2 | $\tau \omega \alpha \delta \eta$ |
| Ex－144\＄ | 151.2 | 3：19，2．2 | －$\mu \alpha \tau$ |
| Ex－144\＄ | 152.2 | 3：20，1．2 | $\alpha \pi \alpha \xi \in \delta \in \chi$－ |
| Ex－144\＄ | 155.2 | 3：21，1．2 | $\omega$ |
| Ex－144\＄ | 156.2 | 3：21，2．2 | $\eta \mu-$ |
| Ex－144\＄ | 157.2 | 3：22，1．2 | ${ }^{\circ}$ о $\quad$ ¢ $\tau$ |
| Ex－144\＄ | 158.2 | 3：22，2．2 | ，$\delta \in \gamma \lambda \nu \tau \iota \in \nu \sigma \mu \circ \rho \tau \in \mu$ v $\tau^{\prime} \iota \tau \alpha \in \alpha \in \tau \in \rho \nu \alpha \in \eta \in \rho \in \delta \in \sigma \in \phi \phi \iota \chi \in \rho \hat{\epsilon}$ $\mu \mathrm{\rho}$ |
| Ex－144\＄ | 159.1 | 4：1，1．1 | ＇$\pi \alpha$ Өо⿱亠乂го¢ $\sigma \alpha \rho \kappa \iota$ |
| Ex－144\＄ | 161.2 | 4：1，3．2 | －$\tau \iota \alpha \iota \varsigma$ |
| Ex－144\＄ | 165.2 | 4：3，1．2 | $\nu \mu \tau \nu$ |
| Ex－144\＄ | 166.2 | 4：3，2．2 | tov $\beta$ ıou |
| Ex－144\＄ | 167.2 | 4：3，3．2 | $\theta \in \lambda \eta \mu \alpha$ |
| Ex－144\＄ | 168.2 | 4：3，4．2 | торєионєขоия |
| Ex－144\＄ | 169.2 | 4：4，1．2 | $\kappa \alpha \iota \beta \lambda \alpha \sigma \phi \eta \mu$ ovoı $\nu$ |
| Ex－144\＄ | 172.2 | 4：7，1．2 | $\tau \alpha \varsigma$ |
| Ex－144\＄ | 174.2 | 4：8，2．2 | $\alpha \cup \tau-$ |
| Ex－144\＄ | 175.2 | 4：8，3．2 | － v ¢ $\llcorner$ |
| Ex－144\＄ | 176.2 | 4：9，1．2 | －$\sigma \mu \omega \nu$ |
| Ex－144\＄ | 183.1 | 4：14，1．1 | ＇к欠L to tov $\theta$ ¢ou |
| Ex－144\＄ | 186.2 | 4：15，1．2 | $\omega \varsigma$ |
| Ex－144\＄ | 187.2 | 4：15，2．2 | $\zeta$ |



| Ex－145\＄ | 48.2 | 1：24，3．2 | $\alpha$ บоט |
| :---: | :---: | :---: | :---: |
| Ex－145\＄ | 63.2 | 2：5，2．2 | ${ }^{\circ}$ оцı七 |
| Ex－145\＄ | 80.4 | 2：13，2．4 | $\phi \cup \sigma \in L \sim \nu \theta \rho-$ |
| Ex－145\＄ | 88.2 | 2：18，1．2 | 21 |
| Ex－145\＄ | 95.2 | 2：20，3．2 | －$\mu \in \nu \in \tau \epsilon$ |
| Ex－145\＄ | 96.2 | 2：21，1．2 | $\kappa \alpha \downarrow$ |
| Ex－145\＄ | 98.2 | 2：21，3．2 | $\alpha \pi \epsilon \theta \alpha \nu \in \nu$ |
| Ex－145\＄ | 100.3 | 2：21，5．3 | $\eta \mu$－ $\mathrm{u} \mu$－ |
| Ex－145\＄ | 102.4 | 2：23，1．4 | $\delta \epsilon \in \alpha \cup \tau 0 \nu$ |
| Ex－145\＄ | 110.3 | 3：1，1．3 | $\kappa \alpha \downarrow$ |
| Ex－145\＄ | 111.2 | 3：1，2．2 | 213 |
| Ex－145\＄ | 112.2 | 3：2，1．2 | －¢טovtes |
| Ex－145\＄ | 113.2 | 3：3，1．2 | $\epsilon \kappa \pi \lambda$ окпऽ |
| Ex－145\＄ | 114.2 | 3：3，2．2 | ${ }^{\circ}$ о $\mu$ ¢ |
| Ex－145\＄ | 115.2 | 3：4，1．2 | 21 |
| Ex－145\＄ | 116.2 | 3：5，1．2 | $\epsilon \pi \iota$ 的． |
| Ex－145\＄ | 118.3 | 3：6，2．3 | поıךбıข |
| Ex－145\＄ | 122.3 | 3：7，4．3 | $\chi \cdot \zeta . \alpha<\omega \nu$ Lov |
| Ex－145\＄ | 124.2 | 3：8，1．2 | ф८入офр－ |
| Ex－145\＄ | 125.2 | 3：9，1．2 | $\epsilon$ єठотє̧ |
| Ex－145\＄ | 127.2 | 3：10，2．2 | $\alpha$ บтou |
| Ex－145\＄ | 133.4 | 3：13，3．4 | $\gamma \in \nu \in \sigma \theta \epsilon$ |
| Ex－145\＄ | 137.2 | 3：15，2．2 | $\delta \in \alpha \in\llcorner$ |
| Ex－145\＄ | 138.2 | 3：15，3．2 | $\alpha \pi \alpha \iota \tau-$ |
| Ex－145\＄ | 142.3 | 3：16，4．3 | $\epsilon \nu$ X．$\alpha \gamma \nu \eta \nu$ |
| Ex－145\＄ | 144.5 | 3：18，2．5 | $\pi \in \rho \iota \alpha \mu . \eta \mu . \alpha \pi \in \theta$ ． |
| Ex－145\＄ | 148.2 | 3：18，6．2 | ${ }^{\circ}$ оцı七 |
| Ex－145\＄ | 150.3 | 3：19，1．3 |  |
| Ex－145\＄ | 155.3 | 3：21，1．3 | － |
| Ex－145\＄ | 161.3 | 4：1，3．3 | $\alpha \pi 0-\tau \iota \alpha \varsigma$ |
| Ex－145\＄ | 162.2 | 4：2，1．2 | 21 |
| Ex－145\＄ | 165.3 | 4：3，1．3 | $\eta \mu \tau \nu$ |
| Ex－145\＄ | 171.3 | 4：5，2．3 |  |
| Ex－145\＄ | 178.2 | 4：11，2．2 | 231 |
| Ex－145\＄ | 181.2 | 4：11，5．2 | ${ }^{\square}$ о $\mu \tau$ |
| Ex－145\＄ | 184.3 | 4：14，2．3 | $\alpha \nu \alpha \pi \epsilon \pi \alpha \nu \tau \alpha \downarrow$ |
| Ex－145\＄ | 185.2 | 4：14，3．2 |  |
| Ex－145\＄ | 195.2 | 4：18，2．2 | 321 |
| Ex－145\＄ | 201.3 | 5：2，1．3 | 2－5 |


| Ex-145\$ | 204.2 | 5:5,1.2 | $\delta \epsilon$ |
| :---: | :---: | :---: | :---: |
| Ex-145\$ | 205.3 | 5:5,2.3 | $\alpha \lambda \lambda$. vпоот $\alpha \sigma \sigma 0 \mu \in \nu 0\llcorner$ |
| Ex-145\$ | 207.2 | 5:6,1.2 | $\epsilon \pi\llcorner\sigma \kappa о \pi \eta$ ¢ |
| Ex-145\$ | 212.3 | 5:8,3.3 | - |
| Ex-145\$ | 213.2 | 5:8,4.2 | $\alpha \tau \alpha \pi \iota \eta$ |
| Ex-145\$ | 221.4 | 5:10,3.4 | $\kappa$ - $\tau \iota \sigma \alpha \iota \nu \mu \alpha \varsigma$ - $\xi \in\llcorner$ - $\sigma \in\llcorner$ - $\sigma \in\llcorner$ |
| Ex-145\$ | 222.4 | 5:11,1.4 | то кр. к $\alpha \iota \eta \delta$ о $\xi^{\prime} \alpha$ |
| Ex-145\$ | 225.2 | 5:12,2.2 | ${ }^{\circ} \mathrm{o} \mathrm{\mu} \mathrm{\nu} \mathrm{\tau}$ |
| Total for Ex-145\$ = 59 |  |  |  |
|  |  |  |  |
| Ex-146\$ | 18.3 | 1:7,4.3 | $K \alpha \iota \delta \iota \alpha \pi$. |
| Ex-146\$ | 19.4 | 1:7,5.4 | т. к. єıऽ $\delta$. |
| Ex-146\$ | 48.4 | 1:24,3.4 | - |
| Ex-146\$ | 95.3 | 2:20,3.3 | - |
| Ex-146\$ | 102.5 | 2:23,1.5 | $\tau \epsilon$ |
| Ex-146\$ | 116.3 | 3:5,1.3 | $\epsilon \pi\llcorner$ тov $\theta$. |
| Ex-146\$ | 183.3 | 4:14,1.3 |  |
| Ex-146\$ | 195.3 | 4:18,2.3 | " $\delta \in \alpha \sigma$. к. $\alpha \mu$. |
| Ex-146\$ | 198.4 | 5:1,1.4 | - |
| Ex-146\$ | 204.3 | 5:5,1.3 | $\delta \in$ ol |
| Ex-146\$ | 205.4 | 5:5,2.4 |  |
| Total for Ex-146\$ = 11 |  |  |  |
|  |  |  |  |
| Ex-147\$ | 116.4 | 3:5,1.4 | tıs tov $\theta$. |
| Ex-147\$ | 204.4 | 5:5,1.4 | $\delta \in \kappa \alpha \iota$ oı |
| Total for Ex-147\$ = 2 |  |  |  |
|  |  |  |  |
| Ex-148\$ | 111.5 | 3:1,2.5 | к $\alpha$ ¢ oıt. |
| Total for Ex-148\$ = 1 |  |  |  |
|  |  |  |  |
| Ex-149\$ | 7.3 | 1:4,1.3 | 1 |
| Ex-149\$ | 13.3 | 1:6,3.3 | - $\theta \eta \nu \alpha \iota$ |
| Ex-149\$ | 20.1 | 1:8,1.1 | 「i¢ovtes |
| Ex-149\$ | 27.2 | 1:12,2.2 | ${ }^{\circ}{ }^{\text {o }}$ \% ${ }^{\circ} \tau$ |
| Ex-149\$ | 33.2 | 1:16,5.2 | ${ }^{\circ}$ о $\mu \tau \tau$ |
| Ex-149\$ | 38.2 | 1:20,1.2 | - $\tau \omega \nu \tau . \chi$. |
| Ex-149\$ | 42.2 | 1:22,2.2 | " 2 |
| Ex-149\$ | 47.2 | 1:24,2.2 | ${ }^{\circ} \mathrm{o} \mu \tau \tau$ |
| Ex-149\$ | 50.2 | 1:24,5.2 | $\alpha$ บтou |


| Ex－149\＄ | 58.1 | 2：3，1．1 | ${ }^{\text {¢ }}$ ¢ i |
| :---: | :---: | :---: | :---: |
| Ex－149\＄ | 66.1 | 2：6，1．1 | ${ }^{\prime} \in \nu$ |
| Ex－149\＄ | 69.1 | 2：7，2．1 | ${ }^{\top} \lambda \iota \theta$ os |
| Ex－149\＄ | 73.2 | 2：11，1．2 | $\cdot \alpha \pi \epsilon \chi \in \sigma \theta \epsilon$ |
| Ex－149\＄ | 79.2 | 2：13，1．2 | ouv |
| Ex－149\＄ | 86.2 | 2：17，1．2 | $\alpha \gamma \alpha \pi \eta \sigma \alpha \tau \epsilon$ |
| Ex－149\＄ | 91.4 | 2：19，1．4 | $\theta \in$ ou |
| Ex－149\＄ | 92.3 | 2：19，2．3 | $\alpha \gamma \alpha \theta \eta \nu$ өєou |
| Ex－149\＄ | 93.2 | 2：20，1．2 | к $\alpha \iota$ ко入 $\alpha \zeta_{\text {о }}$ ¢ $\nu$ оь |
| Ex－149\＄ | 94.2 | 2：20，2．2 | －$\mu \in \nu \in \tau \epsilon$ |
| Ex－149\＄ | 111.4 | 3：1，2．4 | O८TL |
| Ex－149\＄ | 121.4 | 3：7，3．4 | －$\nu$ о $\mu \omega$ |
| Ex－149\＄ | 124.3 | 3：8，1．3 | $\phi \iota \lambda о \phi \rho-\tau \alpha \pi \epsilon \iota \nu \circ \phi \rho-$ |
| Ex－149\＄ | 132.2 | 3：13，2．2 | $\mu \iota \eta \eta \tau \alpha \iota$ |
| Ex－149\＄ | 136.2 | 3：15，1．2 | $\theta \in o \nu$ |
| Ex－149\＄ | 153.1 | 3：20，2．1 | Fólı ${ }^{\text {chol }}$ |
| Ex－149\＄ | 159.4 | 4：1，1．4 | $\pi . \in \nu \sigma$ ． |
| Ex－149\＄ | 160.2 | 4：1，2．2 | $\epsilon \nu$ |
| Ex－149\＄ | 173.2 | 4：8，1．2 | $\delta \epsilon$ |
| Ex－149\＄ | 184.1 | 4：14，2．1 | 「¢¢ $\nu \alpha \pi \alpha \nu \in \tau \alpha \downarrow$ |
| Ex－149\＄ | 198.3 | 5：1，1．3 | tous |
| Ex－149\＄ | 210.2 | 5：8，1．2 | otı |
| Ex－149\＄ | 218.4 | 5：9，5．4 | $\epsilon \pi \iota \mu \in \lambda \in\llcorner\sigma \theta \epsilon$ |
| Total for Ex－149\＄＝ 32 |  |  |  |
|  |  |  |  |
| Ex－150\＄ | 111.3 | 3：1，2．3 | 23 |
| Ex－150\＄ | 121.1 | 3：7，3．1 | 「биүк入прогоноь¢ |
| Ex－150\＄ | 159.3 | 4：1，1．3 | $\pi . \nu \pi \in \rho$ v $\mu \omega \nu \sigma$ ． |
| Ex－150\＄ | 218.2 | 5：9，5．2 | $-\lambda \in\llcorner\sigma \theta \epsilon$ |
| Total for Ex－150\＄＝ 4 |  |  |  |

## Appendix H

Every Place Where a Variant is Initiated in the Textual History of 1 Peter Arranged in Order by Reference

This appendix lists every place a variant is introduced into the textual history of 1 Peter either initially or later by mixture. The information is arranged in order by reference as follows: (1) place of variation, (2) reference, (3) witness(es) where variant was initiated. Those witnesses enclosed in square brackets [] are places where the variant was introduced by mixture; those not enclosed are where the variant first originated. The number enclosed in <> is the generation of the preceding witness. For example, the following line means:

| 19.1 | $1: 7,5.1$ | $\left[\mathrm{C}^{*} \%\right]<4>;\left[\mathrm{C}^{\wedge} 2 \%\right]<4>$; Autograph; |
| :--- | :--- | :--- |

(1) 19.2 refers to the second variant in variation unit 19.
(2) $1: 7,5.1$ is the reference where this place of variation occurs: chapter 1 , verse 7 , the fifth place of variation in this verse, the first variant there.
(3) Autograph means that the variant was initiated in the autograph and then by mixture in $[\mathrm{C} * \%]<4>;\left[\mathrm{C}^{\wedge} 2 \%\right]$.
(4) Since the variant was first initiated in an exemplar, in this case the autograph, one can presume that the variant was inherited by all of the descendants of the autograph unless otherwise altered in one of its subsequent branches.

The following line means:

| 9.2 | $1: 4,3.2$ | $\left[\mathrm{P}^{\wedge} 72\right]<3>;[\mathrm{TR}]<6>;[\mathrm{vg} \wedge \mathrm{b}]<4>;$ Ex-144\$<1>; |
| :--- | :--- | :--- |

(1) 9.2 refers to the second variant in variation unit 9 .
(2) $1: 4,3.2$ is the reference where this place of variation occurs: chapter 1 , verse 4 , the third place of variation in this verse, the second variant there.
(3) The variant was first initiated in first-generation virtual exemplar Ex-144\$, and subsequently initiated by mixture from Ex-144\$ into $\left[\mathrm{P}^{\wedge} 72\right]<3>;[T R]<6>;\left[\mathrm{Vg}^{\wedge} \mathrm{b}\right]$.

Since the variant was first initiated in a virtual exemplar, one may safely assume that the variant randomly happened by scribal accident and not by actual mixture in a context of actual genealogical descent.

The following line means:

| 14.2 | $1: 6,4.2$ | $\mathrm{P}^{\wedge} 72<3>;$ |
| :---: | :---: | :--- |

(1) 14.2 refers to the second variant in variation unit 14.
(2) $1: 6,4.2$ is the reference where this place of variation occurs: chapter 1 , verse 6 , the fourth place of variation in this verse, the second variant there.
(3) The variant was first initiated only in third-generation extant MS $\mathrm{P}^{\wedge} 72$. This is a singularity; it has no heredity.

| Place of Variation | Reference | Places Variant is Introduced |
| :---: | :---: | :---: |
| 1.1 | 1:1,1.1 | Autograph; |
| 1.2 | 1:1,1.2 | [01*]<3>; [sy^h]<3>; Ex-144\$<1>; |
| 2.1 | 1:1,2.1 | Autograph; |
| 2.2 | 1:1,2.2 | Aug^a\%<<7>; |
| 2.3 | 1:1,2.3 | B*<4>; |
| 2.4 | 1:1,2.4 | [01*]<3>; [048\%]<2>; Ex-144\$<1>; |
| 2.5 | 1:1,2.5 | [614*]<3>; [1243]<5>; [1505*]<3>; [1505^c]<3>; [1852]<7>; [it-s]<3>; Ex-145\$<1>; |
| 3.1 | 1:3,1.1 | Autograph; |
| 3.2 | 1:3,1.2 | P^72<3>; |
| 4.1 | 1:3,2.1 | Autograph; |
| 4.2 | 1:3,2.2 | [P^72]<3>; [048\%]<2>; [33*]<4>; [323*]<4>; [69\%]<3>; [Ex-127]<2>; Ex-144\$<1>; |
| 4.3 | 1:3,2.3 | $\mathrm{vg}^{\wedge} \mathrm{b}<4>$; |
| 5.1 | 1:3,3.1 | Autograph; |
| 5.2 | 1:3,3.2 | 1241*<4>; |
| 5.3 | 1:3,3.3 | P^72<3>; |
| 6.1 | 1:3,4.1 | Autograph; |
| 6.2 | 1:3,4.2 | [1505*]<3>; [1505^c]<3>; [1852]<7>; [vg^b]<4>; [sy^h]<3>; [bo^a\%]<2>; $\left[\right.$ Cass $\left.^{\wedge} \mathrm{a} \%\right]<3>;\left[\right.$ Cass $\left.^{\wedge} \mathrm{b} \%\right]<3>;\left[\mathrm{Hier}^{\wedge} \mathrm{a} \%\right]<4>$; $[$ Ex-116]<6>; Ex-144\$<1>; |
| 7.1 | 1:4,1.1 | Autograph; |
| 7.2 | 1:4,1.2 | [1505*]<3>; [1505^c]<3>; [Ex-131]<2>; Ex-144\$<1>; |
| 7.3 | 1:4,1.3 | [1852]<7>; [vg^b]<4>; [Oros\%]<2>; [Ex-145\$]<1>; Ex-149\$<1>; |
| 8.1 | 1:4,2.1 | $\begin{aligned} & {[\text { [it-h* }]<3>;[\mathrm{it-r}]<3>;[\text { [it-s }]<3>;[\text { it-t }]<3>;[\text { [it-w] }] 3>;\left[\mathrm{it-z}^{*}\right]<3>;[\text { sy^h }]<3>;} \\ & {[\mathrm{sy} \wedge \mathrm{p} \%]<2>[\text { Ex-124]<3>; Autograph; }} \end{aligned}$ |
| 8.2 | 1:4,2.2 | Ex-135\#<1>; |
| 8.3 | 1:4,2.3 | Ex-131<2>; |
| 9.1 | 1:4,3.1 | Autograph; |
| 9.2 | 1:4,3.2 | [ $\left.\mathrm{P}^{\wedge} 72\right]<3>$; [TR] $<6 \gg$ [ vg ^b]<4>; Ex-144\$<1>; |
| 10.1 | 1:5,1.1 | Autograph; |
| 10.2 | 1:5,1.2 | P^72<3>; |
| 11.1 | 1:6,1.1 | Autograph; |
| 11.2 | 1:6,1.2 | P^72<3>; |
| 11.3 | 1:6,1.3 | C^2\% ${ }^{\text {¢ }}$ <4>; |
| 12.1 | 1:6,2.1 | Autograph; |
| 12.2 | 1:6,2.2 | [01*]<3>; [1505*]<3>; [1505^c]<3>; [Cl^a\%] ${ }^{\text {a }}$ [4>; [Ex-133]<3>; Ex-144\$<1>; |
| 13.1 | 1:6,3.1 | [1505*]<3>; [1505^c]<3>; Autograph; |
| 13.2 | 1:6,3.2 | $\begin{aligned} & {[01 *]<3>;[\mathrm{L020*}]<6>;[623 *]<5>;[1852]<7>;[69 \%]<3>;[\mathrm{Ex}-127]<2>;[\mathrm{Ex}-134]<4>;} \\ & \mathrm{Ex}-145 \$<1>; \end{aligned}$ |


| 13.3 | 1:6,3.3 | [vg^cl]<4>; [vg^ww]<4>; [Ex-116]<6>; [Ex-144\$]<1>; [Ex-146\$]<1>; Ex-149\$<1>; |
| :---: | :---: | :---: |
| 13.4 | 1:6,3.4 | 048\%<2>; |
| 14.1 | 1:6,4.1 | Autograph; |
| 14.2 | 1:6,4.2 | P^72<3>; |
| 15.1 | 1:7,1.1 | [Ex-119]<7>; Autograph; |
| 15.2 | 1:7,1.2 | [P^72]<3>; [Ex-120]<6>; Ex-144\$<1>; |
| 16.1 | 1:7,2.1 | Autograph; |
| 16.2 | 1:7,2.2 | $\begin{aligned} & {\left[\mathrm{P}^{\wedge} 72\right]<3>;[048 \%]<2>;\left[1241^{*}\right]<4>;[\mathrm{vg} \wedge \mathrm{~b}]<4>;[\mathrm{it}-\mathrm{s}]<3>;\left[\mathrm{C} \wedge^{\wedge} \mathrm{a} \%\right]<4>;[\mathrm{Ex}-116]<6>} \\ & \text { Ex-144\$<1>; } \end{aligned}$ |
| 17.1 | 1:7,3.1 | Autograph; |
| 17.2 | 1:7,3.2 | [945]<4>; [Ex-133]<3>; Ex-144\$<1>; |
| 18.1 | 1:7,4.1 |  |
| 18.2 | 1:7,4.2 | [bo^b\%]<2>; [sa^a\%]<2>; [Ex-126]<2>; Ex-145\$<1>; |
| 18.3 | 1:7,4.3 | $\begin{aligned} & {\left[\mathrm{P}^{\wedge} 72\right]<3>;[1175 *]<6>;[1243]<5>;\left[\mathrm{vg}^{\wedge} \mathrm{b}\right]<4>;\left[\mathrm{Cl}^{\wedge} \mathrm{a} \%\right]<4>;[\mathrm{Or} \mathrm{a} \%]<2>;[\mathrm{Ex}-} \\ & 121]<3>; \text { Ex- } 146 \$<1>; \end{aligned}$ |
| 19.1 | 1:7,5.1 | [C*\%]<4>; [C^2\%]<4>; Autograph; |
| 19.2 | 1:7,5.2 | [2298]<6>; [TR]<6>; [1\%]<2>; [Ex-121]<3>; Ex-145\$<1>; |
| 19.3 | 1:7,5.3 | $\mathrm{Cl}^{\wedge} \mathrm{a} \%<4>$; |
| 19.4 | 1:7,5.4 | [323*]<4>; [Ex-140]<2>; Ex-146\$<1>; |
| 20.1 | 1:8,1.1 |  |
| 20.2 | 1:8,1.2 | [1241*]<4>; [bo^a\%] ${ }^{\text {a }}$ 2> ; [Cl^a $\left.\mathrm{a} \%\right]<4>$; [Ex-136] $<3>$; Autograph; |
| 21.1 | 1:8,2.1 | Autograph; |
| 21.2 | 1:8,2.2 | [C*\%]<4>; [1852]<7>; [O^^a\%]<2>; [Ex-133]<3>; Ex-144\$<1>; |
| 22.1 | 1:9,1.1 | Autograph; |
| 22.2 | 1:9,1.2 |  |
| 22.3 | 1:9,1.3 | [1505*]<3>; [1505^c]<3>; [bo^b\%]<2>; [Or^lat^a\%]<3>; Ex-145\$<1>; |
| 23.1 | 1:11,1.1 |  |
| 23.2 | 1:11,1.2 | $\begin{aligned} & {\left[\mathrm{C}^{* \%} /\right]<4>;\left[\mathrm{C}^{\wedge} 2 \%\right]<4>;[\mathrm{L} 020 *]<6>;[\mathrm{P} 025 *]<6>;[1852]<7>;[\mathrm{Ex}-126]<2>;[\mathrm{Ex}-} \\ & 138]<3>; \text { Ex-141\#<1>; } \end{aligned}$ |
| 24.1 | 1:11,2.1 | Autograph; |
| 24.2 | 1:11,2.2 | Ex-133<3>; |
| 25.1 | 1:11,3.1 | [ ${ }^{*}$ ]<5>; Autograph; |
| 25.2 | 1:11,3.2 | $\begin{aligned} & {[\mathrm{P} \wedge 72]<3>;\left[\mathrm{P} 025^{*}\right]<6>;[1 \%]<2>;[\mathrm{Cyr} \wedge \mathrm{a} \%]<4>;[\mathrm{Ex}-130]<4>;[\mathrm{Ex}-132]<4>; \text { Ex- }} \\ & 144 \$<1>; \end{aligned}$ |
| 26.1 | 1:12,1.1 | Autograph; |
| 26.2 | 1:12,1.2 | $\begin{aligned} & {[945]<4>;\left[1241^{*}\right]<4>;[\mathrm{TR}]<6>;[\mathrm{vg} \wedge \mathrm{~b}]<4>;\left[\text { sy^} \mathrm{p}^{2} \%\right]<2>;[\text { Hier^a } \%]<4>; \text { Ex- }} \\ & 144 \$<1>; \end{aligned}$ |
| 26.3 | 1:12,1.3 | 33*<4>; |
| 27.1 | 1:12,2.1 | [it-s]<3>; [NA-27]<3>; Autograph; |


| 27.2 | 1:12,2.2 | $\begin{aligned} & {[623 *]<5>;[1852]<7>;[2464 *]<5>;[E x-126]<2>;[E x-139]<2>;[E x-144 \$]<1>;[\text { Ex- }} \\ & 145 \$]<1>; E x-149 \$<1>; \end{aligned}$ |
| :---: | :---: | :---: |
| 28.1 | 1:14,1.1 | Autograph; |
| 28.2 | 1:14,1.2 | [81*]<3>; [1243]<5>; Ex-144\$<1>; |
| 28.3 | 1:14,1.3 | P^72<3>; |
| 28.4 | 1:14,1.4 | 1241*<4>; |
| 29.1 | 1:16,1.1 | Autograph; |
| 29.2 | 1:16,1.2 | [ ${ }^{*} \% \%$ ]<4>; [ $\left.\mathrm{C}^{\wedge} 2 \%\right]<4>$; [Ex-131]<2>; Ex-144\$<1>; |
| 29.3 | 1:16,1.3 | [33*]<4>; [1243]<5>; Ex-145\$<1>; |
| 30.1 | 1:16,2.1 | [044*]<3>; [049*]<5>; [69\%]<3>; [NA-27]<3>; [Ex-133]<3>; Ex-144\$<1>; |
| 30.2 | 1:16,2.2 | Autograph; |
| 31.1 | 1:16,3.1 | [C*\%]<4>; [C^2\%]<4>; Autograph; |
| 31.2 | 1:16,3.2 | [P025*]<6>; [322]<6>; [TR]<6>; [1\%]<2>; [Ex-121]<3>; [Ex-130]<4>; Ex-145\$<1>; |
| 31.3 | 1:16,3.3 | Ex-140<2>; |
| 32.1 | 1:16,4.1 | Autograph; |
| 32.2 | 1:16,4.2 | [P^72]<3>; [81*]<3>; [Cl^a\%] ${ }^{\text {a }}$ 4>; [Ex-131]<2>; Ex-144\$<1>; |
| 32.3 | 1:16,4.3 | [it-t]<3>; [sy^p\%]<2>; Ex-145\$<1>; |
| 33.1 | 1:16,5.1 | [P^72]<3>; [NA-27]<3>; [Ex-136]<3>; Autograph; |
| 33.2 | 1:16,5.2 | [A*]<5>; [C1^a\%] ${ }^{\text {a }}$ - 4 ; [Ex-141\#]<1>; [Ex-144\$]<1>; Ex-149\$<1>; |
| 34.1 | 1:17,1.1 | Autograph; |
| 34.2 | 1:17,1.2 | P^72<3>; |
| 34.3 | 1:17,1.3 | [322]<6>; [323*]<4>; Ex-144\$<1>; |
| 35.1 | 1:17,2.1 | Autograph; |
| 35.2 | 1:17,2.2 | P^72<3>; |
| 36.1 | 1:18,1.1 | [945]<4>; [it-h*]<3>; [it-r]<3>; [it-s]<3>; [it-t]<3>; [it-w]<3>; [it-z*]<3>; [sy^h]<3>; [sy^p\%]<2>; [Ex-124]<3>; Autograph; |
| 36.2 | 1:18,1.2 | [69\%]<3>; [Ex-121]<3>; Ex-135\#<1>; |
| 37.1 | 1:19,1.1 | Autograph; |
| 37.2 | 1:19,1.2 | [C*\%]<4>; [C^2\%]<4>; [1243]<5>; [69\%]<3>; Ex-144\$<1>; |
| 38.1 | 1:20,1.1 | [614*]<3>; [1505*]<3>; [1505^c]<3>; [sy^h]<3>; Autograph; |
| 38.2 | 1:20,1.2 | [P^72]<3>; [Ex-135\#]<1>; [Ex-140]<2>; [Ex-144\$]<1>; Ex-149\$<1>; |
| 38.3 | 1:20,1.3 | 69\%<3>; |
| 38.4 | 1:20,1.4 | [01*]<3>; [044*]<3>; Ex-145\$<1>; |
| 39.1 | 1:21,1.1 | [Ex-124]<3>; [Ex-139]<2>; Ex-144\$<1>; |
| 39.2 | 1:21,1.2 | [P^72]<3>; Autograph; |
| 39.3 | 1:21,1.3 | 33*<4>; |
| 40.1 | 1:21,2.1 | Autograph; |
| 40.2 | 1:21,2.2 | [P^72]<3>; [1243]<5>; Ex-144\$<1>; |
| 41.1 | 1:22,1.1 | Autograph; |
| 41.2 | 1:22,1.2 | [Ex-127]<2>; [Ex-140]<2>; Ex-144\$<1>; |


| 42.1 | 1:22,2.1 | [P^72]<3>; [33*]<4>; [vg^a]<4>; [NA-27]<3>; Autograph; |
| :---: | :---: | :---: |
| 42.2 | 1:22,2.2 | [1852]<7>; [Ex-124]<3>; [Ex-139]<2>; [Ex-144\$]<1>; [Ex-145\$]<1>; Ex-149\$<1>; |
| 42.3 | 1:22,2.3 | Ex-122<3>; |
| 43.1 | 1:23,1.1 | Autograph; |
| 43.2 | 1:23,1.2 | [ $\left.\mathrm{P}^{\wedge} 72\right]<3 \gg[\mathrm{vg}$ ^ b$]<4>$; Ex-144\$<1>; |
| 43.3 | 1:23,1.3 | [C*\%]<4>; [C^2\%]<4>; [Ex-131]<2>; [Ex-132]<4>; Ex-145\$<1>; |
| 44.1 | 1:23,2.1 | [sy^h] $<3>$; Autograph; |
| 44.2 | 1:23,2.2 | Ex-126<2>; |
| 44.3 | 1:23,2.3 | 36<10>; |
| 45.1 | 1:23,3.1 | [1505*]<3>; [1505^c]<3>; [vg^st]<4>; Autograph; |
| 45.2 | 1:23,3.2 | [it-t]<3>; [sy^p\%]<2>; [Ex-124]<3>; [Ex-127]<2>; [Ex-140]<2>; Ex-145\$<1>; |
| 45.3 | 1:23,3.3 | 1838<6>; |
| 46.1 | 1:24,1.1 | [it-h*]<3>; [it-r]<3>; [it-s]<3>; [it-t]<3>; [it-w]<3>; [it-z*]<3>; [sy^h]<3>; [Ex124]<3>; Autograph; |
| 46.2 | 1:24,1.2 | P^72<3>; |
| 46.3 | 1:24,1.3 | [1852]<7>; [Ex-126]<2>; Ex-145\$<1>; |
| 47.1 | 1:24,2.1 | [C*\%]<4>; [C^2\%]<4>; [630]<3>; Autograph; |
| 47.2 | 1:24,2.2 | $\begin{aligned} & {[01 \wedge 2]<4>;[\mathrm{Aug} \wedge \mathrm{a} \%]<7>;[\mathrm{Ex}-121]<3>;[\mathrm{Ex}-135 \#]<1>;[\mathrm{Ex}-136]<3>;[\mathrm{Ex}-144 \$]<1>;} \\ & \mathrm{Ex}-149 \$<1>; \end{aligned}$ |
| 48.1 | 1:24,3.1 | $\begin{aligned} & \hline\left[614^{*}\right]<3>;\left[1505^{*}\right]<3>;\left[1505^{\wedge} \mathrm{c}\right]<3>;[\text { it-h*}]<3>;[\text { it-r] }]<3>;[\text { it-s }]<3>;[\text { it-t }]<3>; \text { [it- } \\ & \text { w] }] 3>;[\text { it-z* }]<3>;[\text { sy } \wedge \text { h }]<3>;[\text { Ex-124] }] 3>; \text { Autograph; } \\ & \hline \end{aligned}$ |
| 48.2 | 1:24,3.2 | [01*]<3>; [bo^b\%]<2>; Ex-145\$<1>; |
| 48.3 | 1:24,3.3 | Ex-135\#<1>; [Ex-140]<2>; |
| 48.4 | 1:24,3.4 | [322]<6>; [323*]<4>; Ex-146\$<1>; |
| 49.1 | 1:24,4.1 | Autograph; |
| 49.2 | 1:24,4.2 | P^72<3>; |
| 50.1 | 1:24,5.1 | [81*]<3>; [1505*]<3>; [1505^c]<3>; Autograph; |
| 50.2 | 1:24,5.2 | $\begin{aligned} & {\left[\mathrm{vg}^{\wedge} \mathrm{cl}\right]<4>;[\mathrm{it-t]}]<3>;[\mathrm{ac} * \%]<2>;[\mathrm{bo} \wedge \mathrm{a} \%]<2>;[\mathrm{bo} \wedge \mathrm{~b} \%]<2>;[\text { sa^a } \%]<2>;} \\ & {\left[\mathrm{s}{ }^{\wedge} \mathrm{b} \%\right]<2>;[\mathrm{Ex}-127]<2>;[\mathrm{Ex}-142 \#]<1>;[\mathrm{Ex}-145 \$]<1>; \text { Ex-149\$<1>; }} \end{aligned}$ |
| 51.1 | 1:25,1.1 | Autograph; |
| 51.2 | 1:25,1.2 | Ex-132<4>; |
| 52.1 | 1:25,2.1 | Autograph; |
| 52.2 | 1:25,2.2 | [P^72]<3>; [vg^b]<4>; [Ex-116]<6>; Ex-144\$<1>; |
| 53.1 | 2:1,1.1 | Autograph; |
| 53.2 | 2:1,1.2 | $\begin{aligned} & {[01 \wedge 1]<4>;[\mathrm{it}-\mathrm{t}]<3>;[\mathrm{Ambr} \wedge \mathrm{a} \%]<4>;[\mathrm{Ambr} \wedge \mathrm{~b} \%]<3>;\left[\mathrm{C} \wedge^{\wedge} \mathrm{a} \%\right]<4>;[\mathrm{Ex}-116]<6>;} \\ & {[\mathrm{Ex}-133]<3>\mathrm{Ex}-144 \$<1>;} \end{aligned}$ |
| 54.1 | 2:1,2.1 | Autograph; |
| 54.2 | 2:1,2.2 |  |
| 54.3 | 2:1,2.3 | Ex-133<3>; |
| 55.1 | 2:1,3.1 | Autograph; |
| 55.2 | 2:1,3.2 | [Ex-116]<6>; [Ex-125]<4>; [Ex-132]<4>; Ex-144\$<1>; |
| 55.3 | 2:1,3.3 | 01*<3>; |


| 55.4 | 2:1,3.4 | Cl ^a\%<4>; |
| :---: | :---: | :---: |
| 56.1 | 2:2,1.1 | Autograph; |
| 56.2 | 2:2,1.2 | $\begin{aligned} & {[33 *]<4>;\left[v \mathrm{v}^{\wedge} \mathrm{ww}\right]<4>;[\text { sy^h }]<3>;[\mathrm{bo} \wedge \mathrm{~b} \%]<2>;[\mathrm{Cyr} \wedge \mathrm{a} \%]<4>;[\mathrm{Ex}-116]<6>;[\mathrm{Ex}-} \\ & 125]<4>;[\mathrm{Ex}-127]<2>; \mathrm{Ex}-144 \$<1>; \end{aligned}$ |
| 57.1 | 2:2,2.1 | [ $\mathrm{K}^{*}$ ]<5>; [P025*]<6>; Autograph; |
| 57.2 | 2:2,2.2 | Ex-140<2>; |
| 58.1 | 2:3,1.1 | [ vg ^tt]<4>; [it-t]<3>; [Cl^a\%] ${ }^{\text {a }}$ [4>; [Ex-141\#]<1>; [Ex-144\$]<1>; Ex-149\$<1>; |
| 58.2 | 2:3,1.2 | [Ex-122]<3>; Autograph; |
| 59.1 | 2:3,2.1 | Autograph; |
| 59.2 | 2:3,2.2 | $\mathrm{P}^{\wedge} 72<3>$; |
| 59.3 | 2:3,2.3 | sy^p\%<2>; |
| 60.1 | 2:3,3.1 | Autograph; |
| 60.2 | 2:3,3.2 | $\begin{aligned} & {\left[\mathrm{P}^{\wedge} 72\right]<3>;[\mathrm{L} 020 *]<6>;[33 *]<4>;\left[614^{*}\right]<3>;[1241 *]<4>;[1852]<7>;[2298]<6>;} \\ & {[69 \%]<3>;[\mathrm{Ex}-138]<3>; \text { Ex-144\$<1>; }} \end{aligned}$ |
| 61.1 | 2:4,1.1 | [Ex-123]<5>; Autograph; |
| 61.2 | 2:4,1.2 | [1505*]<3>; [1505^c]<3>; [Ex-121]<3>; Ex-144\$<1>; |
| 61.3 | 2:4,1.3 | Ex-128<4>; |
| 62.1 | 2:5,1.1 | Autograph; |
| 62.2 | 2:5,1.2 | [A^c]<5>; [it-s]<3>; [Ex-124]<3>; [Ex-129]<2>; [Ex-131]<2>; Ex-144\$<1>; |
| 63.1 | 2:5,2.1 | [vg^b]<4>; [Ex-116]<6>; Autograph; |
| 63.2 | 2:5,2.2 | [Ex-124]<3>; [Ex-127]<2>; [Ex-140]<2>; Ex-145\$<1>; |
| 64.1 | 2:5,3.1 | Autograph; |
| 64.2 | 2:5,3.2 | Ex-125<4>; |
| 64.3 | 2:5,3.3 | P^72<3>; |
| 64.4 | 2:5,3.4 | Ex-131<2>; |
| 65.1 | 2:5,4.1 | [P^72]<3>; [945]<4>; [NA-27]<3>; [Cl^a\%]<4>; [Ex-122]<3>; Autograph; |
| 65.2 | 2:5,4.2 | [1243]<5>; [Ex-121]<3>; [Ex-125]<4>; [Ex-126]<2>; Ex-141\#<1>; |
| 66.1 | 2:6,1.1 | [044*]<3>; [Ex-141\#]<1>; [Ex-144\$]<1>; Ex-149\$<1>; |
| 66.2 | 2:6,1.2 | Ex-140<2>; |
| 66.3 | 2:6,1.3 | Autograph; |
| 67.1 | 2:6,2.1 | Autograph; |
| 67.2 | 2:6,2.2 | $\begin{aligned} & {\left[\mathrm{C}^{*} \%\right]<4>;\left[\mathrm{C}^{\wedge} 2 \%\right]<4>;[1243]<5>;\left[\mathrm{bo}^{\wedge} \mathrm{a} \%\right]<2>;\left[\mathrm{sa}^{\wedge} \mathrm{b} \%\right]<2>;[69 \%]<3>;[\mathrm{Ex}-} \\ & 133]<3>; \mathrm{Ex}-144 \$<1>; \end{aligned}$ |
| 67.3 | 2:6,2.3 | Prim\%<2>; |
| 67.4 | 2:6,2.4 | Ex-125<4>; |
| 68.1 | 2:7,1.1 | Autograph; |
| 68.2 | 2:7,1.2 | [323*]<4>; [614*]<3>; [sy^p\%]<2>; [Ex-136]<3>; [Ex-140]<2>; Ex-144\$<1>; |
| 69.1 | 2:7,2.1 | $[$ C $* \%]<4>;[630]<3>;\left[1505^{*}\right]<3>;\left[1505^{\wedge} \mathrm{c}\right]<3>;[\mathrm{it}-\mathrm{h} *$ ]<3>; [it-r]<3>; [it-s]<3>; [itt]<3>; [it-w]<3>; [it-z*]<3>; [Ex-124]<3>; [Ex-141\#]<1>; [Ex-144\$]<1>; Ex149\$<1>; |
| 69.2 | 2:7,2.2 | [01*]<3>; [vg^b]<4>; [sa^a\%]<2>; Autograph; |
| 70.1 | 2:8,1.1 | Autograph; |


| 70.2 | 2:8,1.2 | Ex-133<3>; |
| :---: | :---: | :---: |
| 70.3 | 2:8,1.3 | 1852<7>; |
| 70.4 | 2:8,1.4 | 1241*<4>; |
| 71.1 | 2:8,2.1 | [1505*]<3>; [1505^c]<3>; Autograph; |
| 71.2 | 2:8,2.2 | Ex-127<2>; |
| 72.1 | 2:9,1.1 | Autograph; |
| 72.2 | 2:9,1.2 | [P^72]<3>; [bo^b\%] <2>; Ex-144\$<1>; |
| 73.1 | 2:11, 1.1 | [Ex-123]<5>; Autograph; |
| 73.2 | 2:11,1.2 | $\begin{aligned} & {\left[\mathrm{P}^{\wedge} \wedge 2\right]<3>;[\mathrm{C} * \%]<4>;\left[\mathrm{C}^{\wedge} 2 \%\right]<4>;[\mathrm{L} 020 *]<6>;\left[\mathrm{P} 025^{*}\right]<6>;\left[81^{*}\right]<3>;[1241 *]<4>;} \\ & {[1243]<5>;[1852]<7>\left[v \mathrm{~g}^{\wedge} \mathrm{b}\right]<4>;[\mathrm{sy} \wedge \mathrm{~h}]<3>;[\mathrm{Ex}-136]<3>;[\mathrm{Ex}-137]<3>;[\mathrm{Ex}-} \\ & 144 \$]<1>; \mathrm{Ex}-149 \$<1>; \end{aligned}$ |
| 74.1 | 2:12,1.1 | [1505*]<3>; [1505^c]<3>; Autograph; |
| 74.2 | 2:12,1.2 | Ex-127<2>; |
| 75.1 | 2:12,2.1 | [Ex-123]<5>; [Ex-130]<4>; Autograph; |
| 75.2 | 2:12,2.2 | $\begin{aligned} & {\left[\mathrm{L} 020^{*}\right]<6>;\left[\mathrm{P} 025^{*}\right]<6>;\left[614^{*}\right]<3>;\left[1505^{*}\right]<3>;\left[1505^{\wedge} \mathrm{c}\right]<3>;\left[\mathrm{vg}^{\wedge}\right]<4>;} \\ & {[69 \%]<3>;[\mathrm{Ex}-140]<2>; \text { Ex-144\$<1>; }} \end{aligned}$ |
| 75.3 | 2:12,2.3 | Ex-125<4>; |
| 76.1 | 2:12,3.1 | Autograph; |
| 76.2 | 2:12,3.2 | $\begin{aligned} & {\left[\mathrm{vg}^{\wedge} \mathrm{b}\right]<4>;[\mathrm{sy} \wedge \mathrm{~h}]<3>;[\mathrm{ac} * \%]<2>;[\mathrm{bo} \wedge \mathrm{a} \%]<2>;[\mathrm{bo} \wedge \mathrm{~b} \%]<2>;[\text { sa^a} \%]<2>;} \\ & {[\mathrm{sa} \mathrm{~b} \%]<2>;[\mathrm{Cyp} \wedge \mathrm{a} \%]<4>;[\mathrm{Ex}-127]<2>; \text { Ex-144\$<1>; }} \\ & \hline \end{aligned}$ |
| 77.1 | 2:12,4.1 | [sy^h]<3>; [Ex-121]<3>; Autograph; |
| 77.2 | 2:12,4.2 | [323*]<4>; Cl ^a\% 2 <4>; [Ex-126]<2>; [Ex-136]<3>; Ex-142\#<1>; |
| 78.1 | 2:12,5.1 | Autograph; |
| 78.2 | 2:12,5.2 | P^72<3>; |
| 79.1 | 2:13,1.1 | [C*\%]<4>; [C^2\%]<4>; [81*]<3>; Autograph; |
| 79.2 | 2:13,1.2 |  |
| 80.1 | 2:13,2.1 | Autograph; |
| 80.2 | 2:13,2.2 | [1241*]<4>; [1243]<5>; [1852]<7>; [69\%]<3>; Ex-144\$<1>; |
| 80.3 | 2:13,2.3 | 01*<3>; |
| 80.4 | 2:13,2.4 |  |
| 81.1 | 2:14,1.1 | Autograph; |
| 81.2 | 2:14,1.2 | [P025*]<6>; [049^c]<5>; [TR]<6>; [Ex-121]<3>; [Ex-127]<2>; Ex-144\$<1>; |
| 82.1 | 2:14,2.1 | Autograph; |
| 82.2 | 2:14,2.2 | [049*]<5>; [1241*]<4>; [1505*]<3>; Ex-144\$<1>; |
| 83.1 | 2:15,1.1 | Autograph; |
| 83.2 | 2:15,1.2 | $\begin{aligned} & {[322]<6>;[1852]<7>;[2298]<6>;[\mathrm{bo} \wedge \mathrm{~b} \%]<2>;[\text { sa^a } \%]<2>;[69 \%]<3>;[\text { Ex-121]<3>; }} \\ & \text { Ex-144\$<1>; } \end{aligned}$ |
| 84.1 | 2:15,2.1 | Autograph; |
| 84.2 | 2:15,2.2 | P^72<3>; |
| 84.3 | 2:15,2.3 | [1241*]<4>; [C1^a\%]<4>; Ex-144\$<1>; |
| 85.1 | 2:16,1.1 | [ $\mathrm{K}^{*}$ ]<5>; [044*]<3>; [vg^b]<4>; Autograph; |
| 85.2 | 2:16,1.2 | Ex-135\#<1>; [Ex-136]<3>; [Ex-140]<2>; |


| 85.3 | 2:16,1.3 | 049*<5>; |
| :---: | :---: | :---: |
| 85.4 | 2:16,1.4 | 460<6>; |
| 86.1 | 2:17,1.1 | [C*\%]<4>; [C^2\%]<4>; [P025*]<6>; [1739*]<4>; [1739^c]<4>; [TR]<6>; Autograph; |
| 86.2 | 2:17,1.2 | [69\%]<3>; [Ex-127]<2>; [Ex-142\#]<1>; [Ex-145\$]<1>; Ex-149\$<1>; |
| 87.1 | 2:17,2.1 | Autograph; |
| 87.2 | 2:17,2.2 | [P^72]<3>; [Spec\%] $<3 \gg$ Ex $-144 \$<1>$; |
| 88.1 | 2:18,1.1 | $[$ [it-h* $]<3>;[$ it-r] $]<3>;[$ it-s $]<3>;[$ it-t $]<3>;\left[\right.$ it-w] $<3>;[$ it-z* $]<3>;\left[s y^{\wedge}\right]<3>;[$ Ex- $124]<3>;$ Autograph; |
| 88.2 | 2:18,1.2 | [Ex-126]<2>; [Ex-131]<2>; Ex-145\$<1>; |
| 89.1 | 2:18,2.1 | Autograph; |
| 89.2 | 2:18,2.2 | [vg^b]<4>; [it-z*]<3>; [sy^p\%]<2>; [ac*\%]<2>; [ba^a\%]<2>; [bo^b\%]<2>; $[$ sa^a $\%]<2>;[$ sa^ $\wedge$ $\%]<2>;[$ Spec $\%]<3>;[$ Ex-131] $<2>;$ Ex-144\$<1>; |
| 90.1 | 2:18,3.1 | Autograph; |
| 90.2 | 2:18,3.2 | [P^72]<3>; [81*]<3>; [614*]<3>; [2464*]<5>; [69\%] ${ }^{\text {c }}$ [ ${ }^{\text {¢ }}$; Ex-144\$<1>; |
| 91.1 | 2:19,1.1 | $\begin{aligned} & {\left[\text { it-h*]<3>; [it-r]<3>; [it-s]<3>; [it-t] }<3>;\left[\text { it-w] }<3>;\left[i t-z^{*}\right]<3>;[\text { Ex-123] }]<5>;[\text { Ex- }\right.\right.} \\ & 124]<3>; \text { Autograph; } \end{aligned}$ |
| 91.2 | 2:19,1.2 | [33*]<4>; [vg^b]<4>; [Ex-121]<3>; Ex-135\#<1>; |
| 91.3 | 2:19,1.3 | 2464*<5>; |
| 91.4 | 2:19,1.4 | $\begin{aligned} & {\left[\text { Cass }^{\wedge} \mathrm{a} \%\right]<3>;\left[\text { Cass }^{\wedge} \mathrm{b} \%\right]<3>;[\text { Ex-128] }<4>;[\text { Ex-144\$ }]<1>;[\text { Ex-145\$]<1>; Ex- }} \\ & 149 \$<1>; \end{aligned}$ |
| 92.1 | 2:19,2.1 |  |
| 92.2 | 2:19,2.2 | [Ex-121]<3>; Ex-135\#<1>; |
| 92.3 | 2:19,2.3 | [P^72]<3>; [81*]<3>; [Ex-136]<3>; [Ex-144\$]<1>; [Ex-145\$]<1>; Ex-149\$<1>; |
| 93.1 | 2:20,1.1 | $\begin{aligned} & {\left[\mathrm{C}^{*} \%\right]<4>;\left[\mathrm{C}^{\wedge} 2 \%\right]<4>;\left[614^{*}\right]<3>;\left[1505^{*}\right]<3>;\left[1505^{\wedge} \mathrm{c}\right]<3>;[\text { sy^h }]<3>;[\mathrm{Ex}-} \\ & 124]<3>; \text { Autograph; } \end{aligned}$ |
| 93.2 | 2:20,1.2 | $\begin{aligned} & {\left[\mathrm{P}^{\wedge} 72\right]<3>;\left[\mathrm{P} 025^{*}\right]<6>;[322]<6>;[2138]<6>;[2298]<6>;[\mathrm{Ex}-121]<3>;[\mathrm{Ex}-} \\ & 122]<3>;[\mathrm{Ex}-135 \#]<1>;[\mathrm{Ex}-144 \$]<1>; \mathrm{Ex}-149 \$<1>; \end{aligned}$ |
| 93.3 | 2:20,1.3 | 69\%<3>; |
| 94.1 | 2:20,2.1 | [C*\%]<4>; [C^2\%]<4>; [630]<3>; Autograph; |
| 94.2 | 2:20,2.2 | $\begin{aligned} & {\left[\mathrm{P}^{\wedge} 72\right]<3>;[69 \%]<3>;[\mathrm{Ex}-121]<3>;[\mathrm{Ex}-122]<3>;[\mathrm{Ex}-135 \#]<1>;[\mathrm{Ex}-144 \$]<1>; \mathrm{Ex}-} \\ & 149 \$<1>; \end{aligned}$ |
| 95.1 | 2:20,3.1 | [C*\%]<4>; [C^2\%]<4>; [323*]<4>; [1241*]<4>; Autograph; |
| 95.2 | 2:20,3.2 | $\begin{aligned} & {[\mathrm{P} \wedge 72]<3>;[2298]<6>;[69 \%]<3>;[\mathrm{Ex}-121]<3>;[\mathrm{Ex}-125]<4>;[\mathrm{Ex}-126]<2>; \text { Ex- }} \\ & 145 \$<1>; \end{aligned}$ |
| 95.3 | 2:20,3.3 |  |
| 96.1 | 2:21,1.1 | [C*\%]<4>; [C^2\%]<4>; Autograph; |
| 96.2 | 2:21,1.2 | [ $\left.{ }^{\text {^}} 72\right]<3 \gg[630]<3 \gg\left[1505^{*}\right]<3 \gg\left[1505^{\wedge} \mathrm{c}\right]<3>$; [Ex-121]<3>; Ex-145\$<1>; |
| 97.1 | 2:21,2.1 | Autograph; |
| 97.2 | 2:21,2.2 |  |
| 98.1 | 2:21,3.1 | $\begin{aligned} & {[\text { [it-h*]<3>; [it-r] }]<3>;[\text { it-s }]<3>;[\text { it-t }]<3>;[\text { [it-w] }] 3>;\left[\text { [it-z* }{ }^{*}<3>;[\text { sy^h }]<3>;[\text { Ex- }\right.} \\ & 123]<5>;[\text { Ex-124]<3>; Autograph; } \end{aligned}$ |
| 98.2 | 2:21,3.2 | $\left[\mathrm{P}^{\wedge} 81 \%\right]<3>;[2464 *]<5>;[$ sy^p\% $]<2>;[\mathrm{Ex}-126]<2>;[\mathrm{Ex}-128]<4>;[\mathrm{Ex}-131]<2>;$ Ex- $145 \$<1>;$ |


| 99.1 | 2:21,4.1 | Autograph; |
| :---: | :---: | :---: |
| 99.2 | 2:21,4.2 | [P^72]<3>; [Ex-132]<4>; Ex-144\$<1>; |
| 100.1 | 2:21,5.1 | Autograph; |
| 100.2 | 2:21,5.2 | $\begin{aligned} & {\left[614^{*}\right]<3>;[1243]<5>;\left[1505^{\wedge} \mathrm{c}\right]<3>;[\mathrm{TR}]<6>;[\mathrm{it-r}]<3>;[\mathrm{sy} \mathrm{p} \%]<2>;[\mathrm{bo} \wedge \mathrm{a} \%]<2>;} \\ & {[\text { Aug } \mathrm{a} \%]<7>; \text { Ex-144\$<1>; }} \end{aligned}$ |
| 100.3 | 2:21,5.3 | $\begin{aligned} & {\left[33^{*}\right]<4>;\left[323^{*}\right]<4>;[630]<3>;\left[1505^{*}\right]<3>;\left[\mathrm{vg}^{\wedge} \mathrm{cl}\right]<4>;\left[5 \mathrm{sa}^{\wedge} \%\right]<2>;[\mathrm{Ex}-140]<2>;} \\ & \mathrm{Ex}-145 \$<1>; \end{aligned}$ |
| 101.1 | 2:21,6.1 | Autograph; |
| 101.2 | 2:21,6.2 | P^72<3>; |
| 101.3 | 2:21,6.3 | P025*<6>; |
| 102.1 | 2:23,1.1 | Autograph; |
| 102.2 | 2:23,1.2 | [P^72]<3>; [049*]<5>; [614*]<3>; [bo^b\%]<2>; [sa^b\%]<2>; Ex-144\$<1>; |
| 102.3 | 2:23,1.3 | P^81\%<3>; |
| 102.4 | 2:23,1.4 | $\begin{aligned} & {[\mathrm{vg} \wedge \mathrm{~b}]<4>;[\mathrm{it-r}]<3>;[\mathrm{it-t}]<3>;[\text { Aug^} \wedge \%]<5>;[\mathrm{C} 1 \wedge \mathrm{lat} \%]<3>;[\mathrm{Cyp} \wedge \mathrm{a} \%]<4>; \text { Ex- }} \\ & 145 \$<1>; \end{aligned}$ |
| 102.5 | 2:23,1.5 | [ $\left.\mathrm{C}^{*} \%\right]<4>$; [ $\left.\mathrm{C}^{\wedge} 2 \%\right]<4>$; Ex-146\$<1>; |
| 103.1 | 2:23,2.1 | Autograph; |
| 103.2 | 2:23,2.2 | [it-t]<3>; [C^^1at\%]<3>; [Ex-124]<3>; Ex-144\$<1>; |
| 104.1 | 2:24,1.1 | Autograph; |
| 104.2 | 2:24,1.2 | [P^72]<3>; [Ex-133]<3>; Ex-144\$<1>; |
| 105.1 | 2:24,2.1 | [945]<4>; Autograph; |
| 105.2 | 2:24,2.2 |  |
| 106.1 | 2:24,3.1 | [ $\mathrm{K}^{*}$ < ${ }^{\text {c }}$ >; Autograph; |
| 106.2 | 2:24,3.2 | [01*]<3>; [945]<4>; [Ex-140]<2>; Ex-144\$<1>; |
| 107.1 | 2:24,4.1 | Autograph; |
| 107.2 | 2:24,4.2 | $[81 *]<3>;\left[\mathrm{vg}^{\wedge} \mathrm{b}\right]<4>;[\mathrm{it-t} \mathrm{t}]<3>;[$ sa^ $\mathrm{b} \%]<2>;[$ Ambr^a $\%]<4>;[$ Ambr^b $\%]<3>;$ Ex144\$<1>; |
| 108.1 | 2:25,1.1 | [1505*]<3>; [1505^c]<3>; Ex-141\#<1>; |
| 108.2 | 2:25,1.2 | [ $\left.\mathrm{P}^{\wedge} 72\right]<3 \gg$ [ $33 *$ ] ${ }^{\text {c }}$-4>; Autograph; |
| 109.1 | 2:25,2.1 | [K*]<5>; Autograph; |
| 109.2 | 2:25,2.2 | [L020*]<6>; [322]<6>; [323*]<4>; [1852]<7>; [69\%]<3>; [Ex-138]<3>; Ex-144\$<1>; |
| 110.1 | 3:1,1.1 | [P^72]<3>; [33*]<4>; [vg^st]<4>; [NA-27]<3>; [Ex-122]<3>; Autograph; |
| 110.2 | 3:1,1.2 | [81*]<3>; Ex-141\#<1>; |
| 110.3 | 3:1,1.3 | [1505*]<3>; [1505^c]<3>; [sy^h]<3>; [Ex-124]<3>; Ex-145\$<1>; |
| 111.1 | 3:1,2.1 | [044*]<3>; [323*]<4>; [Ex-124]<3>; Autograph; |
| 111.2 | 3:1,2.2 | [K*]<5>; [69\%]<3>; [Ex-121]<3>; Ex-145\$<1>; |
| 111.3 | 3:1,2.3 | $\begin{aligned} & {\left[\mathrm{P}^{\wedge} 81 \%\right]<3>;[\mathrm{ac} * \%]<2>;[\mathrm{bo} \wedge \mathrm{a} \%]<2>;[\mathrm{bo} \wedge \mathrm{~b} \%]<2>;[\text { sa^a} \%]<2>;[\mathrm{sa} \wedge \mathrm{~b} \%]<2>;[\mathrm{Ex}-} \\ & 133]<3>;[\mathrm{Ex}-135 \#]<1>;[\mathrm{Ex}-146 \$]<1>; \text { Ex-150\$<1>; } \end{aligned}$ |
| 111.4 | 3:1,2.4 | [1505*]<3>; [1505^c]<3>; [sy^p\%]<2>; [Ex-144\$]<1>; [Ex-147\$]<1>; Ex-149\$<1>; |
| 111.5 | 3:1,2.5 | [81*]<3>; [Ex-125]<4>; Ex-148\$<1>; |
| 112.1 | 3:2,1.1 | $\left[\mathrm{C}^{*} \%\right]<4 \gg\left[\mathrm{C}^{\wedge} 2 \%\right]<4>;[323 *]<4>;\left[\mathrm{Cl}\right.$ ^a\%] ${ }^{\text {a }}$-4>; Autograph; |


| 112.2 | 3:2,1.2 | $\left[\mathrm{P}^{\wedge} 72\right]<3>;\left[01^{*}\right]<3>;[1243]<5>;\left[1881^{\wedge} \mathrm{c}\right]<5>;[2298]<6>;[$ Ex-121]<3>; Ex- $145 \$<1>;$ |
| :---: | :---: | :---: |
| 113.1 | 3:3,1.1 | [ ${ }^{*}$ ]<5>; [1505*]<3>; [1505^${ }^{\text {c }}$ ]<3>; [2464*]<5>; [Ex-128]<4>; Autograph; |
| 113.2 | 3:3,1.2 | [Ex-127]<2>; [Ex-140]<2>; Ex-145\$<1>; |
| 114.1 | 3:3,2.1 | [it-r]<3>; [it-t]<3>; [it-z*]<3>; [sy^h]<3>; [Ex-124]<3>; Autograph; |
| 114.2 | 3:3,2.2 | $\begin{aligned} & {\left[\mathrm{P}^{\wedge} 72\right]<3>;\left[\mathrm{C}^{*} \%\right]<4>;\left[\mathrm{C}^{\wedge} 2 \%\right]<4>;[1852]<7>;\left[\mathrm{sa}^{\wedge} \mathrm{a} \%\right]<2>;[\mathrm{Cl} \wedge \mathrm{a} \%]<4>;[\mathrm{Ex}-} \\ & 126]<2>; \mathrm{Ex}-145 \$<1>; \end{aligned}$ |
| 115.1 | 3:4,1.1 | [044*]<3>; [sy^h]<3>; Autograph; |
| 115.2 | 3:4,1.2 | [bo^a\%]<2>; [Ex-126]<2>; [Ex-133]<3>; Ex-145\$<1>; |
| 116.1 | 3:5,1.1 | [1505*]<3>; [1505^c]<3>; Autograph; |
| 116.2 | 3:5,1.2 | [323*]<4>; [Ex-140]<2>; Ex-145\$<1>; |
| 116.3 | 3:5,1.3 | [TR]<6>; [Ex-131]<2>; [Ex-134]<4>; Ex-146\$<1>; |
| 116.4 | 3:5,1.4 | [1243]<5>; [2298]<6>; [Ex-125]<4>; [Ex-127]<2>; Ex-147\$<1>; |
| 117.1 | 3:6,1.1 | Autograph; |
| 117.2 | 3:6,1.2 | P^72<3>; |
| 117.3 | 3:6,1.3 | [sa^b\%]<2>; [69\%]<3>; [Ex-126]<2>; [Ex-133]<3>; Ex-144\$<1>; |
| 118.1 | 3:6,2.1 | Autograph; |
| 118.2 | 3:6,2.2 | [P025*]<6>; [33*]<4>; Ex-144\$<1>; |
| 118.3 | 3:6,2.3 | [623*]<5>; [1852]<7>; Ex-145\$<1>; |
| 119.1 | 3:7,1.1 | Autograph; |
| 119.2 | 3:7,1.2 | [P^81\%]<3>; [Ex-133]<3>; Ex-144\$<1>; |
| 120.1 | 3:7,2.1 | Autograph; |
| 120.2 | 3:7,2.2 | 01*<3>; |
| 121.1 | 3:7,3.1 | $\begin{aligned} & {[\mathrm{it-z} *]<3>;[\text { Aug^a\% }]<7>;[\text { Ex-121]<3>; }[\text { Ex-124] }<3>;[\text { Ex-141\#] }<1>;[\text { Ex-144\$]<1>; }} \\ & \text { Ex-150\$<1>; } \end{aligned}$ |
| 121.2 | 3:7,3.2 | $\left[\mathrm{C}^{* \%}\right]<4 \gg\left[\mathrm{C}^{\wedge} 2 \%\right]<4>;[945]<4>$; [Hier^a\%]<4>; [Ex-132]<4>; Autograph; |
| 121.3 | 3:7,3.3 | 01*<3>; |
| 121.4 | 3:7,3.4 | $\begin{aligned} & {\left[\mathrm{Ambr}^{\wedge} \mathrm{a} \%\right]<4>;\left[\mathrm{Ambr}^{\wedge} \mathrm{b} \%\right]<3>;[\text { Spec } \%]<3>;[\text { Ex-145\$]<1>; }[\text { Ex- } 146 \$]<1>; \text { Ex- }} \\ & 149 \$<1>; \end{aligned}$ |
| 122.1 | 3:7,4.1 | [Ex-123]<5>; Autograph; |
| 122.2 | 3:7,4.2 | $\begin{aligned} & {\left[\mathrm{C}^{\wedge} 2 \%\right]<4>;[2464 *]<5>;[\text { sy^h }]<3>;[\mathrm{bo} \wedge \mathrm{a} \%]<2>;[\mathrm{Ex}-127]<2>;[\mathrm{Ex}-128]<4>;[\mathrm{Ex}-} \\ & 131]<2>;[\mathrm{Ex}-132]<4>; \text { Ex-144\$<1>; } \end{aligned}$ |
| 122.3 | 3:7,4.3 | [P^72]<3>; [sy^p\%]<2>; Ex-145\$<1>; |
| 123.1 | 3:7,5.1 | Autograph; |
| 123.2 | 3:7,5.2 | [P^81\%]<3>; [Ex-133]<3>; Ex-144\$<1>; |
| 124.1 | 3:8,1.1 | [044*]<3>; [sy^h]<3>; [Ex-124]<3>; Autograph; |
| 124.2 | 3:8,1.2 | [945]<4>; [Ex-140]<2>; Ex-145\$<1>; |
| 124.3 | 3:8,1.3 | [L020*]<6>; [vg^cl]<4>; [Ex-126]<2>; [Ex-144\$]<1>; [Ex-146\$]<1>; Ex-149\$<1>; |
| 125.1 | 3:9,1.1 | [K*]<5>; [1505*]<3>; [1505^c]<3>; Autograph; |
| 125.2 | 3:9,1.2 | [Ex-127]<2>; [Ex-140]<2>; Ex-145\$<1>; |
| 126.1 | 3:10,1.1 | [044*]<3>; [vg^b]<4>; [Ex-129]<2>; [Ex-139]<2>; Ex-144\$<1>; |
| 126.2 | 3:10,1.2 | Autograph; |


| 127.1 | 3:10,2.1 | [ ${ }^{*}$ ]<5>> [044*]<3>; [vg^b]<4>; [sy^h]<3>; Autograph; |
| :---: | :---: | :---: |
| 127.2 | 3:10,2.2 | [sy^p\%]<2>; [Ex-126]<2>; [Ex-140]<2>; Ex-145\$<1>; |
| 128.1 | 3:10,3.1 | Autograph; |
| 128.2 | 3:10,3.2 | P^72<3>; |
| 129.1 | 3:11,1.1 | $\begin{aligned} & \hline[\mathrm{C} * \%]<4>;[81 *]<3>;[\text { it-h*]<3>; [it-r]<3>; [it-s]<3>; [it-t]<3>; [it-w]<3>; [it-z*]<3>; } \\ & {[\mathrm{sy} \wedge \mathrm{~h}]<3>;[\mathrm{Ex}-124]<3>;[\mathrm{Ex}-127]<2>;[\mathrm{Ex}-139]<2>; \text { Ex-144\$<1>; }} \\ & \hline \end{aligned}$ |
| 129.2 | 3:11,1.2 | [33*]<4>; [vg^cl] ${ }^{\text {c }}$ [4>; Autograph; |
| 130.1 | 3:12,1.1 | Autograph; |
| 130.2 | 3:12,1.2 | [vg^b]<4>; [sy^h]<3>; [Ex-127]<2>; Ex-144\$<1>; |
| 131.1 | 3:13,1.1 | [K*]<5>; Autograph; |
| 131.2 | 3:13,1.2 | [Ex-125]<4>; [Ex-130]<4>; [Ex-133]<3>; Ex-144\$<1>; |
| 132.1 | 3:13,2.1 | [ $\left.{ }^{*} \% \%\right]<4>;\left[\mathrm{C}^{\wedge} 2 \%\right]<4 \gg\left[1739^{*}\right]<4>;\left[1739^{\wedge} \mathrm{c}\right]<4>$; Autograph; |
| 132.2 | 3:13,2.2 |  |
| 133.1 | 3:13,3.1 | $[$ it-h* $]<3>;[$ [it-r $]<3>;[$ it-s $]<3>;[$ it-t $]<3>;\left[\right.$ it-w] $<3>;\left[\right.$ it-- $\left.{ }^{*}\right]<3>;[$ Ex-124]<3>; Auto- graph; |
| 133.2 | 3:13,3.2 | Ex-126<2>; |
| 133.3 | 3:13,3.3 | Ex-133<3>; |
| 133.4 | 3:13,3.4 | [P^72]<3>; [01*]<3>; Ex-145\$<1>; |
| 134.1 | 3:14,1.1 | Autograph; |
| 134.2 | 3:14,1.2 | $\left[\mathrm{C}^{*} \%\right]<4>;\left[\mathrm{C}^{\wedge} 2 \%\right]<4>;[\mathrm{vg}$ ^b]<4>; [it-t]<3>; [Ex-131]<2>; Ex-144\$<1>; |
| 135.1 | 3:14,2.1 | Autograph; |
| 135.2 | 3:14,2.2 | [P^72]<3>; [L020*]<6>; [Ex-133]<3>; Ex-144\$<1>; |
| 136.1 | 3:15,1.1 | [Ex-121]<3>; Autograph; |
| 136.2 | 3:15,1.2 | $\begin{aligned} & {\left[323^{*}\right]<4>;\left[1241^{*}\right]<4>;\left[1505^{*}\right]<3>;\left[1505^{\wedge} c\right]<3>;[\text { Ex-142\# }]<1>;[\text { Ex- } 144 \$]<1>; \text { Ex- }} \\ & 149 \$<1>; \end{aligned}$ |
| 137.1 | 3:15,2.1 | $[$ it-h*]<3>; [it-r]<3>; [it-s]<3>; [it-t]<3>; [it-w]<3>; [it-z*]<3>; [sy^h]<3>; [Ex124]<3>; Autograph; |
| 137.2 | 3:15,2.2 | [945]<4>; [C1^a\%]<4>; [Ex-126]<2>; [Ex-140]<2>; Ex-145\$<1>; |
| 138.1 | 3:15,3.1 | $[$ [it-h*]<3>; [it-r]<3>; [it-s]<3>; [it-t]<3>; [it-w]<3>; [it-z*]<3>; [sy^h]<3>; [Ex- 124]<3>; Autograph; |
| 138.2 | 3:15,3.2 | [01^2]<4>; [Ex-126]<2>; [Ex-132]<4>; Ex-145\$<1>; |
| 139.1 | 3:16,1.1 | Autograph; |
| 139.2 | 3:16,1.2 | [945]<4>; [sy^p\%]<2>; [Spec\%]<3>; [Ex-140]<2>; Ex-144\$<1>; |
| 140.1 | 3:16,2.1 | $\begin{aligned} & {\left[\mathrm{P}^{\wedge} 72\right]<3>;[044 *]<3>;[\text { [s^^a } \%]<2>;[\mathrm{NA}-27]<3>;[\text { Ex-121]<3>; }[\mathrm{Ex}-124]<3>;[\mathrm{Ex}-} \\ & 127]<2>;[\mathrm{Ex}-133]<3>; \mathrm{Ex}-144 \$<1>; \end{aligned}$ |
| 140.2 | 3:16,2.2 | [ $\left.\mathrm{C}^{*} \%\right]<4>$; [ $\left.\mathrm{C}^{\wedge} 2 \%\right]<4>$; [323*]<4>; [945]<4>; Autograph; |
| 141.1 | 3:16,3.1 | Autograph; |
| 141.2 | 3:16,3.2 | P^72<3>; |
| 142.1 | 3:16,4.1 | Autograph; |
| 142.2 | 3:16,4.2 | $\begin{aligned} & {[\mathrm{P} \wedge 72]<3>;\left[\mathrm{K}^{*}\right]<5>;\left[\mathrm{L} 020^{*}\right]<6>;\left[\mathrm{vg}^{\wedge} \mathrm{b}\right]<4>;[\mathrm{Ex}-121]<3>;[\mathrm{Ex}-127]<2>; \text { Ex- }} \\ & 144 \$<1>; \end{aligned}$ |
| 142.3 | 3:16,4.3 | [ ${ }^{*} \%$ ] $<4 \gg$; [ $\left.{ }^{\wedge} 2 \%\right]<4>$; [1243]<5>; Ex-145\$<1>; |
| 142.4 | 3:16,4.4 | 01*<3>; |


| 143.1 | 3:18,1.1 | Autograph; |
| :---: | :---: | :---: |
| 143.2 | 3:18,1.2 | P^72<3>; |
| 143.3 | 3:18,1.3 | 242<8>; |
| 143.4 | 3:18,1.4 | [ $\left.\mathrm{vg}^{\wedge} \mathrm{b}\right]<4>;[$ it-z*]<3>; [Ex-131]<2>; Ex-144\$<1>; |
| 144.1 | 3:18,2.1 | [323*]<4>; [NA-27]<3>; [Ex-133]<3>; [Ex-140]<2>; Ex-144\$<1>; |
| 144.2 | 3:18,2.2 | Ex-124<3>; |
| 144.3 | 3:18,2.3 | [L020*]<6>; Autograph; |
| 144.4 | 3:18,2.4 | 044*<3>; |
| 144.5 | 3:18,2.5 | $\begin{aligned} & {\left[\mathrm{C}^{*} \%\right]<4>;\left[\mathrm{vg}^{\wedge} \mathrm{cl}\right]<4>;\left[\mathrm{it}-\mathrm{z}^{*}\right]<3>;\left[\mathrm{sy}^{\wedge} \mathrm{p} \%\right]<2>;[\text { Aug^a } \%]<7>;[\mathrm{Cl} \wedge \mathrm{lat} \%]<3>; \text { Ex- }} \\ & 145 \$<1>; \end{aligned}$ |
| 145.1 | 3:18,3.1 | $\begin{aligned} & {[0285 \%]<3>;[\text { it-h* }]<3>;[\text { it-r }]<3>;[\text { it-s }]<3>;[\text { it-t }]<3>;[\text { it-w }]<3>;[\text { it-z* }]<3>;} \\ & {\left[\mathrm{sy}^{\wedge} \mathrm{h}\right]<3>;[\text { Ex-124] }]<3>; \text { Autograph; }} \end{aligned}$ |
| 145.2 | 3:18,3.2 | Ex-126<2>; |
| 146.1 | 3:18,4.1 | $\begin{aligned} & {\left[\mathrm{P}^{\wedge} 72\right]<3>;\left[323^{*}\right]<4>;\left[1241^{*}\right]<4>;\left[1505^{*}\right]<3>;\left[1505^{\wedge} \mathrm{c}\right]<3>;[\mathrm{vg} \wedge \mathrm{~b}]<4>;[\mathrm{NA}-} \\ & 27]<3>;[\text { Ex-126]<2>; }[\text { Ex-133 }]<3>;[\text { Ex-140]<2>; Ex-144\$<1>; } \\ & \hline \end{aligned}$ |
| 146.2 | 3:18,4.2 | [ ${ }^{*}$ ]<5>; [L020*]<6>; [TR]<6>; [it-t]<3>; [Ex-124]<3>; Autograph; |
| 146.3 | 3:18,4.3 | $01^{*}<3>$; |
| 147.1 | 3:18,5.1 | [sy^$\left.{ }^{\wedge}\right]<3>$; Autograph; |
| 147.2 | 3:18,5.2 | $\left[\mathrm{C}^{*} \%\right]<4>$; [C^2\%]<4>; [1243]<5>; [Ex-126]<2>; Ex-144\$<1>; |
| 147.3 | 3:18,5.3 | 440<6>; |
| 147.4 | 3:18,5.4 | Ex-133<3>; |
| 148.1 | 3:18,6.1 | [ $\left.\mathrm{vg}^{\wedge} \mathrm{cl}\right]<4>$; [it-t]<3>; [it-z*]<3>; [sy^h]<3>; Autograph; |
| 148.2 | 3:18,6.2 | [ $\left.\mathrm{P}^{\wedge} 72\right]<3>$; [A*]<5>; [Ex-126]<2>; Ex-145\$<1>; |
| 149.1 | 3:18,7.1 | Autograph; |
| 149.2 | 3:18,7.2 | $\mathrm{P}^{\wedge} 72<3>$; |
| 149.3 | 3:18,7.3 | $81^{*}<3>$; |
| 150.1 | 3:19,1.1 | Autograph; |
| 150.2 | 3:19,1.2 | [614*]<3>; [Ambst\%]<3>; Ex-144\$<1>; |
| 150.3 | 3:19,1.3 |  |
| 151.1 | 3:19,2.1 | Autograph; |
| 151.2 | 3:19,2.2 | [P^72]<3>; [614*]<3>; [vg^b]<4>; [Ex-125]<4>; Ex-144\$<1>; |
| 152.1 | 3:20,1.1 | Autograph; |
| 152.2 | 3:20,1.2 | $\left.\left[\mathrm{K}^{*}\right]<5\right\rangle$; [TR]<6>; [69\%]<3>; Ex-144\$<1>; |
| 153.1 | 3:20,2.1 | $\begin{aligned} & {[\text { it-h* }]<3>;[\text { it-r }]<3>;[\text { it-s }]<3>;[\text { it-t }]<3>;[\text { it-w }]<3>;\left[i t-z^{*}\right]<3>;[\text { Ex-124]<3>; [Ex- }} \\ & 130]<4>;[\text { Ex-141\#]<1>; }[\text { Ex-144\$]<1>; Ex-149\$<1>; } \end{aligned}$ |
| 153.2 | 3:20,2.2 | $\left[\mathrm{K}^{*}\right]<5>;\left[\mathrm{vg}^{\wedge} \mathrm{b}\right]<4>$; Autograph; |
| 154.1 | 3:20,3.1 | Autograph; |
| 154.2 | 3:20,3.2 | P^72<3>; |
| 155.1 | 3:21,1.1 | Autograph; |
| 155.2 | 3:21,1.2 | [241]<9>; [630]<3>; [TR]<6>; Ex-144\$<1>; |
| 155.3 | 3:21,1.3 | [ $\left.\mathrm{P}^{\wedge} 72\right]<3>;[01 *]<3>;\left[\mathrm{sa}^{\wedge} \mathrm{a} \%\right]<2>$; Ex-145\$<1>; |


| 156.1 | 3:21,2.1 | [P025*]<6>; [Ex-130]<4>; Autograph; |
| :---: | :---: | :---: |
| 156.2 | 3:21,2.2 | $\begin{aligned} & {[\mathrm{C} * \%]<4>;\left[\mathrm{C}^{\wedge} 2 \%\right]<4>;\left[\mathrm{K}^{*}\right]<5>;\left[323^{*}\right]<4>;[1241 *]<4>;[\mathrm{Ex}-127]<2>;[\mathrm{Ex}-} \\ & 140]<2>; \text { Ex-144\$<1>; } \end{aligned}$ |
| 157.1 | 3:22,1.1 | [0285\%]<3>; Autograph; |
| 157.2 | 3:22,1.2 | [01*]<3>; [Ex-126]<2>; [Ex-133]<3>; Ex-144\$<1>; |
| 158.1 | 3:22,2.1 | Autograph; |
| 158.2 | 3:22,2.2 | $\begin{aligned} & {\left[\mathrm{vg}^{\wedge} \mathrm{cl}\right]<4>;\left[\mathrm{vg}^{\wedge} \mathrm{ww}\right]<4>;\left[\mathrm{it-} \mathrm{z}^{*}\right]<3>;\left[\mathrm{Aug}^{\wedge} \mathrm{a} \%\right]<7>;\left[\text { Cass }^{\wedge} \mathrm{a} \%\right]<3>;\left[\text { Cass }^{\wedge} \mathrm{b} \%\right]<3>;} \\ & \mathrm{Ex}-144 \$<1>; \end{aligned}$ |
| 159.1 | 4:1,1.1 | $\begin{aligned} & {\left[\mathrm{P}^{\wedge} 72\right]<3>;\left[044^{*}\right]<3>;[0285 \%]<3>;[\mathrm{NA}-27]<3>;[\text { Ex-121]<3>; [Ex-133]<3>; Ex- }} \\ & 144 \$<1>; \end{aligned}$ |
| 159.2 | 4:1,1.2 | [945]<4>; [1241*]<4>; [sy^h]<3>; Autograph; |
| 159.3 | 4:1,1.3 | $\begin{aligned} & {\left[1505^{*}\right]<3>;\left[1505^{\wedge} \mathrm{c}\right]<3>;[\mathrm{vg} \wedge \mathrm{~b}]<4>;[\mathrm{sy} \wedge \mathrm{p} \%]<2>;[69 \%]<3>;[\text { Ex-145\$]<1>; [Ex- }} \\ & 146 \$]<1>; \text { Ex-150\$<1>; } \end{aligned}$ |
| 159.4 | 4:1,1.4 | [049^c]<5>; [sa^a\%]<2>; [Ex-126]<2>; [Ex-147\$]<1>; Ex-149\$<1>; |
| 159.5 | 4:1,1.5 | 01*<3>; |
| 160.1 | 4:1,2.1 | [C*\%]<4>; [C^2\%]<4>; [1739*]<4>; [1739^c]<4>; Autograph; |
| 160.2 | 4:1,2.2 | $\begin{aligned} & {[\mathrm{vg} \wedge \mathrm{~b}]<4>;\left[\mathrm{it-z*} \mathrm{z}^{*}<3>;[69 \%]<3>;[\mathrm{Ex}-127]<2>;[\mathrm{Ex}-142 \#]<1>;[\mathrm{Ex}-145 \$]<1>;\right. \text { Ex- }} \\ & 149 \$<1>; \end{aligned}$ |
| 161.1 | 4:1,3.1 | [K*]<5>; Autograph; |
| 161.2 | 4:1,3.2 | [Ex-122]<3>; [Ex-126]<2>; [Ex-133]<3>; Ex-144\$<1>; |
| 161.3 | 4:1,3.3 | [Hier^a\%]<4>; [Ex-125]<4>; [Ex-130]<4>; Ex-145\$<1>; |
| 162.1 | 4:2,1.1 | $\begin{aligned} & {[\text { [it-h*]<3>; [it-r]<3>; [it-s]<3>; [it-t]<3>; [it-w]<3>; [it-z*]<3>; [sy^h]<3>; [Ex- }} \\ & 124]<3>; \text { Autograph; } \end{aligned}$ |
| 162.2 | 4:2,1.2 | [ $\left.\mathrm{C}^{*} \%\right]<4>;\left[\mathrm{C}^{\wedge} 2 \%\right]<4>;\left[\right.$ Hier^a\%] ${ }^{\text {a }}$ /4>; Ex-145\$<1>; |
| 162.3 | 4:2,1.3 | Ex-126<2>; |
| 163.1 | 4:2,2.1 | Autograph; |
| 163.2 | 4:2,2.2 | 01*<3>; |
| 164.1 | 4:2,3.1 | Autograph; |
| 164.2 | 4:2,3.2 | P^72<3>; |
| 165.1 | 4:3,1.1 | Autograph; |
| 165.2 | 4:3,1.2 | [01*]<3>; [630]<3>; [pm^b]<6>; [HF]<6>; [bo^a\%]<2>; [Aug^b\%]<5>; Ex-144\$<1>; |
| 165.3 | 4:3,1.3 | $\left[\mathrm{C}^{*} \%\right]<4>;\left[\mathrm{C}^{\wedge} 2 \%\right]<4>;[69 \%]<3>$; [Hier^$\left.{ }^{\wedge} \%\right]<4>;[$ Ex-140]<2>; Ex-145\$<1>; |
| 166.1 | 4:3,2.1 | Autograph; |
| 166.2 | 4:3,2.2 | [945]<4>; [Ex-140]<2>; Ex-144\$<1>; |
| 167.1 | 4:3,3.1 | [C1^a\%] ${ }^{\text {a }}$ [ ${ }^{\text {¢ }}$; Autograph; |
| 167.2 | 4:3,3.2 | [614*]<3>; [1505*]<3>; [1505^c]<3>; [Ex-140]<2>; Ex-144\$<1>; |
| 168.1 | 4:3,4.1 | Autograph; |
| 168.2 | 4:3,4.2 | [Ex-125]<4>; [Ex-131]<2>; Ex-144\$<1>; |
| 169.1 | 4:4,1.1 | [ ${ }^{\wedge} 2 \%$ ]<4>; Autograph; |
| 169.2 | 4:4,1.2 | [01*]<3>; [Ex-129]<2>; Ex-144\$<1>; |
| 170.1 | 4:5,1.1 | Autograph; |
| 170.2 | 4:5,1.2 | P^72<3>; |


| 170.3 | 4:5,1.3 | 01*<3>; |
| :---: | :---: | :---: |
| 171.1 | 4:5,2.1 | [323*]<4>; [1505*]<3>; [1505^c]<3>; Autograph; |
| 171.2 | 4:5,2.2 | [81*]<3>; [1852]<7>; [Ex-133]<3>; Ex-135\#<1>; |
| 171.3 | 4:5,2.3 | [P^72]<3>; [Ex-121]<3>; [Ex-125]<4>; Ex-145\$<1>; |
| 172.1 | 4:7,1.1 | Autograph; |
| 172.2 | 4:7,1.2 | [945]<4>; [Ex-140]<2>; Ex-144\$<1>; |
| 173.1 | 4:8,1.1 | Autograph; |
| 173.2 | 4:8,1.2 | $\begin{aligned} & {\left[\mathrm{vg}^{\wedge} \mathrm{cl}\right]<4>;[\mathrm{it-t}]<3>;[\mathrm{sy} \wedge \mathrm{~h}]<3>;[\mathrm{bo} \wedge \mathrm{a} \%]<2>;[\text { sa^a} \%]<2>;[\mathrm{Ex}-127]<2>;[\text { Ex- }} \\ & 142 \#]<1>;[\mathrm{Ex}-144 \$]<1>; \text { Ex-149\$<1>; } \end{aligned}$ |
| 174.1 | 4:8,2.1 | [Ex-123]<5>; Autograph; |
| 174.2 | 4:8,2.2 | [P^72]<3>; [2464*]<5>; [Ex-128]<4>; Ex-144\$<1>; |
| 175.1 | 4:8,3.1 | [K*]<5>; Autograph; |
| 175.2 | 4:8,3.2 | [P^72]<3>; [945]<4>; [Ex-131]<2>; [Ex-140]<2>; Ex-144\$<1>; |
| 176.1 | 4:9,1.1 | Autograph; |
| 176.2 | 4:9,1.2 | [945]<4>; [vg^b]<4>; [Ex-140]<2>; Ex-144\$<1>; |
| 177.1 | 4:11,1.1 | [TR]<6>; [Ex-121]<3>; Autograph; |
| 177.2 | 4:11,1.2 | Ex-142\#<1>; |
| 177.3 | 4:11,1.3 | Ex-127<2>; |
| 178.1 | 4:11,2.1 | $\begin{aligned} & {[\mathrm{it-h} *]<3>;[\mathrm{it-r}]<3>;[\mathrm{it-s}]<3>;\left[\mathrm{it-t]}<3>;\left[\mathrm{it-w]<3>;[it-z}^{*}\right]<3>;[\text { sy^h }]<3>;[\text { Ex- }\right.} \\ & 124]<3>; \text { Autograph; } \end{aligned}$ |
| 178.2 | 4:11,2.2 | [1852]<7>; [Ex-127]<2>; Ex-145\$<1>; |
| 178.3 | 4:11,2.3 | Ex-126<2>; |
| 179.1 | 4:11,3.1 | Autograph; |
| 179.2 | 4:11,3.2 | P^72<3>; |
| 180.1 | 4:11,4.1 | Autograph; |
| 180.2 | 4:11,4.2 | P^72<3>; |
| 181.1 | 4:11,5.1 | [323*]<4>; [1241*]<4>; Autograph; |
| 181.2 | 4:11,5.2 | $\begin{aligned} & {\left[\mathrm{P}^{\wedge} 72\right]<3>;[\mathrm{vg} \text { ^ww }]<4>;[\mathrm{it}-\mathrm{r}]<3>;[\mathrm{sy} \wedge \mathrm{~h}]<3>;[\text { bo^b} \%]<2>;[\text { sa^b} \%]<2>;[69 \%]<3>;} \\ & {[\mathrm{Ex}-121]<3>;[\mathrm{Ex}-127]<2>; \mathrm{Ex}-145 \$<1>;} \end{aligned}$ |
| 182.1 | 4:12,1.1 | Autograph; |
| 182.2 | 4:12,1.2 | P^72<3>; |
| 183.1 | 4:14,1.1 | $\begin{aligned} & {\left[\mathrm{P}^{\wedge} 72\right]<3>;[044 *]<3>;[\mathrm{sy} \wedge \mathrm{p} \%]<2>;[\mathrm{NA}-27]<3>;[\mathrm{Cl} \wedge \mathrm{a} \%]<4>;[\mathrm{Ex}-133]<3>;[\mathrm{Ex}-} \\ & 140]<2>; \text { Ex-144\$<1>; } \end{aligned}$ |
| 183.2 | 4:14,1.2 | [P025*]<6>; [pm^b]<6>; [vg^cl]<4>; Autograph; |
| 183.3 | 4:14,1.3 | [sy^h]<3>; [Ex-127]<2>; Ex-146\$<1>; |
| 184.1 | 4:14,2.1 |  |
| 184.2 | 4:14,2.2 | [1852]<7>; [Ex-132]<4>; Autograph; |
| 184.3 | 4:14,2.3 | $\begin{aligned} & {[\mathrm{P} \wedge 72]<3>;[33 *]<4>;\left[2464^{*}\right]<5>;[\mathrm{Ex}-121]<3>;[\mathrm{Ex}-122]<3>;[\mathrm{Ex}-137]<3>; \text { Ex- }} \\ & 145 \$<1>; \end{aligned}$ |
| 184.4 | 4:14,2.4 | Ex-130<4>; |
| 185.1 | 4:14,3.1 | $\left[\mathrm{vg}^{\wedge} \mathrm{cl}\right]<4>$; [vg$\left.\wedge \mathrm{st}\right]<4>;[\mathrm{Cl} \wedge \mathrm{a} \%]<4>$; [Ex-130]<4>; Autograph; |


| 185.2 | 4:14,3.2 | $\begin{aligned} & {\left[\mathrm{K}^{*}\right]<5>;\left[1505^{*}\right]<3>;\left[1505^{\wedge} \mathrm{c}\right]<3>;[\mathrm{bo} \wedge \mathrm{~b} \%]<2>;[\mathrm{sa} \wedge \mathrm{a} \%]<2>;[\mathrm{Ex}-126]<2>;[\mathrm{Ex}-} \\ & 140]<2>; \text { Ex-145\$<1>; } \end{aligned}$ |
| :---: | :---: | :---: |
| 186.1 | 4:15,1.1 | Autograph; |
| 186.2 | 4:15,1.2 | [P^72]<3>; [sy^p\%]<2>; [bo^a\%]<2>; Ex-144\$<1>; |
| 187.1 | 4:15,2.1 | Autograph; |
| 187.2 | 4:15,2.2 | [P^72]<3>; [sy^p\%]<2>; [bo^a\%]<2>; Ex-144\$<1>; |
| 188.1 | 4:15,3.1 | [81*]<3>; Ex-141\#<1>; |
| 188.2 | 4:15,3.2 | Autograph; |
| 188.3 | 4:15,3.3 | [69\%]<3>; [Ex-126]<2>; [Ex-132]<4>; Ex-144\$<1>; |
| 188.4 | 4:15,3.4 | P^72<3>; |
| 189.1 | 4:16,1.1 | Autograph; |
| 189.2 | 4:16,1.2 | P^72<3>; |
| 190.1 | 4:16,2.1 | Autograph; |
| 190.2 | 4:16,2.2 | 01*<3>; |
| 191.1 | 4:16,3.1 | Autograph; |
| 191.2 | 4:16,3.2 | [630]<3>; [945]<4>; [Ex-140]<2>; Ex-144\$<1>; |
| 192.1 | 4:17,1.1 | $\left[\mathrm{P}^{\wedge} 72\right]<3 \gg[\mathrm{NA}-27]<3 \gg[\mathrm{Ex}-133]<3>$; Autograph; |
| 192.2 | 4:17,1.2 | [81*]<3>; [1852]<7>; Ex-141\#<1>; |
| 193.1 | 4:17,2.1 | [Ex-123]<5>; Autograph; |
| 193.2 | 4:17,2.2 | $\begin{aligned} & {[01 *]<3>;\left[\mathrm{A}^{\wedge} \mathrm{c}\right]<5>;\left[1241^{*}\right]<4>;[2464 *]<5>;[\mathrm{vg} \wedge \mathrm{~b}]<4>;[69 \%]<3>;[\mathrm{Ex}-128]<4>} \\ & \text { Ex-144\$<1>; } \end{aligned}$ |
| 194.1 | 4:18,1.1 | Autograph; |
| 194.2 | 4:18,1.2 | [P^72]<3>; [vg^s]<4>; [it-h*]<3>; Ex-144\$<1>; |
| 195.1 | 4:18,2.1 | [044*]<3>; [Ex-124]<3>; Autograph; |
| 195.2 | 4:18,2.2 | [P^72]<3>; [945]<4>; [bo^a\%] <2>; [Ex-126]<2>; Ex-145\$<1>; |
| 195.3 | 4:18,2.3 | [B*]<4>; [614*]<3>; [1505*]<3>; [1505^c]<3>; [sy^h]<3>; Ex-146\$<1>; |
| 196.1 | 4:19,1.1 | [323*]<4>; Autograph; |
| 196.2 | 4:19,1.2 | Ex-133<3>; |
| 196.3 | 4:19,1.3 | [1852]<7>; [TR]<6>; [69\%]<3>; [Ex-121]<3>; Ex-144\$<1>; |
| 197.1 | 4:19,2.1 | [sy^h]<3>; Autograph; |
| 197.2 | 4:19,2.2 | [P^72]<3>; [Ex-126]<2>; [Ex-129]<2>; [Ex-136]<3>; Ex-144\$<1>; |
| 198.1 | 5:1,1.1 | Autograph; |
| 198.2 | 5:1,1.2 | [2464*]<5>; [Ex-126]<2>; [Ex-128]<4>; [Ex-131]<2>; Ex-144\$<1>; |
| 198.3 | 5:1,1.3 | [33*]<4>; [Ex-123]<5>; [Ex-142\#]<1>; [Ex-145\$]<1>; Ex-149\$<1>; |
| 198.4 | 5:1,1.4 | [1505*]<3>; [1505^c]<3>; Ex-146\$<1>; |
| 199.1 | 5:1,2.1 | Autograph; |
| 199.2 | 5:1,2.2 | $\begin{aligned} & {[\mathrm{P} 025 *]<6>;[630]<3>;[1243]<5>;\left[1505^{*}\right]<3>;\left[1505^{\wedge} \mathrm{c}\right]<3>;[\mathrm{sy} \wedge \mathrm{~h}]<3>;[\mathrm{sa} \wedge \mathrm{a} \%]<2>} \\ & {[1 \%]<2>; \text { Ex- } 144 \$<1>;} \end{aligned}$ |
| 200.1 | 5:1,3.1 | Autograph; |
| 200.2 | 5:1,3.2 | P^72<3>; |
| 201.1 | 5:2,1.1 | [P025*]<6>; Autograph; |


| 201.2 | 5:2,1.2 | [01*]<3>; [323*]<4>; [sa^a\%]<2>; Ex-144\$<1>; |
| :---: | :---: | :---: |
| 201.3 | 5:2,1.3 | [Did^a\%]<3>; [Ex-133]<3>; Ex-145\$<1>; |
| 201.4 | 5:2,1.4 | Ex-140<2>; |
| 202.1 | 5:2,2.1 | Autograph; |
| 202.2 | 5:2,2.2 | $\begin{aligned} & \hline \text { [L020*]<6>; [1243]<5>; [it-h*]<3>; [it-r]<3>; [sy^p\%]<2>; [Ex-125]<4>; [Ex- } \\ & \text { 132]<4>; Ex-144\$<1>; } \end{aligned}$ |
| 203.1 | 5:3,1.1 | Autograph; |
| 203.2 | 5:3,1.2 | Ex-133<3>; |
| 204.1 | 5:5,1.1 | $\begin{aligned} & \text { [it-h*]<3>; [it-r] }] 3>;[\text { it-s] }<3>;[\text { it-t }]<3>;[\text { it-w] }] 3>;[\text { it-z* }]<3>;[\text { sy^h }]<3>;[\text { Ex- } \\ & 124]<3>; \text { Autograph; } \end{aligned}$ |
| 204.2 | 5:5,1.2 | [01*]<3>; [Ex-126]<2>; Ex-145\$<1>; |
| 204.3 | 5:5,1.3 | [33*]<4>; [2298]<6>; [Ex-121]<3>; [Ex-125]<4>; Ex-146\$<1>; |
| 204.4 | 5:5,1.4 | [1852]<7>; [Ex-127]<2>; Ex-147\$<1>; |
| 205.1 | 5:5,2.1 | Autograph; |
| 205.2 | 5:5,2.2 | [P^72]<3>; [vg^b]<4>; Ex-144\$<1>; |
| 205.3 | 5:5,2.3 | [630]<3>; [Ex-140]<2>; Ex-145\$<1>; |
| 205.4 | 5:5,2.4 | [614*]<3>; [1505*]<3>; [1505^c]<3>; [sy^h]<3>; Ex-146\$<1>; |
| 205.5 | 5:5,2.5 | 044*<3>; |
| 206.1 | 5:5,3.1 | [NA-27]<3>; [Ex-132]<4>; Autograph; |
| 206.2 | 5:5,3.2 | Ex-139<2>; |
| 207.1 | 5:6,1.1 | [sy^h]<3>; [Ex-123]<5>; Autograph; |
| 207.2 | 5:6,1.2 | $\begin{aligned} & {[\mathrm{P} 025 *]<6>;[2464 *]<5>;[\mathrm{bo} \wedge \mathrm{a} \%]<2>;[\text { Spec } \%]<3>;[\text { Ex-126]<2>; [Ex-128]<4>; [Ex- }} \\ & 136]<3>; \text { Ex-145\$<1>; } \end{aligned}$ |
| 208.1 | 5:7,1.1 | Autograph; |
| 208.2 | 5:7,1.2 | P^72<3>; |
| 208.3 | 5:7,1.3 | [0206\%]<2>; [Aug^a\%]<7>; Ex-144\$<1>; |
| 209.1 | 5:7,2.1 | Autograph; |
| 209.2 | 5:7,2.2 | [01*]<3>; [33*]<4>; [vg^b]<4>; Ex-144\$<1>; |
| 210.1 | 5:8,1.1 | Autograph; |
| 210.2 | 5:8,1.2 | [P^72]<3>; [L020*]<6>; [049^c]<5>; [TR]<6>; [ac*\%]<2>; [bo^a\%]<2>; <br> [bo^b\%]<2>; [sa^a\%]<2>; [sa^b\%]<2>; [69\%]<3>; [Ex-121]<3>; [Ex-122]<3>; [Ex- <br> 135\#] <1>; [Ex-144\$]<1>; Ex-149\$<1>; |
| 211.1 | 5:8,2.1 | Autograph; |
| 211.2 | 5:8,2.2 | [P^72]<3>; [33*]<4>; Ex-144\$<1>; |
| 212.1 | 5:8,3.1 | [1241*]<4>; [1505*]<3>; [1505^c]<3>; [sy^h]<3>; Autograph; |
| 212.2 | 5:8,3.2 | $\begin{aligned} & {[\mathrm{L} 020 *]<6>;\left[\mathrm{P} 025^{*}\right]<6>;[322]<6>;[1243]<5>;[2298]<6>;[\text { Ex-121 }]<3>;[\text { Ex- }} \\ & \text { 131]<2>; Ex-135\#<1>; } \end{aligned}$ |
| 212.3 | 5:8,3.3 | [044*]<3>; [0206\%]<2>; [Ex-133]<3>; Ex-145\$<1>; |
| 213.1 | 5:8,4.1 | [1505*]<3>> [1505^c]<3>; Autograph; |
| 213.2 | 5:8,4.2 | $\begin{aligned} & {\left[\mathrm{P}^{\wedge 72]<3>;[945]<4>;[2298]<6>;[\mathrm{pm} \wedge \mathrm{~b}]<6>;[\mathrm{TR}]<6>;[\mathrm{HF}]<6>;[\mathrm{sy} \wedge \mathrm{~h}]<3>;[\mathrm{Ex}-}\right.} \\ & 127]<2>;[\mathrm{Ex}-136]<3>; \mathrm{Ex}-145 \$<1>; \end{aligned}$ |
| 214.1 | 5:9,1.1 | Autograph; |
| 214.2 | 5:9,1.2 | P^72<3>; |


| 215.1 | 5:9,2.1 | Autograph; |
| :---: | :---: | :---: |
| 215.2 | 5:9,2.2 | P^72<3>; |
| 216.1 | 5:9,3.1 | Autograph; |
| 216.2 | 5:9,3.2 | [P^72]<3>; [Ex-127]<2>; Ex-144\$<1>; |
| 217.1 | 5:9,4.1 | Ex-141\#<1>; |
| 217.2 | 5:9,4.2 | [0206\%]<2>; [Ex-122]<3>; [Ex-136]<3>; Autograph; |
| 218.1 | 5:9,5.1 | [B^2]<4>; [NA-27]<3>; Autograph; |
| 218.2 | 5:9,5.2 | [ ${ }^{*}$ ]<5>; [Ex-127]<2>; [Ex-141\#]<1>; [Ex-145\$]<1>; Ex-150\$<1>; |
| 218.3 | 5:9,5.3 | P^72<3>; |
| 218.4 | 5:9,5.4 | [322]<6>; [323*]<4>; [1241*]<4>; [Ex-144\$]<1>; [Ex-146\$]<1>; Ex-149\$<1>; |
| 219.1 | 5:10,1.1 | Autograph; |
| 219.2 | 5:10,1.2 | $\begin{aligned} & {[0206 \%]<2>;[\mathrm{TR}]<6>;[\mathrm{it}-\mathrm{t}]<3>;[\mathrm{sy} \wedge \mathrm{p} \%]<2>;[\mathrm{bo} \wedge \mathrm{~b} \%]<2>;[\mathrm{Ex}-124]<3>;[\mathrm{Ex}-} \\ & 125]<4>; \text { Ex-144\$<1>; } \end{aligned}$ |
| 220.1 | 5:10,2.1 | Autograph; |
| 220.2 | 5:10,2.2 | [Ex-127]<2>; [Ex-131]<2>; Ex-144\$<1>; |
| 220.3 | 5:10,2.3 | Ex-133<3>; |
| 220.4 | 5:10,2.4 | 945<4>; |
| 221.1 | 5:10,3.1 | $\begin{aligned} & {[33 *]<4>;[1852]<7>;[2464 *]<5>;[\text { NA- } 27]<3>;[\text { Ex-125]<4>; [Ex-131]<2>; Ex- }} \\ & \text { 142\#<1>; } \end{aligned}$ |
| 221.2 | 5:10,3.2 |  |
| 221.3 | 5:10,3.3 | Autograph; |
| 221.4 | 5:10,3.4 | [323*]<4>; [Ex-140]<2>; Ex-145\$<1>; |
| 221.5 | 5:10,3.5 | Ex-127<2>; |
| 222.1 | 5:11,1.1 | Autograph; |
| 222.2 | 5:11,1.2 | [vg^cl]<4>; [sy^p\%]<2>; [sa^a\%]<2>; [Ex-131]<2>; [Ex-140]<2>; Ex-144\$<1>; |
| 222.3 | 5:11,1.3 | Ex-130<4>; |
| 222.4 | 5:11,1.4 | $\begin{aligned} & {[33 *]<4>;[\mathrm{sy} \wedge \mathrm{~h}]<3>;[\mathrm{bo} \wedge \mathrm{a} \%]<2>;[69 \%]<3>;[\text { Ex-127]<2>; [Ex-129]<2>; Ex- }} \\ & 145 \$<1>; \end{aligned}$ |
| 223.1 | 5:11,2.1 | [P^72]<3>; [bo^a\%]<2>; [NA-27]<3>; [Ex-133]<3>; Ex-144\$<1>; |
| 223.2 | 5:11,2.2 | Autograph; |
| 224.1 | 5:12,1.1 | Autograph; |
| 224.2 | 5:12,1.2 | P^72<3>; |
| 225.1 | 5:12,2.1 | [it-h* $]<3>;$ [it-r]<3>; [it-s]<3>; [it-t]<3>; [it-w]<3>; [it-2*]<3>; [sy^h]<3>; [Ex- 124]<3>; Autograph; |
| 225.2 | 5:12,2.2 | [P^72]<3>; [0206\%]<2>; [33*]<4>; [Ex-126]<2>; [Ex-129]<2>; Ex-145\$<1>; |
| 226.1 | 5:12,3.1 | [Ex-124]<3>; Autograph; |
| 226.2 | 5:12,3.2 | [ $\left.\mathrm{vg}^{\wedge} \mathrm{c} 1\right]<4>$; Ex-135\#<1>; [Ex-140]<2>; |
| 226.3 | 5:12,3.3 | [1505*]<3>; [1505^c]<3>; [sy^h]<3>; Ex-144\$<1>; |
| 226.4 | 5:12,3.4 | 044*<3>; |
| 227.1 | 5:13,1.1 | Autograph; |
| 227.2 | 5:13,1.2 | 2138<6>; |


| 228.1 | 5:13,2.1 | Autograph; |
| :---: | :---: | :---: |
| 228.2 | 5:13,2.2 | [vg^b]<4>; [sy^p\%]<2>; [Ex-131]<2>; Ex-144\$<1>; |
| 229.1 | 5:14,1.1 | [Ex-123]<5>; Autograph; |
| 229.2 | 5:14,1.2 | [2464*]<5>; [sy^p\%]<2>; [Ex-124]<3>; [Ex-128]<4>; Ex-144\$<1>; |
| 230.1 | 5:14,2.1 | Autograph; |
| 230.2 | 5:14,2.2 | $\mathrm{P}^{\wedge} 72<3>$; |
| 231.1 | 5:14,3.1 | [sy^p\%]<2>; [bo^b\%]<2>; [sa^b\%]<2>; [Ex-126]<2>; [Ex-139]<2>; Ex-144\$<1>; |
| 231.2 | 5:14,3.2 | $\left[\mathrm{vg}^{\wedge} \mathrm{cl}\right]<4>;[\mathrm{it}-\mathrm{h} *]<3 \gg[\mathrm{sy}$ ^h] $<3>$; Autograph; |
| 232.1 | 5:14,4.1 | $\begin{aligned} & {[044 *]<3>;\left[\mathrm{vg}^{\wedge} \mathrm{st}\right]<4>;\left[\mathrm{ac}^{*} \%\right]<2>;\left[\mathrm{bo}^{\wedge} \mathrm{a} \%\right]<2>;\left[\mathrm{sa}^{\wedge} \mathrm{a} \%\right]<2>;\left[\mathrm{sa}{ }^{\wedge} \mathrm{b} \%\right]<2>;[\mathrm{Ex}-} \\ & 129]<2>;[\mathrm{Ex}-139]<2>; \text { Ex-144\$<1>; } \end{aligned}$ |
| 232.2 | 5:14,4.2 | [1739^${ }^{\text {c }}$ ]<4>; Autograph; |

## GLOSSARY OF TERMS

Boldfaced words in the following definitions refer to other terms defined in this glossary.
Affinity: the degree to which two witnesses to a text have the same readings. Affinity consists of two components: Quantitative Affinity and Genetic Affinity.

Antiquity: the characteristic of a reading being older than the witness in which it occurs. An inherited reading has antiquity, that is, it is older than the witness in which it occurs. See inheritance. A newly initiated reading lacks antiquity, that is, it is only as old as the witness in which it originated. A reading introduced by mixture is only as old as its age in its source of mixture. In the reconstruction process, the software recognizes the antiquity of a reading by its presence in other witnesses in the active database.
Autograph: The original document written by the hand of its author or by his secretary to whom he dictated its text.
Autographic Text: The words originally written in an original document.
Commonness: A measure of the degree to which witnesses to a given text share the same value of a genetic characteristic of the text. See Commonness of Place of Variation and Commonness of Reading.
Commonness of Place of Variation: The degree to which two witnesses to a given text have the same places of variation regardless of the readings at those places-that is, they share a common portion of the text. The Commonness of Place of Variation of A with $B=$ the number of places of variation where both $A$ and $B$ have a reading, where $A$ and B are witnesses to the same text. This measure is important for dealing with fragmentary witnesses. Two witnesses that both have a complete text have $100 \%$ Commonness of Place of Variation.
Commonness of Readings: A measure of the degree to which two witnesses to a text have the same readings. It is calculated as follows: The Commonness of Readings of A with $B=$ the number of places of variation where both $A$ and $B$ have the same reading, where A and B are witnesses to the same text.
Completeness: A measure of how much of a text a particular witness contains. It is calculated as follows: The Completeness of $\mathrm{A}=$ (the number of places of variation A has of the text) $\div$ (the total number of places of variation in the text), where $A$ is a witness to the text. This measure is important for dealing with fragmentary witnesses.

Content: A list of the places of variation a witness contains, expressed in terms of references (chapter and verse)-that is, that portion of the text the witness contains.

Deferred Ambiguity: The principle of deferred ambiguity states that when consensus fails to recover a reading of an exemplar being reconstructed, the sister of that exemplar will have the inherited reading in the next prior generation.

Distribution: the characteristic of a reading occurring in more than one text tradition. An original reading occurs in more than one first-generation exemplar. An original reading is expected to have both first-generation distribution and antiquity.
Exemplar: A witness from which other witnesses have been copied. The software creates exemplars in the process of reconstructing the genealogical history of a text.

Fragment: A witness that is missing part of its text due to damage or deterioration.
Genetic Affinity: see Quantitative Affinity.
Genetic Dominance: A reading has genetic dominance as long as it is inherited by the descendants of the exemplar in which it first occurs. It loses genetic dominance at any place in the genetic history of the exemplar in which it occurs where an alternate reading replaces it.

Heredity: That characteristic of a reading correctly copied into a daughter witness of the exemplar in which the reading is found.
Inheritable Variant: A variant initiated by one of the ancestor exemplars of a witness.
Inheritance: That characteristic of a reading correctly copied from the parent exemplar of the witness in which the reading is found. An inherited reading is passed down from prior ancestor exemplars.
Inheritance Persistence: The inheritance persistence of a witness is the ratio of the number inheritable variants to the number of actually inherited ones.
Lectionary: A manuscript edited and arranged in sections assigned for reading in the Church at specified times in the liturgical calendar-something like a hymnbook.

Majuscule: A manuscript written in all capital letters.
Manuscript: A handwritten copy of a text made from an earlier copy (exemplar). The term is sometimes used as a synonym of witness.

Minimal Reading: The reading of a witness that occurs least often in the working database.
Minuscule: A manuscript written in lower case characters.
Papyri: Manuscripts copied on paper made from papyrus. They are usually rather early, but mostly fragmentary.
Parent Exemplar: The manuscript from which another manuscript was directly copied.
Place of Variation: A place in a text where the witnesses to the text have different readings. In the data base, each place of variation is assigned a sequential index number in order to distinguish them from one another; each one also has assigned to it the chapter and verse where it occurs in the text.
Primary Parent: The parent exemplar of a witness from which it derives most of its readings, and its place in the tree diagram that maps the genealogical history of the text. A witness has only one primary parent exemplar.

Quantitative Affinity: A measure of the degree to which witnesses to a given text are genetically related. The mutual quantitative affinity between two witnesses is the inverse ratio of the number of places the two witnesses have the same readings to the number of places their readings are different.

Reading: At each place of variation in a text, the witnesses have different words. The words contained in a given witness at a particular place of variation constitute the reading of that witness at that place. The reading may be a word, phrase, sentence, verse, etc., or nothing at all (an omission).

Recension: A recension is understood to be a witness derived from multiple sources and having a significant number of variations from its primary parent exemplar. A recension was a deliberate alteration of a text tradition for the purpose of correction or improvement. A recension occurred when a Christian community noted that their Bibles (manuscripts) had different readings, and there was an attempt to recover the readings of the autograph. This likely took place under the authority of the leadership of the community and was carried out by competent scribes. It is possible that in some recensions some of the corrections were made to strengthen the doctrines of the community.

Secondary Descendant: A descendant of a secondary parent functioning as a source of mixture for the given descendant.

Secondary Parent: A parent exemplar of a witness other than the Primary Parent Exemplar. Secondary parents are the sources of mixture for their secondary descendants.

Siblings: Sisters, first generation descendants (copies) of the same exemplar.
Sibling Gene: The collection of minimal readings a witness has that occur only in it and its sibling sisters. These are the readings where the text of the parent exemplar of the siblings differs from the text of its genealogical ancestors.

Singularity: A reading in an extant witness having no heredity; it differs from that of its parent exemplar.

Stemma: A tree diagram of the genealogical relationships of the witnesses to the text of an ancient literary composition.

Stematics: Stematics is the method used for recovering the original text of the ancient Greek and Latin classics, also known as the family-tree method.
Uncial: A manuscript written in all capital letters.
Variant Heredity: The characteristic of variant readings that provides a measure of the likelihood that a given reading in a particular witness A has been inherited from another witness B in an earlier generation. It is quantified as the genetic distance between witness A containing the given reading and another witness B in an earlier generation containing the same reading. The witness B having the least genetic distance from witness A is the closest near relative of A with respect to the given reading. A reading has no variant heredity until after it is first initiated somewhere in the genealogical history of the text.

Variant Reading: See Reading.
Variation Unit: See Place of Variation.
Version: A translation of a document into a language other than that of the original document itself.

Virtual Exemplar: An exemplar created by the software to account for same-generation mixture. These exemplars do not contribute to the primary structure of the tree diagram.
Witness: A manuscript of a document in its original language, or a translation of that document into another language, or a quotation of the text of a manuscript or translation.

## BIBLIOGRAPHY

Aland, Kurt, and Barbara Aland. The Text of the New Testament, trans. by Erroll F. Rhodes. Grand Rapids: Wm. B. Eerdmans Publishing Co., 1987.
$\qquad$ , and others. "The International Greek New Testament Project: A Status Report," JBL 87.2 (1968) 187-197.

Carlson, Stephen C. "The Origin(s) of the 'Caesarean' Text," a paper presented at the Society of Biblical Literature in 2005.
$\qquad$ . "The Text of Galatians and Its History," a Ph.D. dissertation, Graduate Program in Religion, Duke University, 2012.

Colwell, Ernest C. "Genealogical Method: Its Achievements and its Limitations," Journal of Biblical Literature 66 (1947).

Dearing, V. A. Principles and Practices of Textual Analysis. University of California Press, 1974.
$\qquad$ . "Textual Analysis: A Consideration of Some Questions Raised by M. P. Weitzman," Vetus Testamentum, 29.3 (1979) 355-359.

Ehrman, Bart D. The Orthodox Corruption of Scripture. New York: Oxford University Press, 1993.

Epp, E. J. "The Claremont Profile-Method for Grouping New Testament Minuscule Manuscripts," in B. L. Daniels and M. J. Suggs, eds., Studies in the History and Text of the New Testament, vol. 29 of Studies and Documents. Salt Lake City: 1967; 27-38.

Froger, Dom J. La critique des textes et son automatisation. Paris, 1968.
$\qquad$ . "La critique des textes et L’ordinateur," Viligante Christianae, 24.3 (1970) 210-217.

Griffith, J. G. "Numerical Taxonomy and Some Primary Manuscripts of the Gospels," JTS 20 pt. 2 (1969) 389-406.

Harary, Frank. Graph Theory. Reading, MA: Addison-Wesley, 1969.
Hardmeier, Christof, Eep Talstra, and Bertram Salzmann. The Stuttgart Electronic Study Bible (Stuttgart, Germany: The German Bible Society, 2004).

Hennig, Willi. Phylogenetic Systematics (English trans. and extensively rev., D. Dwight Davis \& Rainer Zangerl). Urbana: U. Ill. Press, 1966.

Hodges Zane C. and Arthur L. Farstad, The Greek New Testament According to the Majority Text. Nashville: Thomas Nelson Publishers, 1982.

Nestle-Aland Novum Textamentum Graece, $27^{\text {th }}$ edition. Stuttgart: German Bible Society, 1993.

Maas, Paul. Textual Criticism, translated from the German by Barbara Flower. Oxford: The Clarendon Press, 1958.

McReynolds, P. "The Value and Limitations of the Claremont Profile Method," SBL, Book of Seminar Papers (Sept 1972) 1.1-7.

Metzger, Bruce M. A Textual Commentary on the Greek New Testament. New York: The United Bible Societies, 1971.
$\qquad$ . The Text of the New Testament: Its Transmission, Corruption, and Restoration, $3^{\text {rd }}$ enlarged edition. New York: Oxford University Press, 1992.

Metzger, Bruce M. and Bart D. Ehrman. The Text of the New Testament: Its Transmission, Corruption, and Restoration, 4th ed. New York: Oxford University Press, 2005.

Mink, Gerd. "Contamination, Coherence, and Coincidence in Textual Transmission: The Coher-ence-Based Genealogical Method (CBGM) as a Complement and Corrective to Existing Approaches," in The Textual History of the Greek New Testament: Changing Views in Contemporary Research, eds. Klaus Wachtel and Michael Holmes. Atlanta: Society of Biblical Research, 2011.

Novum Testamentum Graece. Stuttgart: Deutsche Bibelgesellschaft, 1997.
Pickering, Wilbur N. The Identity of the New Testament Text, $2^{\text {nd }}$ edition. Nashville: Thomas Nelson Publishers, 1980.

Platnick, Nelson I. and H. Don Cameron, "Cladistic Methods in Textual, Linguistic, and Phylogenetic Analysis," Sys. Zool. 26 (1977): 380-385.

Poole, Eric. "The Computer in Determining Stemmatic Relationships," Computers and the Humanities, 8 (1974) 207-216.

Price, James D. "A Computer Aid for Textual Criticism," Grace Theological Journal 8.1 (1987) 115-30.
$\qquad$ . "A Computer-Aided Textual Commentary on the Book of Philippians," Grace Theological Journal 8.2 (1987) 253-90.

Rahlfs, Alfred. Septuaginta, II vols. $6^{\text {th }}$ ed. Stuttgart: Deutsche Bibelgesellschaft, nd.
Richards, W. L. The Classification of the Greek Manuscripts of the Johannine Epistles. SBLDS 35; Missoula: Scholars Press for SBL, 1977.
$\qquad$ . "A Critique of a New Testament Text-Critical Methodology-The Claremont Profile Method," JBL 96 (1977) 555-556.

Robinson, Maurice A. and William G. Pierpont. The New Testament in the Original Greek, Byzantine Textform. Southborough, Massachusetts: Chilton Book Publishing, 2005.

Robinson, Peter M. W. "Computer-Assisted Stemmatic Analysis and 'Best-Text' Historical Editing," in Pieter van Reenen \& Margot van Mulken, eds., Studies in Stemmatology. Amsterdam: Benjamins, 1996.

Robinson, Peter M. W. and Robert J. O'Hara, "Report on the Textual Criticism Challenge 1991," Bryn Mawr Classical Review 3 (1992): 331-337.

Scrivener, F. H. A. H KAINH $\triangle I A \Theta H K H:$ The New Testament, The Greek Text Underlying the English Authorized Version of 1611. London: The Trinitarian Bible Society, n.d.; reprint of the Cambridge University edition of 1902.

Wachtel, Klaus. "Conclusions," in The Textual History of the Greek New Testament: Changing Views in Contemporary Research, eds. Klaus Wachtel and Michael Holmes. Atlanta: Society of Biblical Research, 2011.

Wisse, F. The Profile Method for the Classification and Evaluation of Manuscript Evidence, as Applied to the Continuous Greek Text of the Gospel of Luke. Grand Rapids: 1982.

Weitzman, M. P. Vetus Testamentum. 27.2 (1977) 225-235.
Zarri, Gian Piero. "Algorithms, stemmata codicum, and the Theories of Dom H. Quentin," in The Computer and Literary Studies, eds. A. J. Aitken, R. W. Bailey, and N. Hamilton-Smith (Edinburg, 1973), 225-238.
$\qquad$ ."Some Experiments in Automated Textual Criticism," paper presented at the International Conference on Computers in the Humanities, Minneapolis, 1973.
$\qquad$ . "A Computer Model for Textual Criticism?" in The Computer In Literary and Linguistic Studies, eds. Alan Jones and R. F. Churchhouse. Cardiff: 1976; 133-55.


[^0]:    ${ }^{1}$ Literature composed before the invention of printing, copies of which exist only in handwritten documents. A handwritten copy is referred to as a manuscript.
    ${ }^{2}$ The original text of a composition, that is, the actual words written by the hand of its author, is referred to as its autographic text.

[^1]:    ${ }^{3}$ An exemplar is a manuscript from which other manuscripts were copied.
    ${ }^{4}$ Quantitative affinity is a measure of how similar two manuscripts are to one another.
    ${ }^{5}$ The principle of delayed ambiguity says that the inherited variant will be a reading of a sister exemplar when it develops.

[^2]:    ${ }^{6}$ Novum Testamentum Graece (Stuttgart: Deutsche Bibelgesellschaft, 1997).
    ${ }^{7}$ The witnesses consist of individual manuscripts, translations, and patristic quotations.
    ${ }^{8}$ All my prior research with the genealogical software was done with data manually extracted from the already expanded database in the United Bible Society's Greek New Testament.
    ${ }^{9}$ Christof Hardmeier, Eep Talstra, and Bertram Salzmann, The Stuttgart Electronic Study Bible (Stuttgart, Germany: The German Bible Society, 2004); used with permission.

[^3]:    ${ }^{1}$ I use the term witness because the reconstruction of genealogical history derives evidence not only from extant manuscripts but also from ancient translations and quotations from church fathers. In addition, a few printed editions are involved although not for reconstruction purposes.
    ${ }^{2}$ Christof Hardmeier, Eep Talstra, and Bertram Salzmann, The Stuttgart Electronic Study Bible (Stuttgart, Germany: The German Bible Society, 2004).
    ${ }^{3}$ Appendix A lists all the extant witnesses by name, date, language, content, number of readings, and percentage of completeness.
    ${ }^{4}$ Four editions of the Latin Vulgate: $\mathrm{vg}^{\wedge} \mathrm{cl}, \mathrm{cg}^{\wedge} \mathrm{s}, \mathrm{vg}^{\wedge} \mathrm{st}$, and $\mathrm{vg}^{\wedge} \mathrm{ww}$; Scrivener's TR; Hodges-Farstad HF; Robinson-Pierpont's RP; and NA-27. These do not contribute to reconstructing the stemma.

[^4]:    ${ }^{5}$ Aland, Kurt, and Barbara Aland. The Text of the New Testament, trans. by Erroll F. Rhodes. (Grand Rapids: Wm. B. Eerdmans Publishing Co., 1987), p. 83.
    ${ }^{6}$ The witnesses in the $19^{\text {th }}$ to the $21^{\text {st }}$ centuries are printed editions that do not contribute to the reconstruction of the genealogical history.

[^5]:    ${ }^{7}$ Of course, there are more places of variation than this, but the editors of the NA- 27 text have weeded out those that are insignificant for reconstruction and meaning.
    ${ }^{8}$ Appendix B provides a map showing where the places of variation occur in the text by chapter and verse.

[^6]:    ${ }^{9}$ Quantitative affinity is supplemented by the sibling gene to affirm sibling relationship.

[^7]:    ${ }^{1}$ The term manuscript is used here in its inclusive sense of manuscripts, translations, church fathers, and reconstructed exemplars - the sense I usually assign to the term witness.
    ${ }^{2}$ The total computing time was one minute and forty-three seconds including the time required for the software to assemble and format all the information contained in the tables, diagrams, and appendices of this book.
    ${ }^{3}$ The full diagram, displayed in Appendix C, requires six pages. The condensed form deletes all the terminal branches (extant witnesses) except one at each exemplar-the most interesting one. Likewise, it omits exemplars that only account for same-generation mixture (those with a $\$$ sign attached to their name).

[^8]:    ${ }^{4}$ The date, affinity and difference are found in Appendix C; so also for the other branches.

[^9]:    ${ }^{5}$ Chapter Two of The Genealogical History of the Greek Text of the Gospel of Matthew.

[^10]:    ${ }^{6}$ A primary parent exemplar is the exemplar from which a witness derives its genealogical descent; secondary parent exemplars are the sources from which a witness acquires mixture. A witness has only one primary parent, but it may have any number of secondary parent exemplars.

[^11]:    ${ }^{7}$ While this is true for the book of 1 Peter, for some of the other books the software may fail to uniquely identify the place of origin for a small percentage of variants.

[^12]:    ${ }^{8}$ Witnesses with less than $80 \%$ content are excluded because they do not contribute to the reconstruction of the genealogical history but are attached at the most appropriate place after the tree is complete.
    ${ }^{9}$ Such exemplars do not contribute to the reconstruction of the tree diagram of the genealogical history of the witnesses, their affinity with their parent exemplar having no significance to the reconstruction process.

[^13]:    ${ }^{10}$ The exemplars constructed just to account for same-generation mixture were not included in the study because they do not contribute to the construction of the genealogical tree.

[^14]:    ${ }^{29}$ Again, the term manuscript is used in its broader sense to include manuscripts, translations, quotations from church fathers, and reconstructed exemplars.

[^15]:    ${ }^{30}((1,698-232) \div 1,698) \times 100=86.3$.

[^16]:    ${ }^{31}$ I call this practice deferred ambiguity. Since sibling witnesses rarely have scribal errors at the same place of variation, where the reading of one sibling is ambiguous - that is, it is uncertain which of two readings is the inherited reading and which is a newly initiated error-the other siblings will have the inherited reading. Of the 1,832 decisions the software made, only 139 were made on the basis of deferred ambiguity.
    ${ }^{32}$ Next to the first variant-the NA-27 choice - the reading with the smaller variant number is usually supported by more witnesses than those with larger variant numbers. While this option is purely arbitrary, it turns out to be rarely significant for determining the readings of the autograph. For determining the readings of the autograph, the algorithm treats the exemplars of the last five branches to be constructed as siblings constituting the ancient independent witnesses.

[^17]:    ${ }^{33}$ The place a variant reading was initially introduced in genealogical history is determined by locating the witness containing the variant reading where the reading differs from that of its parent exemplar and the reading is not accounted for by mixture. Mixture fails when the reading does not occur in any witness in preceding generations.
    ${ }^{34} \mathrm{In}$ this and other lists of variants herein, an exemplar enclosed in square brackets [] is the source of mixture for the associated variant. Variants are listed only by their reference: 1:8,1.1[Ex-149\$]; 1:11,1.2; 1:16,5.2[Ex-149\$]; 2:3,1.1[Ex-149\$]; 2:5,4.2; 2:6,1.1[Ex-149\$]; 2:7,2.1[Ex-149\$]; 2:25,1.1; 3:1,1.2; 3:7,3.1[Ex-150\$]; 3:20,2.1[Ex149\$]; 4:14,2.1[Ex-149\$]; 4:15,3.1; 4:17,1.2; 5:9,4.1; 5:9,5.2[Ex-150\$]; Count $=16$.

[^18]:    ${ }^{35} 1: 4,2.2 ; 1: 18,1.2 ; 1: 20,1.2[E x-149 \$] ; 1: 24,2.2[E x-149 \$] ; 1: 24,3.3 ; 2: 16,1.2 ; 2: 19,1.2 ; 2: 19,2.2$; 2:20,1.2[Ex-149\$]; 2:20,2.2[Ex-149\$]; 3:1,2.3[Ex-150\$]; 4:5,2.2; 5:8,1.2[Ex-149\$]; 5:8,3.2; 5:12,3.2; Count = 15 .
    ${ }^{36}$ 1:24,5.2[Ex-149\$]; 2:12,4.2; 2:13,1.2[Ex-149\$]; 2:17,1.2[Ex-149\$]; 3:13,2.2[Ex-149\$]; 3:15,1.2[Ex149\$]; 4:1,2.2[Ex-149\$]; 4:8,1.2[Ex-149\$]; 4:11,1.2; 5:1,1.3[Ex-149\$]; 5:10,3.1; Count = 11 .

[^19]:    ${ }^{39}$ Bart D. Ehrman, The Orthodox Corruption of Scripture (New York: Oxford University Press, 1993), xii; italics his.

[^20]:    ${ }^{40}$ Ehrman, p. 154-55.

[^21]:    ${ }^{41}$ Ehrman, p. 211.

[^22]:    ${ }^{42}$ Ehrman, p. 88.

[^23]:    ${ }^{1}$ At any place in the genealogical history of a text, the evidence of a variant's inheritance is its presence in other witnesses of the same or earlier generations.

[^24]:    ${ }^{2}$ A recension is recognized by the introduction of a larger number of variants than normal in a witness, usually also accompanied by a larger number of secondary parent exemplars-mixture.

[^25]:    ${ }^{45}$ The names of exemplars created by the software have the prefix "Ex-" followed by a number; extant witnesses have the names provided in NA-27 as modified for compatibility with the software (discussed in Chapter Two).

