A Genealogical History of the Greek Text of the New Testament

Volume 23

A Genealogical History of the Greek Text of the First Epistle of John

By

James D. Price

Table of Contents

T CT 11	Page
List of Tables	
List of Figures	
PREFACECHAPTER 1: INTRODUCTION	
Textual Criticism	
The Problem of Mixture	2
The Database Used	
CHAPTER 2: WITNESSES TO THE TEXT OF FIRST JOHN	5
Number of Witnesses	6
Date	6
Completeness	6
Limited Diversity	9
Commonness of Text	12
Quantitative Affinity	13
Genealogical Affinity	13
Conclusion	13
CHAPTER 3: GENEALOGICAL HISTORY OF FIRST JOHN'S MANUS	CRIPTS16
Readings of the Autographic Text	20
The Generations of Genealogical History	21
Mixture	21
Primary Daughters	22
Secondary Daughters	23
Resolution of Mixture	24
Distribution of Affinity	24

	Page
Date of the Autograph	25
Conclusions	26
CHAPTER 4: THE HISTORY OF THE TEXTUAL VARIANTS IN FIRST JO	HN28
Types of Variants	29
Determining Exemplar Readings	30
Autographic Readings	31
Agreement with NA-27	31
The Origin of the Variants	32
Antiochian Recension	33
Western Recension.	34
Egyptian Recension	34
Tracing Variant History	35
Variants of Textual Interest	35
Missing "God" in 1:8,1	35
Missing "Brother" in 3:14,2	37
Missing "God" in 4:10,1	39
Non-NA-27 in 2:29,1	40
Non-NA-27 in 5:20,1	42
Ambiguity in 5:13,1	44
Variants of Theological Interest	
Added "Christ" in 1:7,3	
"If" or "When" in 2:28,2	
Is Christ God in 3:23,3	
"Not Confess" or "Loose" in 4:3,1	

	Page
"Christ" or Not in 4:15,2	54
"Spirit" or Not in 5:6,1	56
Comma Johanneum in 5:7-8	58
"God" or "Son" in 5:10,3	60
"Him" or "Himself" in 5:18,2	62
"Man" or "Phantom" in 5:20,2	64
"Man" or "Phantom" in 5:9,2	66
Tracing Any Variant	68
Conclusion	72
CHAPTER 5: SUMMARY AND CONCLUSIONS	73
The Effect of Recensions	74
Binary Branches	74
So What!	75
APPENDIX A: List of Extant Witnesses to the Greek Text of First John	76
APPENDIX B: List of the References Associated with Each Place of Variati	on81
APPENDIX C: Tree Diagram of The Textual History of First John	83
APPENDIX D: List of Autographic Readings For First John	89
APPENDIX E: List of the Places the Lachmann-10 Text Differs from the NA	A-27 Text .95
APPENDIX F: Places Where the Non-Autographic Variants Were Initiated	97
APPENDIX G: Places Where the Non-Autographic Variants Were Initiated.	105
APPENDIX H: Every Place Where a Variant is Initiated	116
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	24
Table 3.6: Distribution of Affinity of Exemplars with Primary Parent	25
Table 4.1: Distribution of Number of Variants per Place of Variation	27
Table 4.2: Distribution of Variants by Type	28
Table 4.3: Distribution of All Variants by Type	28
Table 4.4: Frequency of Exemplar Reading Rules	29
Table 4.5: Frequency of Exemplar Reading Rules	30
Table 4.6: Distribution of Autographic Readings by Probability	31
Table 4.7: Frequency of Variants	31

List of Figures

Figure 3.1: Condensed Genealogical Stemma of 1 John	16
Figure 3.1a: The Egyptian Recension	17
Figure 3.1b: The Antiochian Recension	19
Figure 3:2: Condensed Tree Diagram of 1 John	18
Figure 4.1: Distribution of 1 John 1:8,1	35
Figure 4.2: Distribution of 1 John 3:14,2	37
Figure 4.3: Distribution of 1 John 4:10,1	39
Figure 4.4: Distribution of 1 John 2:29,1	40
Figure 4.5: Distribution of 1 John 5:20,1	42
Figure 4.6: Distribution of 1 John 5:13,1	44
Figure 4.7: Distribution of 1 John 1:7,3	47
Figure 4.8: Distribution of 1 John 2:28,2	49
Figure 4.9: Distribution of 1 John 3:23,3	50
Figure 4.10: Distribution of 1 John 4:3,1	52
Figure 4.11: Distribution of 1 John 4:15,2	54
Figure 4.12: Distribution of 1 John 5:7-8	58
Figure 4.13: Distribution of 1 John 5:10,3	60
Figure 4.14: Distribution of 1 John 5:18,2	62
Figure 4.15: Distribution of 1 John 5:20,2	64
Figure 4.16: Distribution of 1 John 5:9,2	66
Figure 4.17: Distribution of 1 John 2:24,2	69
Figure 4.18: Distribution of 1 John 2:24,2	70

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

October, 2021

CHAPTER 1 INTRODUCTION

This book is the twenty-third 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 John. 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 literature¹ 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 variants. So, various theories and methodologies were developed to work with the variants at each

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.

place of variation to decide which one is more likely original. But with the development of high-speed 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 uninherited from the primary exemplar; the only difference is that a newly initiated variant has no

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.

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 27th 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 witnesses⁷ 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.

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

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.

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 John.

CHAPTER 2 WITNESSES TO THE TEXT OF FIRST JOHN

The witnesses¹ to the text of the Book of First John 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 119 existing witnesses³ of various types:

(1) Papyrus manuscripts	2
(2) Uncial manuscripts	16
(3) Minuscule manuscripts	47
(4) Lectionary manuscripts	2
(5) Latin Versions	7
(6) Egyptian Versions	5
(7) Syriac Versions	2
(8) Greek Church Fathers	11
(9) Latin Church Fathers	19
(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,

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: vg^cl, cg^s, vg^st, and vg^ww; Scrivener's TR; Hodges-Farstad HF; Robinson-Pierpont's RP; and NA-27. These do not contribute to reconstructing the stemma.

and (6) genealogical affinity. These characteristics of the available witnesses to the text of First John are discussed below and are shown to be suitable for a reasonable reconstruction of its textual history.

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. This does not include the witnesses of the ancient translations and church fathers. This study makes use of the 119 witnesses to the Book of First John 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 First John 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 First John range from the third to the twentieth centuries. Table 2.1 and its associated graph display the reasonably good distribution of the witnesses by date.

Completeness

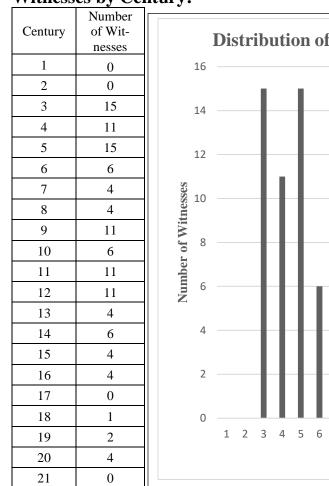
Many of the witnesses are fragmentary, not all their text having survived the passage of time. Only 61 of the 119 witnesses have 96-100% of their text complete, and only 18 have a text

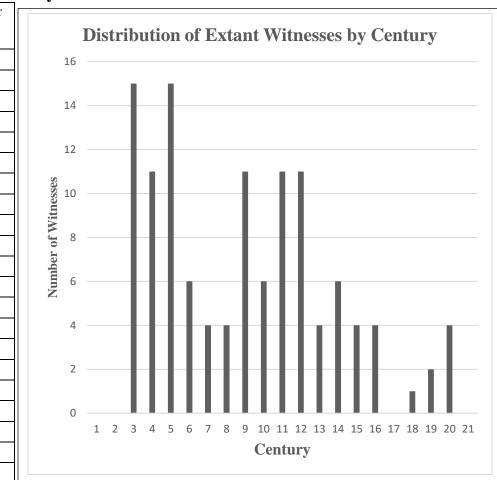
⁵ Aland, Kurt, and Barbara Aland. *The Text of the New Testament*, trans. by Erroll F. Rhodes. (Grand Rapids: Wm. B. Eerdmans Publishing Co., 1987), p. 83.

 $^{^6}$ The witnesses in the 19^{th} to the 21^{st} centuries are printed editions that do not contribute to the reconstruction of the genealogical history.

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.

Table 2.1: Distribution of Extant Witnesses by Century:

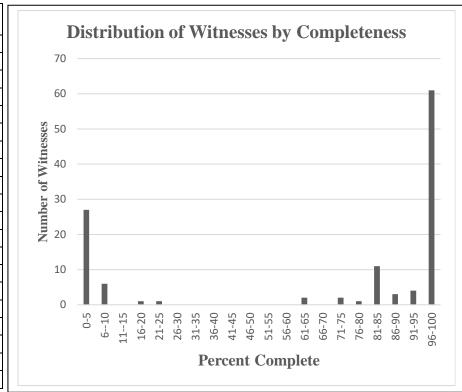




Completeness is important for the reconstruction of the textual history, because the computer depends on minimal difference between witnesses to determine quantitative affinity. Consequently, the computer reconstructed the genealogical history on the basis of witnesses having at least 80% of their text 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:

ny Compi	by Completeness.								
% Complete	Number of Witnesses								
0-5	27								
6-10	6								
11-15	0								
16-20	1								
21-25	1								
26-30	0								
31-35	0								
36-40	0								
41-45	0								
46-50	0								
51-55	0								
56-60	0								
61-65	2								
66-70	0								
71-75	2								
76-80	1								
81-85	11								
86-90	3								
91-95	4								
96-100	61								



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 third century, so a reasonably good reconstruction can be expected.

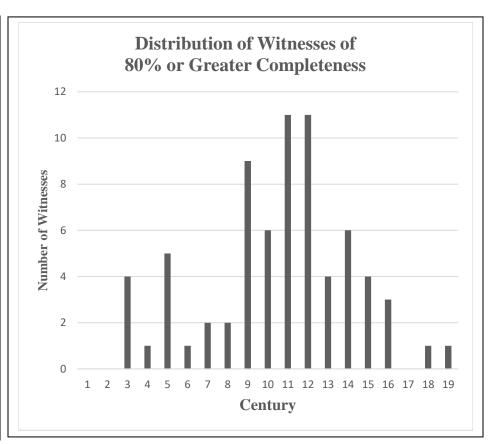
Limited Diversity

The more diverse the text the more difficult the reconstruction of its textual history is. In the overall picture, all witnesses to First John 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 80% or Greater Completeness

by Century

by Cent	ury
Century	Num. of Witnesses
1	0
2	0
3	4
4	1
5	5
6	1
7	2
8	2
9	9
10	6
11	11
12	11
13	4
14	6
15	4
16	3
17	0
18	1
19	1



But modern technology has expanded that limit to where reconstruction is now possible for texts the size and diversity of First John. The NA-27 apparatus records 179 places of variation⁷ for the Book of First John with a total of 428 variant readings distributed among them.⁸ This averaged out to 2.39 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, 126

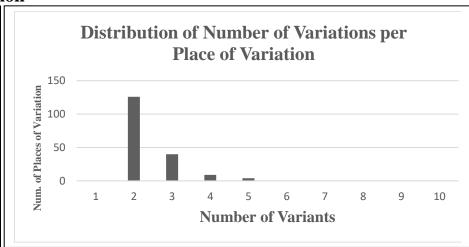
⁷ Of course, there are more places of variation than this, but the editors of the NA-27 text have weeded out those that are insignificant for reconstruction and meaning.

⁸ Appendix B provides a map showing where the places of variation occur in the text by chapter and verse.

places of variation have only two variations whereas only four places of variation have five variations.

Table 2.4
Distribution of Number of Variations per Place of Variation

Jei i iuce	01 / 41140	_
Number of variants	Number of Places of Variation	
1	0	l
2	126	l
3	40	l
4	9	l
5	4	l
6	0	l
7	0	l
8	0	l
9	0	l
10	0	١
Total =	428	L



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 First John they are 01*, 01^c, and 01^2; these each have an affinity with their parent exemplar of only 78%.

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 First John. 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	16
Omit a phrase	5
Alternate word	76
Alternate words	42
Transposed words	9
Added word or phrase	31
Other	0
Total =	179

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 First John.

Table 2.6
Distribution of Commonness of
Text among Witnesses

<u>l ext among</u>	vviules	ses																						
	Number																							
0/ 0	of wit-				Ι)is	tri	bu	tic	n	of	\mathbf{C}	on	nm	on	ne	ess	0	fΊ	ex	t			
% Common-	ness								Δ	m	Λľ	ıσ	W	itn	PC	SP(g							
ness	pairs	4								VIII	UI	18	* *	1411	CS	SCI	3							
0-5	2,471	4		3000																				
6-10	435	4																						
11-15	3																							
16-20	81		7.0	2500																				
21-25	81		airs		-1																			
26-30	0		Number of Witness Pairs	2000	-																			
31-35	0		nes		-1																			п
36-40	0		Vit	1500	1																			Ш
41-45	2		Jf V	1300	-1																			н
46-50	1		er (-1																			н
51-55	28		mp	1000	1																			Ŧ.
56-60	22		N		-1																			н
61-65	130			500	4																4			Ł
66-70	12																						_	
71-75	143			0	-1										_	_			ī.	ī		П	1	
76-80	140			U	0-5	0	[2	- 02	25	30	35	0	15	00	25	- 09	92	0,	75	30	35	- 06	95	00
81-85	744				Ó	61	1115	16-2	21-2	26-3	31-3	36-4	41-7	46-50	51-5	9-99	51- 6	2-99	71-7	3-9/	31-8	5-98	91-6	96-100
86-90	197						Т														-5			ō
91-95	237										Pe l	rce	nt	Co	mr	no	nn	ess	5					
96-100	1,830																							

Quantitative Affinity

Quantitative affinity⁹ 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 First John.

It is evident that many of the extant witnesses to First John 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 First John 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.

⁹ Quantitative affinity is supplemented by the sibling gene to affirm sibling relationship.

Table 2.7
Distribution of Quantitative Affinity
Among all Witnesses

111 11111111111111111111111111111111111	יכ
Number of	
Witnesses	١
1,494	١
87	١
131	١
53	١
224	١
148	
101	
105	
160	
357	
192	
347	
570	
641	
558	
410	
322	
267	
233	
621	
	Number of Witnesses 1,494 87 131 53 224 148 101 105 160 357 192 347 570 641 558 410 322 267 233

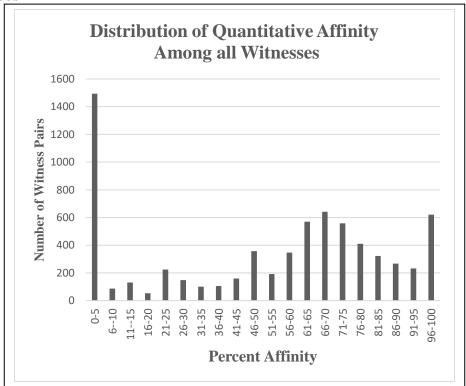
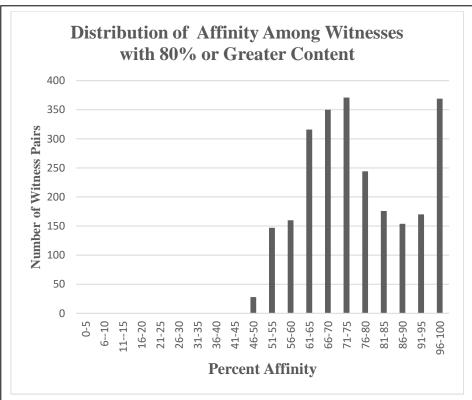


Table 2.8
Distribution of
Quantitative Affinity
Among Witnesses with
80% or Greater Content

Number	П
	- 11
% Affin- of Wit-	
ity 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 28	
51-55 147	
56-60 160	
61-65 316	
66-70 350	
71-75 371	
76-80 244	
81-85 176	
86-90 154	
91-95 170	
96-100 369	



CHAPTER 3 GENEALOGICAL HISTORY OF FIRST JOHN'S MANUSCRIPTS

This chapter presents the genealogical history of the manuscripts¹ of the Greek text of the First Epistle of John as reconstructed by computer program Lachmann-10.² Beginning with a data base of 119 existing witnesses, 179 places of variation, and 428 variants, the program reconstructed 35 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 First John 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 3.2³ 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-145#, Ex-147#, and Ex-153#. These branches are quite independent of one another, having mutual affinities ranging from 69% to 79%. But they have affinities with the autograph ranging from 83% to 93%. In addition, the sibling gene of each uniquely distinguishes them from one another. The following table lists their mutual differences and affinities.

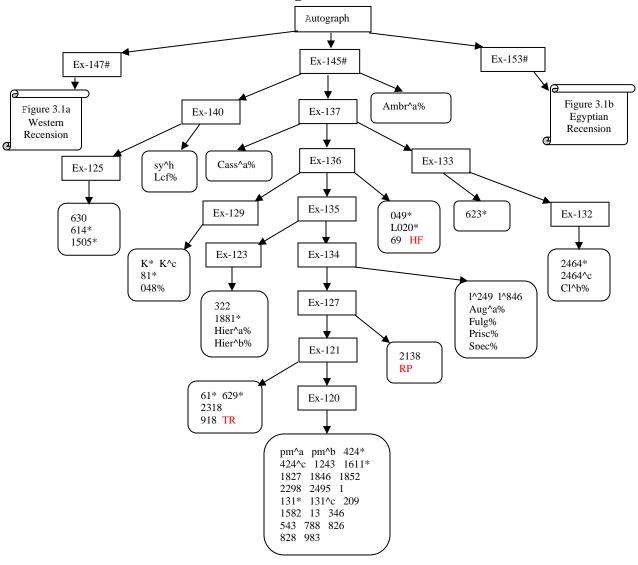
¹ The term *manuscript* is used here in its inclusive sense of manuscripts, translations, church fathers, and reconstructed exemplars—the sense I usually assign to the term *witness*.

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).

	Ex-145#	Ex-147#	Ex-153#	Autograph
Ex-145#		69%	79%	85%
Ex-147#	56		77%	83%
Ex-153#	38	41		93%
Autograph	26	30	12	

Figure 3.1 Condensed Genealogical Stemma of First John



The above diagram displays the overall structure of the genealogical stemma of First John, but it presents only the branch of the Antiochian text tradition in full detail, listing all the sibling descendants of each exemplar. The corresponding branch of the Western text tradition is presented in Figure 3.1a and that of the Egyptian text tradition in Figure 3.1b. Exemplar Ex-145# is the Antiochian recension, the ancestral source of the witnesses in the Antiochian tradition, the history of which extends over nine generations. Its date (c. AD 90) is derived from that of fifth-generation church father Clement (Cl^b%% c. AD 215). It has an unusually low affinity with the autographic text of only 85%, differing from it in 26 places. This text tradition contains Byzantine witnesses pm^a and pm^b along with sy^h. The TR, HF, and RP found their best fit here, but in separate branches.

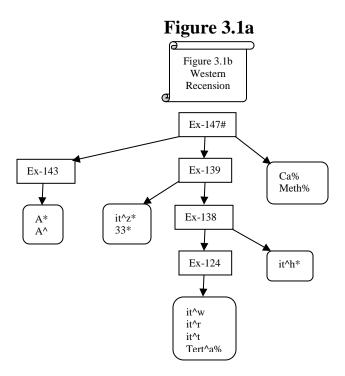


Figure 3.1a displays the Western branch of the genealogical stemma of First John. Exemplar Ex-147# is the Western recension, the ancestral source of the witnesses in the Western tradition, the history of which extends over five generations. Its date (c. AD 80) is derived from that of fifth-generation church father Tertullian (Tert^a% c. AD 220). It has an affinity with the autographic text of 83%, differing from it in 30 places. All the Old Latin translations occur in this branch, but not the Latin Vulgate translations.

⁴ The date, affinity and difference are found in Appendix C; so also for the other branches.

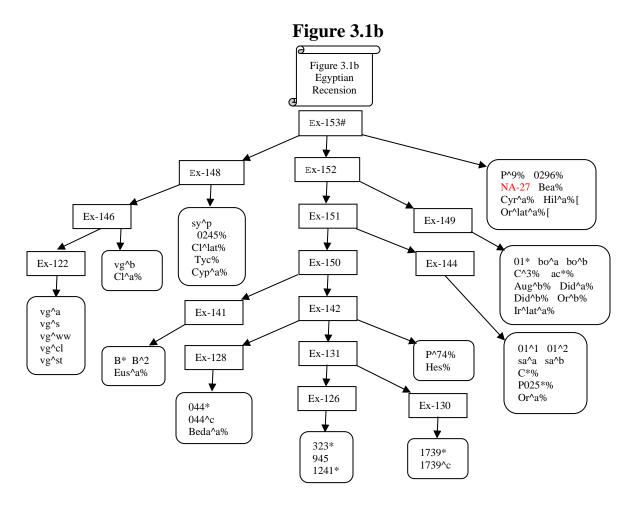
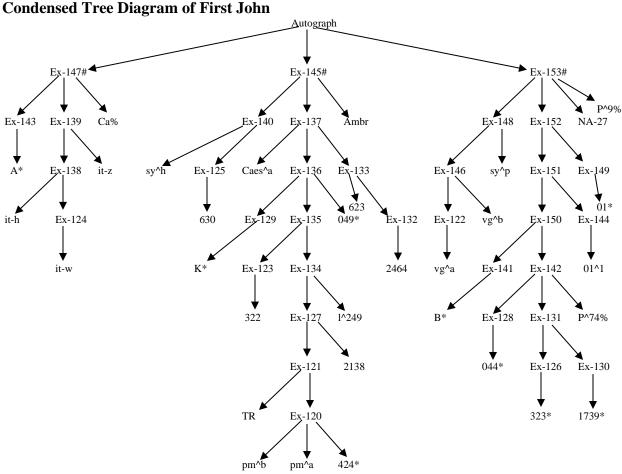


Figure 3.1a displays the Egyptian branch of the genealogical stemma of First John. Exemplar Ex-153# is the Egyptian recension, the ancestral source of the witnesses in the Egyptian text tradition, the history of which extends over eight generations. Its date (c. AD 80) is derived from that of the fifth-generation Sahidic translation sa^a (c. AD 250). It has an affinity with the autographic text of 93%, differing from it in 12 places. The Latin Vulgate witnesses found their best fit in a sub-branch of this tradition. The NA-27 text found its best fit as a daughter of first-generation Exemplar Ex-153# beside MS P^9%.

Figure 3.2



Readings of the Autographic Text

The theory expressed in the first volume of this series⁵ indicates that the readings of the autographic text should be determined on the basis of the "consensus among ancient independent witnesses." The solution for First John 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 First John they are: Exemplars Ex-145#, Ex-147#, and Ex-153#. The text of the autograph is presented in Appendix D.

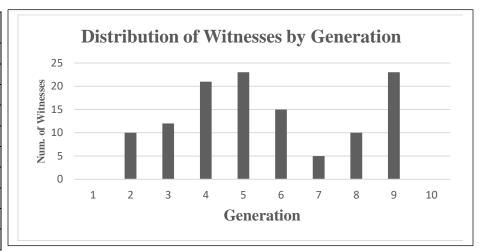
⁵ Chapter Two of *The Genealogical History of the Greek Text of the Gospel of Matthew*.

The Generations of Genealogical History

Program Lachmann-10 reconstructed the genealogical history of the text of First John in five 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 117 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 First John by generation. Every generation has at least 5 extant witnesses.

Table 3.1
Distribution of Extant Witnesses
by Generation

s
S



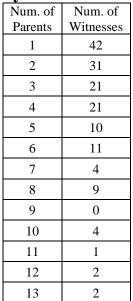
Mixture

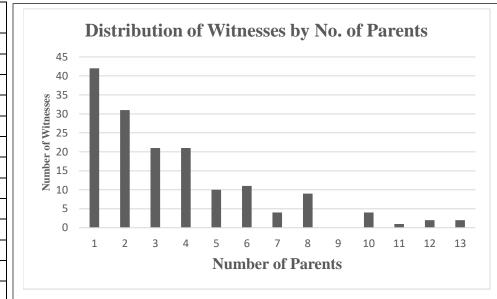
The number of parents a witness had is a measure of the mixture of its text; the more parents, the more mixture. At any place of variation, the reading of a witness may differ from that of its primary parent exemplar⁶ for one of two reasons: (1) the reading is a newly initiated variant having no prior 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.

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.

Those witnesses with the greatest mixture are those with the most diverse text; for example: 42 of the witnesses had only one parent, having no mixture at all; MS 01^2 and Ex-131 have 13 parents, indicating the extreme mixture of those witnesses. The sources of mixture are not displayed in the tree diagrams.

Table 3.2
Distribution of Witnesses by Number of Parents





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. Exemplars Ex-121 and Ex-136 has five primary daughters; and Ex-120 has 23.

Table 3.3 Distribution of Exemplars by Number of Primary Daughters			
	Num. of		
	Primary	Num. of	
	Daughters	Exemplars	
	2	24	
	3	8	
	5	2	
	23	1	
	Total =	35	

Distribution of Exemplars by						
Number of Secondary Daughters						
Num. of		Num. of				
Secondary	Num. of	Secondary	Num. of			
Daughters	Exemplars	Daughters	Exemplars			
0	10	14	2			
1	3	15	1			
2	4	16	1			
3	2	17	1			
4	3	20	2			
6	2	21	2			
8	1	24	1			
9	1	57	1			
12	1	86	1			
13	1	Total	408			

Table 3.4

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.

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-145#, the first-generation exemplar of the Antiochian text tradition, and Exemplar Ex-133 have 21 secondary daughters; those with more than 21 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.

Distribution of Affinity

Another measure of the success of the software in reconstructing the genealogical history of the text of First John 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 witnesses⁸ 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

The evidence from Table 3.5 indicates that all but 8 extant witnesses had a strong affinity (> 90%) with their primary parent exemplar, and all but three 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 18 (52.9%) of the 34 reconstructed exemplars ¹⁰ have a strong affinity (> 90%) with their primary parent exemplar, and another 15 (44.1%) had a moderate affinity (81-90%) with their parent; Exemplar Ex-138 has a weak affinity of 80%.

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

⁷ While this is true for the book of First John, for some of the other books the software may fail to uniquely identify the place of origin for a small percentage of variants.

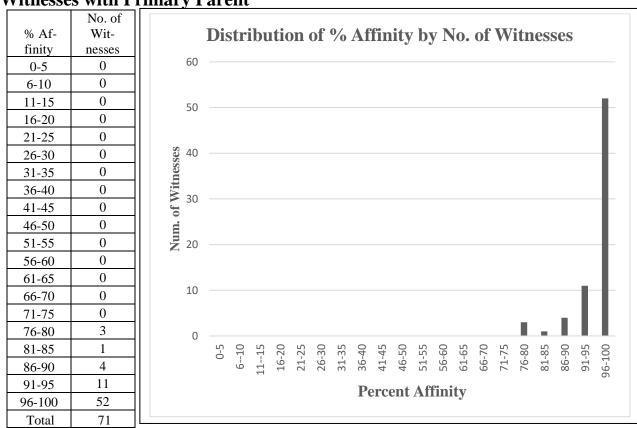
⁸ Witnesses with less than 80% content are excluded because they do not contribute to the reconstruction of the genealogical history but are attached at the most appropriate place after the tree is complete.

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.

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.

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

Table 3.5
Distribution of Affinity of Extant
Witnesses with Primary Parent



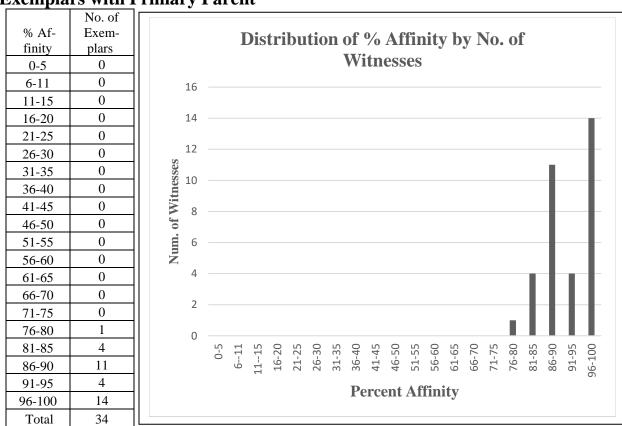
Date of the Autograph

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 Antiochian recension to fifth-generation Sahidic translation (sa^a c. AD 250) through the following exemplars:

```
Autograph[0.00]<0>{AD 75}/0/0/0
|-Ex-153#[0.93]<1>{AD 80}/12/12/2
|-Ex-152[1.00]<2>{AD 100}/0/12/1
|-Ex-151[1.00]<3>{AD 150}/0/0/1
|-Ex-144[0.94]<4>{AD 200}/9/0/5
|-sa^a[0.98]<5>{AD 250}/3/9/4
```

The Sahidic witness is 81% complete and has a 98% affinity with its parent exemplar. So, the date of the autograph is quite firm.

Table 3.6
Distribution of Affinity of
Exemplars with Primary Parent



Conclusions

The software does indeed reconstruct a genealogical history of the manuscripts of the First Epistle of John, 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.

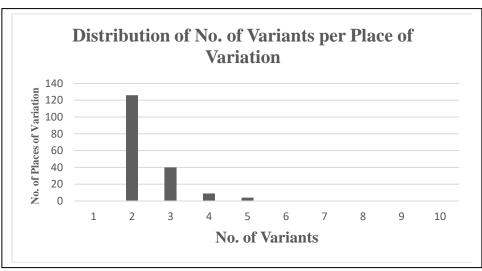
This concludes the discussion of the genealogical history of the witnesses to First John. While the reconstruction of the genealogical history of witnesses depends on the genetic affinity (consensus), sibling genes, and the date of the witnesses, the genealogical history of variant readings depends on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

CHAPTER 4 THE HISTORY OF THE TEXTUAL VARIANTS IN FIRST JOHN

Chapter Three presents the genealogical history of the manuscripts²⁹ of the Greek text of the First Epistle of John. 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 179 places of textual variation in the Book of First John and 428 variant readings. This averages out to a variableness index of 2.39 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

v ai iauuii		
	Number	
Number	of Places	
of vari-	of Varia-	
ants	tion	
1	0	
2	126	
3	40	
4	9	
5	4	
6	0	
7	0	
8	0	
9	0	
10	0	
Total=	428	



Initially the number 428 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 First John (c. 2,161) is regarded as the number of places where variation could occur, and each variation is regarded as the equivalent

²⁹ Again, the term *manuscript* is used in its broader sense to include manuscripts, translations, quotations from church fathers, and reconstructed exemplars.

of one word, then the text of First John is 91.7% pure³⁰ before variations are even considered. Thus, variation occurs in only 8.3% of the text. In that small portion of the text 428 variants are recorded, but 179 of them are original readings, so only 249 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 First John: (1) omissions, (2) alterations, (3) transpositions, and (4) additions. Table 4.2 lists the distribution of these types of variants in the 179 places of variation in the text of the First Epistle of John, 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	16
Omit a phrase	5
Alternate word	76
Alternate words	42
Transposed words	9
Added word or phrase	31
Total	179

Table 4.3
Distribution of All Variants by Type

Variation Type	Number of Variants
Omit a word	32
Omit a phrase	10
Alternate word	167
Alternate words	135
Transposed words	18
Added word or phrase	66
Total	428

 $^{^{30} \ \}left((2{,}161-179) \div 2{,}161 \right) x \ 100 = 91.7.$

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 First John.

Table 4.4
Frequency of Exemplar Reading Rules

(1) by greatest probability	5,634
(2) by deferred ambiguity	317
(4) by default to NA-27	58
(5) by arbitrary choice	1
(6) by language deference	108
Total	6,118

The evidence indicates that the vast majority of exemplar readings (92.09%) were determined by "consensus among independent witnesses," and 5.18% were determined by deferred ambiguity, while 0.94% were deferred to the NA-27 reading, and 1.79% were determined by arbitrary choice or language deference.

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 6,118 decisions the software made, only 317 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.

Autographic Readings

The readings of the autographic text of First John were determined on the basis of consensus among the three most ancient independent witnesses. For the Book of First John, the exemplars of the three most ancient independent recensions were used: (1) Exemplar Ex-145#, the Antiochian text tradition; (2) Exemplar Ex-147#, the Western text tradition; and (3) Exemplar Ex-153#, the Egyptian text tradition. Appendix D lists each of the 179 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 First John. 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	179	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	179	

Table 4.6 and its associated graph displays the distribution of the probability of the reconstructed autographic readings. Of the 179 readings, 112 had a probability of 1.0 (100%), 66 had a probability of 0.66 (67%), and 1 had a probability of 0.33 (33%).

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-27 168 times or 93.85% of the time, and differs from the NA-27 text 11 times or 6.15% of the time. Appendix E lists the 11 places where the Lachmann-10 text differs from that of NA-27.

Table 4.6
Distribution of Autographic
Readings by Probability

11044111-50	- 5
Probability	Number of
Troodomity	Readings
0.1	0
0.2	0
0.33	1
0.4	0
0.5	0
0.66	66
0.7	0
0.8	0
0.9	0
1	112

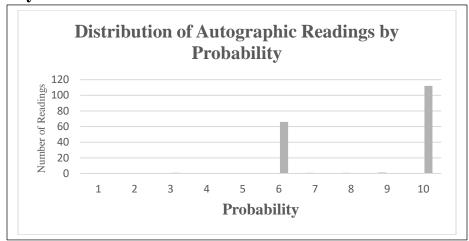


Table 4.7 Frequency of Variants

Variant 1	168
Variant 2	9
Variant 3	2
Variant 4	0
Variant 5	0
Variant 6	0
Variant 7	0
Total	179

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-155\$ through Ex-159\$, are children of the Autograph created by the software as sources for resolving same-generation mixture between the branches headed by the first-

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.

generation 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 249 non-autographic variants, 203 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.

Antiochian Recension

First-generation exemplar Ex-145# was the ancestral forefather of the Antiochian text tradition. This recension differs from the autograph by 26 secondary variants³⁴ among which it uniquely originated the following 16 variants peculiar to this entire text tradition:

Place of Variation	Reference	Variant
2.2	1:3,1.2	ο ομιτ
23.2	2:4,1.2	ο ομιτ
29.2	2:7,1.2	αδ∈λφοι
30.2	2:7,2.2	απ' αρχης
66.2	2:28,2.2	οταν
67.2	2:28,3.2	εχωμεν
71.2	3:1,2.2	ομιτ
73.2	3:2,1.2	δε
88.2	3:16,2.2	τιθεναι
90.2	3:17,2.2	θεωρει
93.2	3:18,1.2	μου

 $^{^{34}}$ 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: 1:3,1.2; 1:4,1.2[Ex-159\$]; 1:9,1.2[Ex-159\$]; 2:4,1.2; 2:7,1.2; 2:7,2.2; 2:28,2.2; 2:28,3.2; 3:1,1.1[Ex-159\$]; 3:1,2.2; 3:2,1.2; 3:5,2.2[Ex-159\$]; 3:13,2.2[Ex-159\$]; 3:15,2.2[Ex-159\$]; 3:16,2.2; 3:17,2.2; 3:18,1.2; 3:19,2.2; 3:19,3.4[Ex-159\$]; 3:21,2.1[Ex-159\$]; 3:22,1.2; 4:3,3.2[Ex-159\$]; 5:9,1.2; 5:13,2.2; 5:15,2.2; 5:20,6.2[Ex-159\$]; Count = 26.

96.2	3:19,2.2	γινωσκομεν
104.2	3:22,1.2	παρ'
154.2	5:9,1.2	ην
162.2	5:13,2.2	αι ινα πιστευητε
167.2	5:15,2.2	παρ'

Western Recension

First-generation Exemplar Ex-147# was the Western recension, being the text from which most of the Old Latin translations were made. It differs from the autographic text by 30 secondary variants,³⁵ among which it uniquely originated the following 11 variants peculiar to this entire text tradition:

Place of Variation	Reference	Variant
7.2	1:5,1.2	2 1
12.3	1:7,3.3	Ι. Χριστου τ. υι. αυτ.
17.2	1:9,2.2	σει
76.2	3:7,1.2	παιδια
106.2	3:23,1.2	— € υωμ € ν
123.2	4:8,1.2	ου γινωσκει τον θ.
129.2	4:13,1.2	εδωκεν
130.2	4:14,1.2	εθεασαμεθα
157.2	5:10,2.2	ືαυτω
171.2	5:18,2.2	Ε αυτον
178.2	5:21,1.2	€αυτους

Egyptian Recension

Exemplar Ex-153# was the Antiochian recension, being the text from which the Syrian and Antiochian witnesses were derived. It differs from the autographic text by 12 secondary variants,³⁶ among which it uniquely originated the following 8 variants peculiar to this entire text tradition:

 $[\]begin{array}{lll} {}^{35}&1:5,1.2;&1:7,3.3;&1:8,2.2[\text{Ex-}159\$];&1:9,2.2;&2:4,2.3[\text{Ex-}159\$];&2:6,1.2[\text{Ex-}159\$];&2:15,2.2[\text{Ex-}159\$];\\ 2:17,1.2[\text{Ex-}159\$];&2:19,1.2[\text{Ex-}159\$];&3:7,1.2;&3:19,1.2[\text{Ex-}159\$];&3:20,2.2[\text{Ex-}159\$];&3:23,1.2;&4:8,1.2;&4:13,1.2;\\ 4:14,1.2;&4:15,1.2[\text{Ex-}159\$];&4:16,1.2[\text{Ex-}159\$];&4:16,2.2[\text{Ex-}159\$];&4:19,1.2[\text{Ex-}159\$];&4:19,3.2[\text{Ex-}159\$];\\ 4:20,1.2[\text{Ex-}159\$];&5:10,1.2[\text{Ex-}159\$];&5:10,2.2;&5:13,1.3[\text{Ex-}159\$];&5:20,3.2[\text{Ex-}159\$];&5:20,4.2[\text{Ex-}159\$];\\ 5:20,5.2[\text{Ex-}159\$];&5:21,1.2;&\text{Count}=30. \end{array}$

³⁶1:4,3.1[Ex-159\$]; 2:14,3.2; 2:18,1.1; 2:20,1.2; 3:11,1.2; 3:13,1.1; 3:21,3.1[Ex-159\$]; 3:21,4.2; 4:10,2.1[Ex-159\$]; 5:1,1.2[Ex-159\$]; 5:11,1.2; 5:13,1.1; Count = 12.

Place of Variation	Reference	Variant
42.2	2:14,3.2	ομιτ
48.1	2:18,1.1	Γοτι
52.2	2:20,1.2	2 3
80.2	3:11,1.2	επαγγελια
81.1	3:13,1.1	°Λαι
103.2	3:21,4.2	εχει
160.2	5:11,1.2	[^] 2 3 1
161.1	5:13,1.1	⊤ ομιτ

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

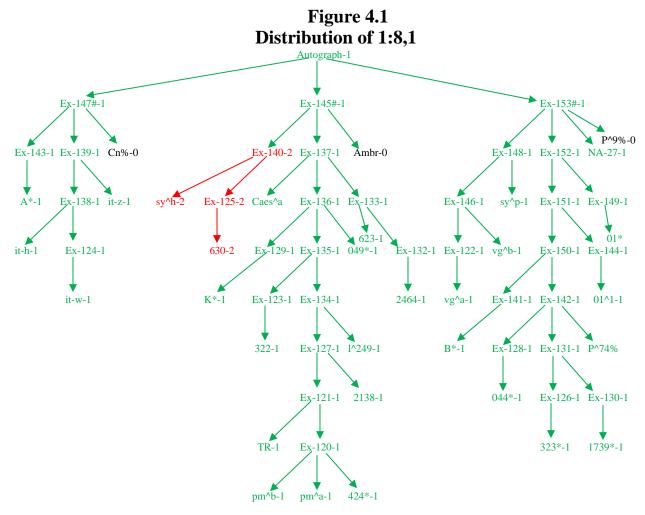
The genealogical history of some variants is more interesting than that of others because of their significance for translation. For example, words or phrases are missing in some witnesses (1:8; 3:14; 4:10); also, some places of variation have multiple options widely distributed among the witnesses (2:27); the genealogical history may help to decide which option is more likely original.

Missing "God" in 1:8,1

First John 1:8 reads: "If we say that we have no sin, we deceive ourselves, and the truth is not in us. Some witnesses have the words "of God" after the word "truth" and some do not. The variants are:

- (1) oμιτ—omit
- (2) $\tau o v \theta \epsilon o v$ —of God

Figure 4.1 displays the distribution of the variants throughout genealogical history.



Variant 1 (omit "of God") has the consensus of all three of the first-generation recensions: Exemplar Ex-145#, the recension from which the Antiochian text tradition was derived, Exemplar Ex-147#, the recension from which the Western text tradition was derived, and Exemplar Ex-153#, the recension from which the Egyptian 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 Antiochian text tradition headed by first-generation Exemplar Ex-145#, except for the witnesses in the sub-branch headed by second-generation Exemplar Ex-140. It has the support of all the witnesses in the Western text tradition headed by first-generation Exemplar Ex-147#. It also has

the support of all the witnesses in the Egyptian text tradition headed by first-generation Exemplar Ex-153#. It has the greatest antiquity,³⁷ the broadest distribution,³⁸ and good persistence.

Variant 2 ("of God") was first initiated only in the Antiochian text tradition in the subbranch headed by second-generation Exemplar Ex-140, after which it persisted throughout the history of that branch. This reading lacks antiquity and distribution, but it has good persistence once introduced.

Missing "Brother" in 3:14,2

First John 3:14 reads: "We know that we have passed from death to life, because we love the brethren. He who does not love *his* brother abides in death." Some witnesses have the words "*his* brother" and some do not. There are three variants here:

- (1) ομιτ—omit
- (2) τον $\alpha \delta \epsilon \lambda \phi o \nu$ —his brother

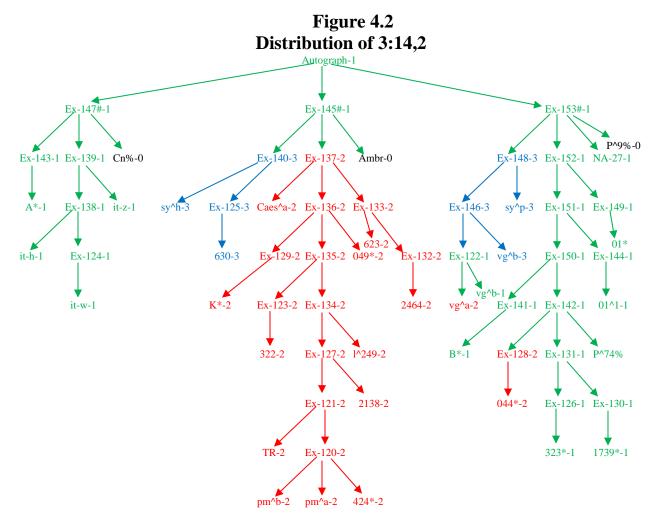
Figure 4.2 displays the distribution of the variants throughout genealogical history. Variant 1 (omit "his brother") has the consensus of all three of the first-generation recensions: Exemplar Ex-145#, the recension from which the Antiochian text tradition was derived, Exemplar Ex-147#, the recension from which the Western text tradition was derived, and Exemplar Ex-153#, the recension from which the Egyptian 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 Antiochian text tradition headed by first-generation Exemplar Ex-145#, except for the witnesses in the branches headed by second-generation Exemplars Ex-140 and Ex-137. However, the Antiochian text tradition actually has no witnesses that support variant 1, but they either support variant 2 or variant 3. This is a rare instance where Lachman-10 made an unfortunate arbitrary choice; the choice should have been variant 2, leaving the probability of the autographic reading at 67% instead of 100%.

Nevertheless, variant 1 has the support of all the witnesses in the Western text tradition headed by first-generation Exemplar Ex-147#. It also has the support of all the witnesses in the Egyptian text tradition headed by first-generation Exemplar Ex-153#, except for those in the sub-

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.

branch headed by second-generation Exemplar Ex-148, and for those in the sub-branch headed by sixth-generation Exemplar Ex-128, and except for MSS C* and P025*%. It also has the support by mixture of all the witnesses in the sub-branch headed by fourth-generation Exemplar Ex-122. It has the greatest antiquity, the broadest distribution, and good persistence.



Variant 2 ("his brother") was first initiated in the branch of the Antiochian text tradition headed by second-generation Exemplar Ex-137, after which it persisted throughout the history of that branch. It was then initiated by mixture into the branch of the Egyptian text tradition headed by sixth-generation Exemplar Ex-128, after which it persisted throughout the history of that branch. It also occurs independently as a singularity in MSS C*%, C^3%, and vg^a (some not shown). This reading lacks antiquity and adequate distribution, but it has good persistence once introduced.

Variant 3 ("his brother") 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. It was then initiated by mixture into the branch of the Egyptian text tradition headed by second-generation Exemplar Ex-148, after which it persisted throughout the history of that branch, except for those in the sub-branch headed by fourth-generation Exemplar Ex-122. It also occurs independently as a singularity in MSS P025*% and 69 (not shown). This reading lacks antiquity and adequate distribution, but it has good persistence once introduced.

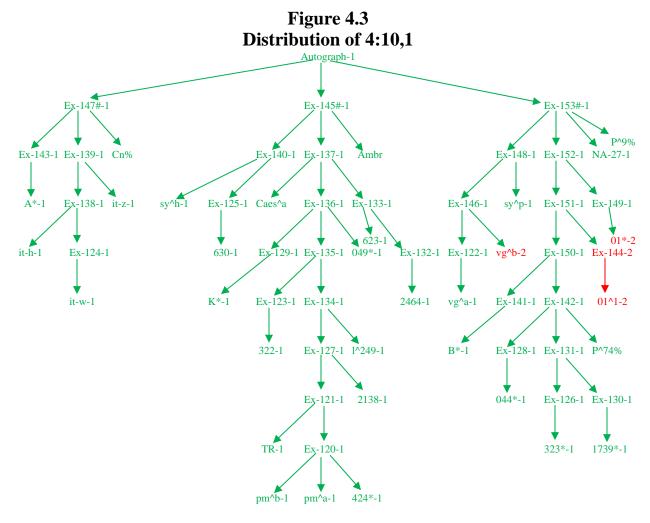
Missing "God" in 4:10,1

First John 4:10 reads: "In this is love, not that we loved God, but that He loved us and sent His Son *to be* the propitiation for our sins." Some witnesses have the words "of God" after the word "love" and some do not. The variants are:

```
(1) ομιτ—omit(2) του θεου—of God
```

Figure 4.3 displays the genealogical distribution of these variants. Variant 1 (omit "of God") has the consensus of all three of the first-generation recensions: Exemplar Ex-145#, the recension from which the Antiochian text tradition was derived, Exemplar Ex-147#, the recension from which the Western text tradition was derived, and Exemplar Ex-153#, the recension from which the Egyptian 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 Antiochian text tradition headed by first-generation Exemplar Ex-145#. It has the support of all the witnesses in the Western text tradition headed by first-generation Exemplar Ex-147#. It also has the support of all the witnesses in the Egyptian text tradition headed by first-generation Exemplar Ex-153#, except for MSS 01* and vg^b, and except for the witnesses in the sub-branch headed by Exemplar Ex-144. It has the greatest antiquity, the broadest distribution, and excellent persistence.

Variant 2 ("of God") was first initiated only in the Egyptian text tradition in the sub-branch headed by fourth-generation Exemplar Ex-144, after which it persisted throughout the history of that branch. It also occurs independently as a singularity in MSS 01* and vg^b. This reading lacks antiquity and adequate distribution, but it has good persistence once introduced.

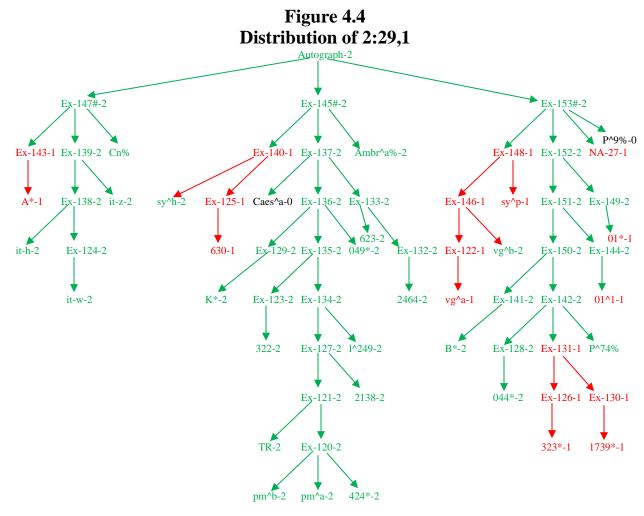


Non-NA-27 in 2:29,1

Lachmann-10 found 11 places where the autographic reading differed from that of NA-27 (see Appendix E); one instance occurs in 2:29. First John 2:29 reads: "If you know that He is righteous, you know that everyone who practices righteousness is born of Him." Some witnesses have the word "also" before the word "everyone" and some do not. The variants are:

- (1) και—also
- (2) *ομιτ*—omit

Figure 4.4 displays the genealogical distribution of these variants.



Variant 2 (omit "also") has the consensus of all three of the first-generation recensions: Exemplar Ex-145#, the recension from which the Antiochian text tradition was derived, Exemplar Ex-147#, the recension from which the Western text tradition was derived, and Exemplar Ex-153#, the recension from which the Egyptian 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 Antiochian text tradition headed by first-generation Exemplar Ex-145#, except for those in the sub-branch headed by second-generation Exemplar Ex-140. It has the support of all the witnesses in the Western text tradition headed by first-generation Exemplar Ex-147#, except for those in the sub-branch headed by second-generation Exemplar Ex-143. It also has the support of all the witnesses in the Egyptian text tradition headed by first-generation Exemplar Ex-153#, except for MSS 01*, 01^1, 01^2, C*, C^3, P025*%, 33*, and sa^a (some not shown); and except for the witnesses in the sub-branches headed by second-generation Exemplar Ex-148 and sixth-generation Exemplar

Ex-131. It also occurs independently in the following singularities: MSS vg^b and sy^h. It has the greatest antiquity, the broadest distribution, and good persistence.

Variant 1 ("also") was first initiated in the Antiochian text tradition in the sub-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 sub-branch headed by second-generation Exemplar Ex-143, after which it persisted throughout the history of that branch. It was then initiated by mixture into the Egyptian text tradition in the sub-branch headed by second-generation Exemplar Ex-148, after which it persisted throughout the history of that branch. It was then initiated again by mixture into the Egyptian text tradition in the sub-branch headed by sixth-generation Exemplar Ex-131, after which it persisted throughout the history of that branch. It also occurs independently in the following singularities: MSS 01*, 01^1, 01^2, C*, C^3, P025*%, 33* and sa^a (some not shown). It lacks antiquity and significant distribution, but has good persistence once initiated.

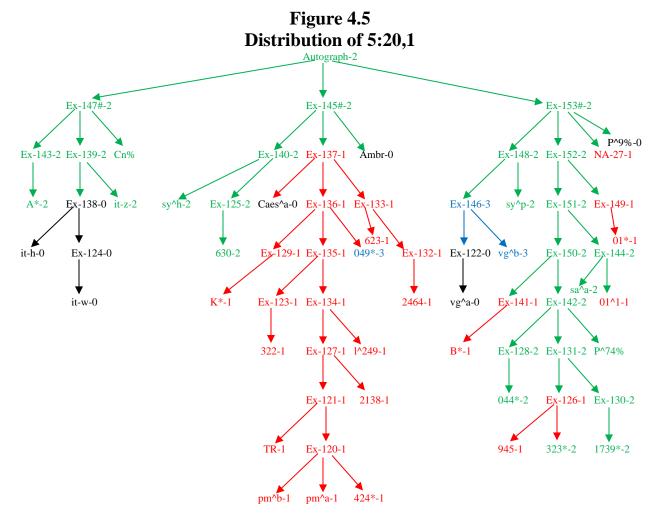
Non-NA-27 in 5:20,1

Another example of where Lachmann-10 found that the autographic reading differed from that of NA-27 occurs in 5:20. First John 5:20 reads: "And we know that the Son of God has come and has given us an understanding, that we may know Him who is true; and we are in Him who is true, in His Son Jesus Christ. This is the true God and eternal life." Some witnesses have the words "And we know," some have "But we know" and some have "We know." The variants are:

- (1) οιδαμεν δε—But we know
- (2) και οιδαμ $\epsilon \nu$ —And we know
- (3) οιδαμ $\epsilon \nu$ —We know

Figure 4.5 displays the genealogical distribution of these variants. Variant 2 ("And we know") has the consensus of all three of the first-generation recensions: Exemplar Ex-145#, the recension from which the Antiochian text tradition was derived, Exemplar Ex-147#, the recension from which the Western text tradition was derived, and Exemplar Ex-153#, the recension from which the Egyptian 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 Antiochian text tradition headed by first-generation Exemplar Ex-145#, except for those in the branch headed by second-generation Exemplar Ex-137. It has the support of all the witnesses in the Western text tradition headed by first-generation Exemplar Ex-147#, except for those in the branch headed by third-generation Exemplar Ex-138. It also has the support of all the witnesses in the Egyptian text

tradition headed by first-generation Exemplar Ex-153#, except for MSS 01^1, 01^2, P025*%, 33*, 945, and 1241* (some not shown); and except for the witnesses in the sub-branches headed by third-generation Exemplars Ex-146 and Ex-149, and sixth-generation Exemplar Ex-126. It also occurs independently in the following singularities: MSS 81* and 323*. It has the greatest antiquity, the broadest distribution, and good persistence.



Variant 1 ("But we know") was first initiated in the Antiochian text tradition headed by second-generation Exemplar Ex-137, after which it persisted throughout the history of that branch, except for MSS 81*, 049* and L020* (some not shown). It also occurs independently in the following singularities: MSS 01^1, 01^2, and NA-27 (some not shown). It lacks antiquity and adequate distribution.

Variant 3 ("We know") was first initiated in the Egyptian text tradition headed by thirdgeneration Exemplar Ex-146, after which it persisted throughout the history of that branch, except for the witnesses in the sub-branch headed by fourth-generation Exemplar Ex-122. It also occurs independently in the following singularities: MSS L020*, P)25*%, 049*, and 1243 (some not shown). It lacks antiquity and adequate distribution.

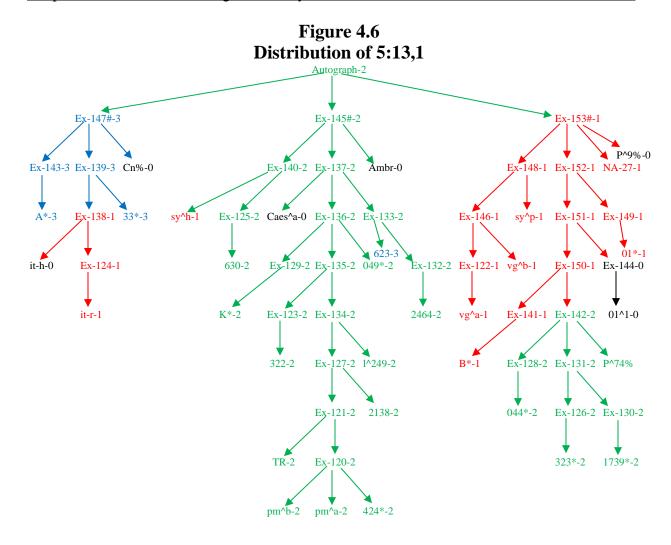
Ambiguity in 5:13,1

Lachmann-10 found an ambiguity in 5:13 where the autographic reading has a probability of only 33%. First John 5:13 reads: "These things I have written to you who believe in the name of the Son of God, that you may know that you have eternal life, and that you may *continue to* believe in the name of the Son of God." Some witnesses have the words "who believe in the name of the Son of God," some have "who believe" and some lack the phrase. The variants are:

- (1) $o\mu\iota\tau$ —omit
- (2) $\tau o \iota \varsigma \pi \iota \sigma \tau \epsilon v o v \sigma \iota \nu \epsilon \iota \varsigma \tau o \sigma \alpha \mu \alpha \tau o v \sigma v \sigma v \theta \epsilon o v$ —who believe in the name of the Son of God
- (3) οι π ιστευοντες—who believe

Figure 4.6 displays the genealogical distribution of these variants. No variant achieved consensus among the first-generation recensions in this case, so Lachmann-10 arbitrarily selected variant 2 as the autographic reading with a probability of 33%. Variant 1 (omit the phrase), the reading of NA-27, was first initiated in first-generation Exemplar Ex-153#, the source of the Egyptian text tradition, after which it persisted throughout the history of that branch, except for MSS 01^2 and P025*%, and except for the witnesses in the branch headed by the fifth generation Exemplar Ex-142. It was then initiated by mixture into the Western text tradition in the branch headed by third-generation Exemplar Ex-138, after which it persisted throughout the history of that branch. It also occurs independently in the following singularities: MSS 01*, 1505*, 1852, and sy^h (some not shown). It lacks superior antiquity and adequate distribution.

Variant 2 ("who believe in the name of the Son of God") was first initiated in first-generation Exemplar Ex-145#, the source of the Antiochian text tradition, after which it persisted throughout the history of that branch, except for MSS sy^h, 623*, 1505, and 1852 (some not shown). It was then initiated into the Egyptian text tradition in the branch headed by fifth-generation Exemplar Ex-142, after which it persisted throughout the history of that branch. It also occurs independently in the following singularity: MS P025*% (not shown). It lacks superior antiquity and adequate distribution.



Variant 3 ("who believe") was first initiated in first-generation Exemplar Ex-147#, the source of the Western text tradition, after which it persisted throughout the history of that branch, except for the witnesses in the branch headed by third-generation Exemplar Ex-138. It also occurs independently in the following singularities: MSS 01^2 (not shown) and 623*. It lacks superior antiquity and adequate distribution. In spite of the genealogical ambiguity here, the object of the reader's faith is not in doubt, regardless of which reading was original.

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 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 First John:

Added "Christ" in 1:7,3

Ehrman claimed that the orthodox scribes tended to alter the text in order to emphasize Christ's suffering. Regarding First John 1:7 he stated:

The heresiologists were not alone in emphasizing the New Testament usage of the name "Christ" in statements related to the passion. Their scribal counterparts attest this form of polemic as well, so that among the more common anti-Gnostic corruptions can be numbered interpolations

³⁹ Bart D. Ehrman, *The Orthodox Corruption of Scripture* (New York: Oxford University Press, 1993), xii; italics his.

of the name "Christ" into passages that originally referred to the suffering and death of Jesus. Because very few of these corruptions bear the marks of authenticity, I will simply note some prominent examples to establish the dominant pattern. As one might expect, the vast majority of instances occur in the Gospels and in Paul. One that is no less expected occurs in the well-known statement of 1 John 1:7: "And the blood of Jesus his Son cleanses us from all sin." There is little doubt that this is the original wording of the text: it is attested in the earliest and best Greek manuscripts (e.g., X B C II 1241 1739) and is preserved as well in Latin, Coptic, and Syriac documents. Some of the versional evidence, however, and the entire Byzantine tradition, supplies Χριστὸς, so that now it is not just Jesus' blood, but the blood of Jesus Christ (one and the same) that brings cleansing for sin. The dominance of the reading in late manuscripts and its presence in some of the early versions suggests its ancient provenance, but scarcely its originality.⁴⁰

First John 1:7 reads: "But if we walk in the light as He is in the light, we have fellowship with one another, and the blood of Jesus Christ His Son cleanses us from all sin." Some witnesses have the word "Christ" and some do not. There are four variants here:

- (1) Ίησου του υιου αὐτου—Jesus His Son
- (2) του υιου αὐτου—His Son
- (3) Ίησου Χριστου του υιου αὐτου—Jesus Christ His Son
- (4) Ίησου Χριστου—Jesus Christ

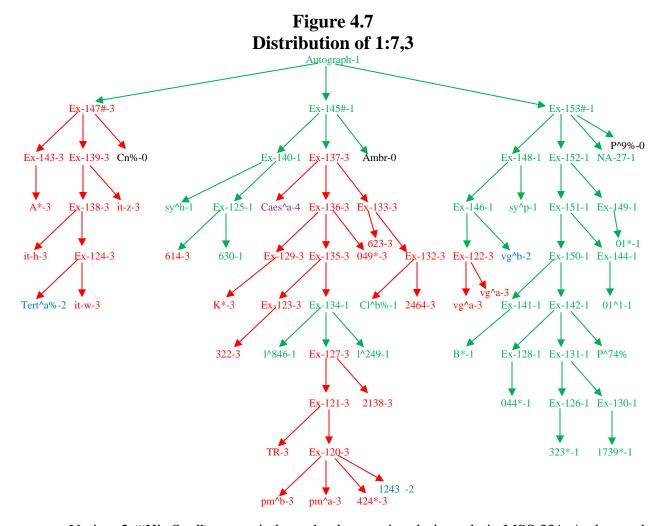
Figure 4.7 displays the distribution of the variants throughout genealogical history. Variant 1 ("Jesus His Son") has the consensus of two of the first-generation recensions: Exemplar Ex-145#, the recension from which the Antiochian text tradition was derived, and Exemplar Ex-153#, the recension from which the Egyptian 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 Antiochian text tradition headed by first-generation Exemplar Ex-145#, except for those in the branch headed by second-generation Exemplar Ex-137, but including the daughter MSS of the fifth-generation Exemplar Ex-134. It has the support of all the witnesses in the Egyptian text tradition headed by first-generation Exemplar Ex-153#, except for MSS Cl^lat%, vg^b, and bo^a (some not shown), and except for those in the branch headed by fourth-generation Exemplar Ex-122. It also occurs independently in the following singularities: MSS vg^st and Cl^b% (not shown). It has the greatest antiquity, the better distribution, and good persistence.

Variant 3 ("Jesus Christ His Son") was first initiated in first-generation Exemplar Ex-147#, the source of the Western text tradition, after which it persisted throughout the history of that branch, except for MS Tert^a%. It was then initiated into the Antiochian text tradition in the branch headed by second-generation Exemplar Ex-137, after which it persisted throughout the history of

_

⁴⁰ Ehrman, p. 153.

that branch except for the daughter MSS of the fifth-generation Exemplar Ex-134. It was then initiated by mixture into the Egyptian text tradition in the branch headed by fourth-generation Exemplar Ex-122, after which it persisted throughout the history of that branch. It also occurs independently in the following singularities: MS 614* and bo^a (not shown). It lacks superior antiquity and adequate distribution.



Variant 2 ("His Son") occurs independently as a singularity only in MSS 33*, Ambst, and Cl^a% (some not shown). Variant 4 ("Jesus Christ") occurs independently as a singularity only in MS Cass^a%. These readings have no chance genealogically of being original.

Ehrman was right; some scribes added the word "Christ" to "Jesus" in order to make the relationship more explicit locally. But this did not affect the canonical text or make it more orthodox. The phrase "Jesus Christ" or "Christ Jesus" occurs about 222 tines in the canonical text (NA-27), including five in First John (2:1; 3:23; 4:2; 5:6; and 5:20).

"If" or "When" in 2:28,2

Again, regarding Christ's physical return, Ehrman wrote:

The orthodox doctrine of Jesus' physical return in glory made some slight impact on the text of the New Testament. In particular, passages that might otherwise appear to speak but tentatively of this glorious event were occasionally modified so as to eliminate any uncertainty. A clear example occurs in 1 John 2:28 which originally read, "And now, children, remain in him, in order that if he should appear (ἴνα ἐὰν φανερωθῆ) we might have boldness and not be put to shame by him in his coming." Interestingly enough, the ἴνα clause is frequently changed in the manuscript tradition, so that the author no longer equivocates on the matter of Christ's return but states with bold assurance: " . . . in order that when he appears" (ἴνα ὅταν φανερωθῆ). 41

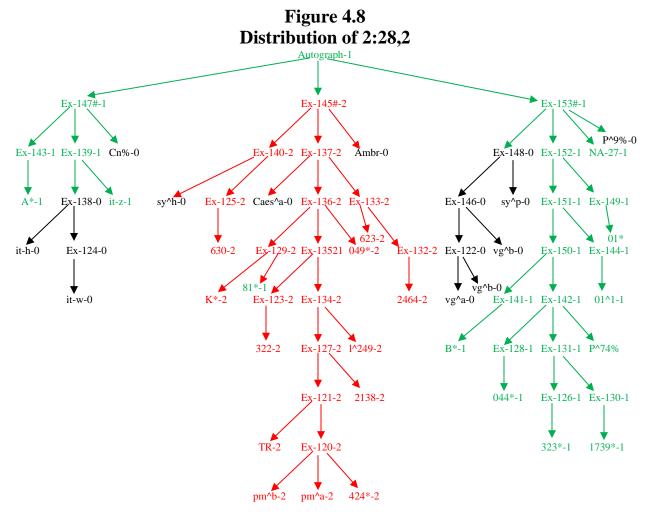
First John 2:28 reads "And now, little children, abide in Him, that when He appears, we may have confidence and not be ashamed before Him at His coming." Some witnesses have the word "if" and some have "when." There are two variants here:

- (1) $\dot{\epsilon}\alpha\nu$ —if
- (2) $o\tau\alpha\nu$ —when

Figure 4.8 displays the genealogical distribution of these variants. Variant 1 ("if") has the consensus of two if the first-generation recensions: Exemplar Ex-147#, the recension from which the Western text tradition was derived, and Exemplar Ex-153#, the recension from which the Egyptian 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 Western text tradition headed by first-generation Exemplar Ex-147#, except for those in the branch headed by third-generation Exemplar Ex-138. It has the support of all the witnesses in the Egyptian text tradition headed by first-generation Exemplar Ex-153#, except for those in the branch headed by second-generation Exemplar Ex-148. It also occurs independently in the following singularities: MSS 01*, 01^1, 01^2, C*%, C^3%, P025*%, and 81* (some not shown). It has the greatest antiquity, the broadest distribution, and good persistence.

Variant 2 ("when") was first initiated in the Antiochian text tradition headed by first-generation Exemplar Ex-145#, after which it persisted throughout the history of that branch, except for MS vg^cl (not shown). This reading lacks antiquity and distribution, but it has good persistence once introduced. Ehrman was right, some scribes altered the word "if" to "when," but they failed to affect the content or orthodoxy of the canonical text.

⁴¹ Ehrman, p. 233.



Is Christ God in 3:23,3

Ehrman claimed that orthodox scribes modified the text to express that "Jesus Christ" is the name of God; he stated:

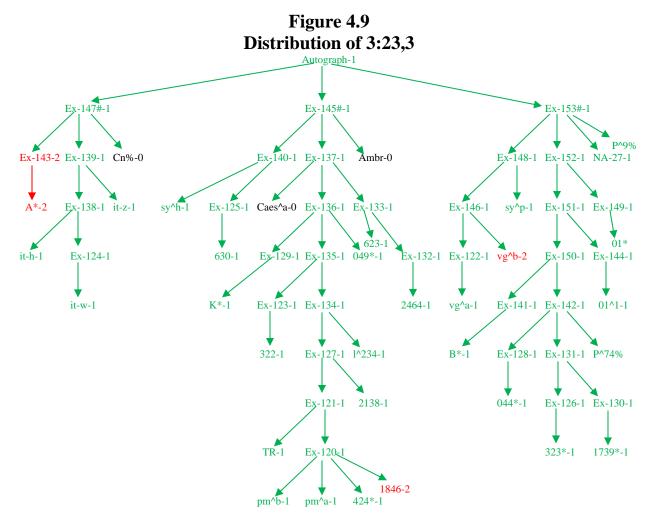
A somewhat different kind of corruption occurs in the manuscript tradition of 1 John 3:23. The immediate context states that believers can have confidence before God and will receive what they ask of him, if they keep his commandments (3:21—22). The author then explicates the commandment of God: "That we believe in the name of his Son Jesus Christ (ἴνα πιστεύσωμεν τῷ ὀνόματι τοῦ υἰοῦ αὐτοῦ Ἰησοῦ Χριστοῦ) and love one another." Several witnesses, however, including again codex Alexandrinus, lack the words τοῦ υἰοῦ (A 1846 vg sss). Now the text reads: "That we believe in his name, Jesus Christ, and love one another." Although it is certainly possible that the two words dropped out of the passage by accident, there seems to be no particular reason (e.g., homoeoteleuton) for them to have done so. It is plausible, then, that the scribes of these manuscripts simply took the opportunity to express their orthodox conviction: "Jesus Christ" is the name of God. 42

⁴² Ehrman, p. 267.

First John 3:23 reads: "And this is His commandment: that we should believe on the name of His Son Jesus Christ and love one another, as He gave us commandment." Some witnesses have the words "His Son" and some do not; the variants are:

- (1) του υιου—His Son
- (2) *ομιτ*—omit

Figure 4.9 displays the genealogical distribution of these variants.



Variant 1 ("His Son") has the consensus of all three of the first-generation recensions: Exemplar Ex-145#, the recension from which the Antiochian text tradition was derived, Exemplar Ex-147#, the recension from which the Western text tradition was derived, and Exemplar Ex-153#, the recension from which the Egyptian 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 Antiochian text tradition headed by first-generation Exemplar Ex-145#, except for MS 1846. It

has the support of all the witnesses in the Western text tradition headed by first-generation Exemplar Ex-147#, except for the witnesses in the sub-branch headed by second-generation Exemplar Ex-143. It also has the support of all the witnesses in the Egyptian text tradition headed by first-generation Exemplar Ex-153#, except for MS vg^b. It has the greatest antiquity, the broadest distribution, and excellent persistence.

Variant 2 (omit "His Son") was first initiated into the Western text tradition in the subbranch headed by second-generation Exemplar Ex-143, after which it persisted throughout the history of that branch. It also occurs independently in the following singularities: 1846, and vg^b. It lacks antiquity and distribution. Ehrman was right, some scribes omitted the words "His Son," but they failed to affect the content or orthodoxy of the canonical text.

"Not Confess" or "Loose" in 4:3,1

Ehrman argued that the variant "loosed" in First John 4:3 is an anti-Gnostic corruption, contrary to popular view. He asserted:

In the majority of manuscripts, 1 John 4:3a reads "every spirit that does not confess Jesus (πᾶν πνεῦμα ὁ μὴ ὁμολογεῖ τὸν Ἰησοῦν) is not from God." Other witnesses, however, as early as the second century, read "every spirit that looses (or "separates") Jesus (πᾶν πνεῦμα ὂ μὴ λύει τὸν Ίησοῦν) is not from God." This reading does not, to be sure, figure prominently among the surviving New Testament manuscripts. Quite to the contrary, the more familiar text is found in every Greek uncial and minuscule manuscript of 1 John, every Greek lectionary with the passage, every manuscript of the Syriac, Coptic, and Armenian versions, the oldest Latin manuscript of 1 John, and virtually all the Greek and many of the Latin fathers who cite the passage. The tantalizing varia lectio has nonetheless enjoyed a favored status among modern critics and commentators, having been championed by such eminent scholars as Theodor Zahn and Adolf von Harnack earlier in this century, and by the influential commentaries of Rudolf Bultmann, Rudolf Schnackenburg, and Raymond Brown more recently. The attractiveness of the reading is not hard to explain. On the one hand, it is extremely difficult to understand and therefore likely to be changed by scribes. Moreover, at least in the view of its modern supporters, it is also pregnant with meaning, unlike the seemingly flaccid reading attested by the Greek witnesses, a reading that indeed could be taken to represent a scribal harmonization of 4:3 to its immediate context (4:2 ὁμολογεῖ; 4:3a μὴ ὁμολογεῖ).

Despite the widespread endorsement of this less attested reading, there are compelling reasons to reject it as a corruption of the text, made in direct opposition to Gnostic Christologies that "separated" (or "loosed") Jesus from the Christ.⁴³

His argument extended over ten pages, including documentary, linguistic, and theological considerations. He was convinced that the reading was a corruption.

First John 4:3 reads: "and every spirit that does not confess that Jesus Christ has come in the flesh is not of God. And this is the *spirit* of the Antichrist, which you have heard was coming,

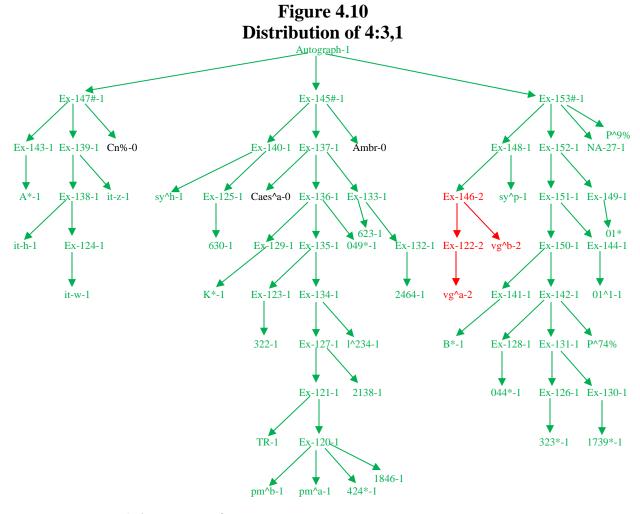
_

⁴³ Ehrman, pp. 125-26.

and is now already in the world." Some witnesses have the phrase "does not confess" and some have "loose." The variants are:

- (1) μη ομολογει—does not confess
- (2) λυει—loose

Figure 4.10 displays the distribution of the variants throughout genealogical history.



Variant 1 ("does not confess") has the consensus of all three of the first-generation recensions: Exemplar Ex-145#, the recension from which the Antiochian text tradition was derived, Exemplar Ex-147#, the recension from which the Western text tradition was derived, and Exemplar Ex-153#, the recension from which the Egyptian 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 Antiochian text tradition headed by first-generation Exemplar Ex-145#, except for MS Lcf%. It has the support of all the witnesses in the Western text tradition headed by first-

generation Exemplar Ex-147#. It also has the support of all the witnesses in the Egyptian text tradition headed by first-generation Exemplar Ex-153#, except for those in the sub-branch headed by third-generation Exemplar Ex-146. It has the greatest antiquity, the broadest distribution, and excellent persistence.

Variant 2 ("loose") was first initiated into the Egyptian text tradition in the sub-branch headed by third-generation Exemplar Ex-146, after which it persisted throughout the history of that branch. It also occurs independently in the following singularity: Lcf%. It lacks antiquity and distribution. Ehrman was right, variant 2 was an obscure anti-Gnostic "corruption"; it had no effect on the content or orthodoxy of the canonical text.

"Christ" or Not in 4:15,2

Ehrman asserted that orthodox scribes altered the text to make explicit that Jesus is the Christ (p. 159). He stated:

Changes in the Johannine literature appear to function similarly. Thus, when the author of 1 John claims that God abides in the one who "confesses that Jesus is the Son of God" (4:15), codex Vaticanus specifies that it is "Jesus Christ" who is the Son of God. So too, in 5:5, where conquering the world involves confessing that Jesus is the Son of God, some manuscripts have rephrased the confession to coincide with the orthodox unitary doctrine that "Jesus Christ is the Son of God" (33 378 arm). 44

First John 4:15 reads: "Whoever confesses that Jesus is the Son of God, God abides in him, and he in God." Some witnesses have the word "Christ" after "Jesus" and some do not. The variants are:

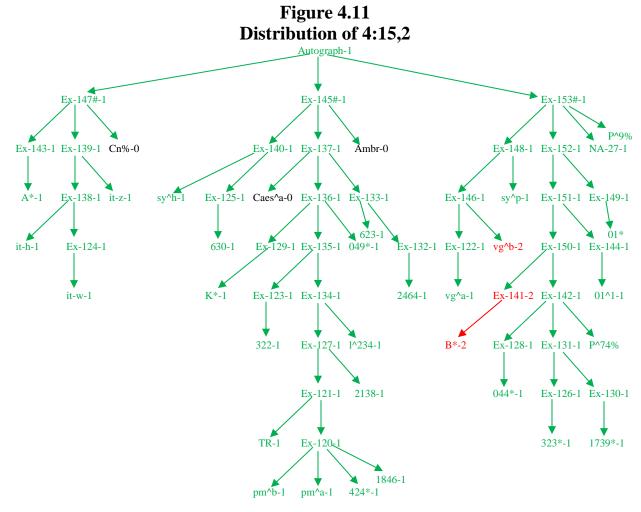
(1) ομιτ—omit(2) Χριστος—Christ

Figure 4.11 displays the distribution of the variants throughout genealogical history. Variant 1 (omit "Christ") has the consensus of all three of the first-generation recensions: Exemplar Ex-145#, the recension from which the Antiochian text tradition was derived, Exemplar Ex-147#, the recension from which the Western text tradition was derived, and Exemplar Ex-153#, the recension from which the Egyptian 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 Antiochian text tradition headed by first-generation Exemplar Ex-145#. It has the support of all the witnesses in the Western text tradition headed by first-generation Exemplar Ex-147#. It also

_

⁴⁴ Ehrman, p. 160.

has the support of all the witnesses in the Egyptian text tradition headed by first-generation Exemplar Ex-153#, except for MS vg^b, and those in the sub-branch headed by fifth-generation Exemplar Ex-141. It has the greatest antiquity, the broadest distribution, and excellent persistence.



Variant 2 ("Christ") was first initiated into the Egyptian text tradition in the sub-branch headed by fifth-generation Exemplar Ex-141, after which it persisted throughout the history of that branch. It also occurs independently in the following singularity: vg^b. It lacks antiquity and distribution. Ehrman was right, a few scribes added the word "Christ"; but, as previously noted, it had no effect on the content or orthodoxy of the canonical text.

Ehrman also cited 5:5 as another instance where scribes inserted the word "Christ"; but the editors of NA-27 did not regard the supporting evidence significant enough to include in the textual apparatus.

"Spirit" or Not in 5:6,1

Ehrman claimed that orthodox scribes altered the text at times in order to emphasize the virgin birth of Christ in opposition to the adoptionist heresy (pp. 54-61). This included inserting the work of the Holy Spirit in in references to Christ's origin outside the birth narratives. He stated:

A comparable textual corruption occurs elsewhere in the Johannine corpus, this time near the end of the first epistle. Establishing a plausible interpretation of 1 John 5:6 has proved more difficult over the years than establishing its text. Nonetheless, the verse's textual problems prove interesting for our investigation, because here the author says something about Jesus' manifestation to the world: "This is the one who came through water and blood, Jesus Christ; not in the water only, but in the water and in the blood." Among the variant readings preserved in the textual tradition, those that affect the introductory clause are particularly germane to the present discussion. For the words "the one who came through water and blood" (δι' ὕδατος καὶ αἴματος) have been modified in a variety of ways. ⁴⁵

First John 5:6 reads: "This is He who came by water and blood-- Jesus Christ; not only by water, but by water and blood. And it is the Spirit who bears witness, because the Spirit is truth." There are four variants of the words translated "by water and blood" here:

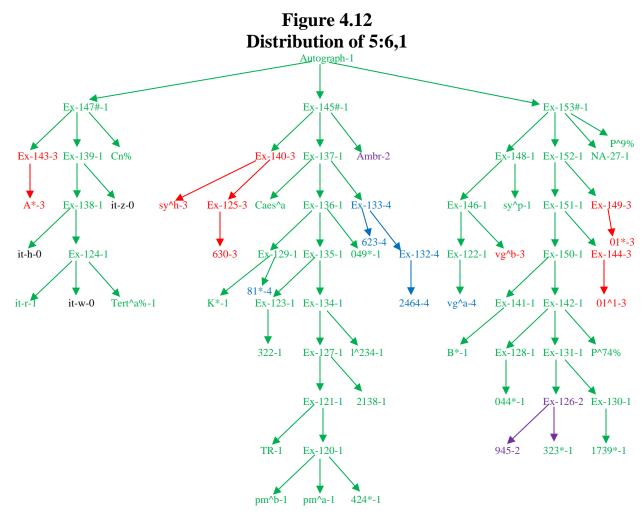
- (1) αιματος—blood
- (2) $\pi \nu \epsilon \nu \mu \alpha \tau \sigma \varsigma$ —Spirit
- (3) αιματος και πνευματος—blood and Spirit
- (4) πνευματος και αιματος—Spirit and blood

Figure 4.12 displays the genealogical distribution of these variants. Variant 1 ("blood") has the consensus of all three of the first-generation recensions: Exemplar Ex-145#, the recension from which the Antiochian text tradition was derived, Exemplar Ex-147#, the recension from which the Western text tradition was derived, and Exemplar Ex-153#, the recension from which the Egyptian 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 Antiochian text tradition headed by first-generation Exemplar Ex-145#, except for MSS Ambr^a%, 81*, 1243, 1846, and 1852 (some not shown); and except for those in the sub-branches headed by second-generation Exemplar Ex-140, by third-generation Exemplar Ex133. It has the support of all the witnesses in the Western text tradition headed by first-generation Exemplar Ex-147#, except for those in the sub-branch headed by second generation Exemplar Ex-143. It also has the support of all the witnesses in the Egyptian text tradition headed by first-generation Exemplar Ex-153#, except for MSS vg^a and vg^b, and those in the sub-branches headed by third-generation Exemplar Ex-149, and by fourth-generation Exemplar Ex-144, and by seventh-generation Exemplar Ex-126. It also occurs independently in

_

⁴⁵ Ehrman, pp. 59-60.

the following singularity: 323*. It has the greatest antiquity, the broadest distribution, and good persistence.



Variant 2 ("Spirit") was first initiated into the Egyptian text tradition in the sub-branch headed by seventh-generation Exemplar Ex-126, after which it persisted throughout the history of that branch, except for MS 323*. It also occurs independently in the following singularity: Ambr^a%. It lacks antiquity and distribution.

Variant 3 ("blood and Spirit") was first initiated into the Antiochian text tradition in the sub-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 sub-branch headed by second-generation Exemplar Ex-143, after which it persisted throughout the history of that branch. It was then initiated by mixture into the Egyptian text tradition in the sub-branches headed by third-generation Exemplar Ex-149, and fourth-generation Exemplar Ex-144

after which it persisted throughout the history of those branches. It also occurs independently in the following singularities: vg^b and 1739^c (not shown). It lacks antiquity and adequate distribution.

Variant 4 ("Spirit and blood") was first initiated into the Antiochian text tradition in the sub-branch headed by third-generation Exemplar Ex-133, after which it persisted throughout the history of that branch. It also occurs independently in the following singularities: P025*%, 0296%, 81*, 630, 1243, 1846, 1852, and vg^a. It lacks antiquity and distribution.

Ehrman was right, some scribes added "Spirit" into their text. But all such alterations were peripheral and had no effect on the content or orthodoxy of the canonical text.

Comma Johanneum in 5:7-8

Regarding the Comma Johanneum (1 John 5:7-8), Ehrman stated:

I have felt constrained to leave out of my study a discussion of the so-called Comma Johanneum (1 John 5:7—8), even though this represents the most obvious instance of a theologically motivated corruption in the entire manuscript tradition of the New Testament. Nonetheless, in my judgment, the comma's appearance in the tradition can scarcely be dated prior to the trinitarian controversies that arose after the period under examination.⁴⁶

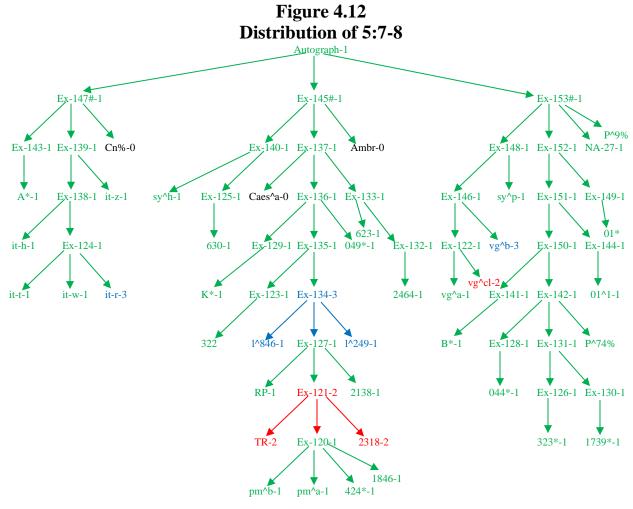
First John 5:7-8 reads: "For there are three that bear witness in heaven: the Father, the Word, and the Holy Spirit; and these three are one. And there are three that bear witness on earth: the Spirit, the water, and the blood; and these three agree as one." Some witnesses have the words "in heaven: the Father, the Word, and the Holy Spirit; and these three are one. And there are three that bear witness on earth: the Spirit, the water, and the blood; and these three agree as one" and some do not. The variants are:

- (1) *ομιτ*—omit
- (2) εν τω ουρανω, ο πατηρ, ο λογος και το αγιον πνευμα, και ουτοι οι τρεις εν εισιν. 8 και τρεις εισιν οι μαρτυρουντες εν τη γη, το πννευμα και το υδατι και το αιμα, και οι τρεις εις το εν εισιν.
- (3) in terraà spiritus et aqua et sanguis) 8 et tres suntà qui testimonium dicunt in caeloà paterà verbum et spiritusà et hi tres unum sunt

Figure 4.12 displays the distribution of the variants throughout genealogical history.

_

⁴⁶ Ehrman, p. 45, note 116.



Variant 1 (lacking the comma) has the consensus of all three of the first-generation recensions: Exemplar Ex-145#, the recension from which the Antiochian text tradition was derived, Exemplar Ex-147#, the recension from which the Western text tradition was derived, and Exemplar Ex-153#, the recension from which the Egyptian 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 Western text tradition headed by first-generation Exemplar Ex-147#, except for MS it-r. It has the support of all the witnesses in the Egyptian text tradition headed by first-generation Exemplar Ex-153#, except for MSS vg^b and vg^cl. It also has the support of all the witnesses in the Antiochian text tradition headed by first-generation Exemplar Ex-145#, except for MSS l^249, l^846, Fulg%, Prisc%, and Spec%, daughters of fifth-generation Exemplar Ex-134; and MSS 61*, 629*, 918,,2318, and interestingly TR, daughters of seventh-generation Exemplar Ex-121. It has the greatest antiquity, the broadest distribution, and excellent persistence.

Variant 2 (containing the comma) was first initiated into the Antiochian text tradition in the branch headed by seventh-generation Exemplar Ex-121 (c. AD 750), after which it failed to persist. It also occurs as an independent singularity in MS vg^cl. This reading lacks antiquity and distribution.

Variant 3 (Latin form of the comma) was first initiated into the Antiochian text tradition in the branch headed by fifth-generation Exemplar Ex-134 (c. AD 335), after which it failed to persist. It also occurs as an independent singularity in MSS vg^b and it-r. This reading lacks antiquity and distribution. Historically, the Latin variant appeared first and probably was the source of the subsequent Greek comma. Ehrman was right; this variant was theologically motivated; and although it had no effect on the content or orthodoxy of the canonical text; however, it did appear in the Textus Receptus.

"God" or "Son" in 5:10,3

Ehrman claimed that orthodox scribes altered the text at times in order to "distinguish God the Father from the divine Christ" (p. 264). He stated:

A comparable motivation may well lie behind the textual variant found in Alexandrian manuscripts of 1 John 5:10. In the first part of the verse the author speaks of "the one who believes in the Son of God," in antithetical parallel to "the one who does not believe God" (ὁ μὴ πιστεύων τῷ θεῷ). Perhaps to avoid the equation that the parallel may imply, that is, between the "Son of God" and God himself (ὁ θεὸς), several manuscripts have exchanged *nomina sacra* in the second line of the parallelism, τῷ υἰῷ for τῷ θεῷ, so that now both elements of the verse speak of belief in the Son of God.⁴⁷

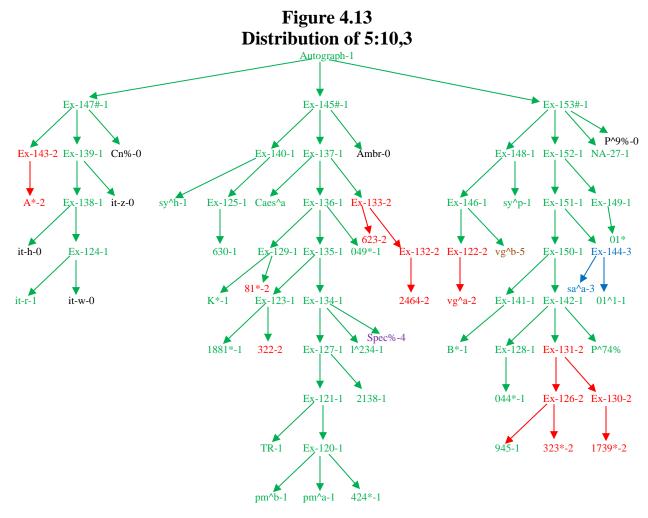
First John 5:10 reads: "He who believes in the Son of God has the witness in himself; he who does not believe God has made Him a liar, because he has not believed the testimony that God has given of His Son." There are five variants of the word "God" in the phrase "believe God" here:

- (1) $\tau\omega \theta\epsilon\omega$ —in God
- (2) $\tau \omega \ \upsilon \iota \omega$ —in the Son
- (3) $\tau \omega \ \upsilon \iota \omega \ \tau o \upsilon \ \theta \epsilon o \upsilon$ —in the Son of God
- (4) *Ιεσυ Χηριστο*—Jesus Christ
- (5) $o\mu\iota\tau$ —omit

Figure 4.13 displays the genealogical distribution of these variants.

_

⁴⁷ Ehrman, p. 267.



Variant 1 ("in God") has the consensus of all three of the first-generation recensions: Exemplar Ex-145#, the recension from which the Antiochian text tradition was derived, Exemplar Ex-147#, the recension from which the Western text tradition was derived, and Exemplar Ex-153#, the recension from which the Egyptian 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 Antiochian text tradition headed by first-generation Exemplar Ex-145#, except for MSS 81*, 322, and Spec%; and except for those in the sub-branches headed by third-generation Exemplar Ex-133. It has the support of all the witnesses in the Western text tradition headed by first-generation Exemplar Ex-147#, except for those in the sub-branch headed by second generation Exemplar Ex-143. It also has the support of all the witnesses in the Egyptian text tradition headed by first-generation Exemplar Ex-153#, except for MSS vg^b, bo^a, and 945, and those in the sub-branches headed by fourth-generation Exemplar Ex-144, and by sixth-generation Exemplar Ex-131. It also occurs independently in the following singularities:

01¹, 01², P025*%, and 945. It has the greatest antiquity, the broadest distribution, and good persistence.

Variant 2 ("in the Son") was first initiated into the Western text tradition in the sub-branch headed by second-generation Exemplar Ex-143, after which it persisted throughout the history of that branch. It was then initiated by mixture into the Antiochian text tradition in the sub-branch headed by third-generation Exemplar Ex-133, after which it persisted throughout the history of that branch. It was then initiated by mixture into the Egyptian text tradition in the sub-branches headed by fourth-generation Exemplar Ex-122, and sixth-generation Exemplar Ex-131 after which it persisted throughout the history of those branches. It also occurs independently in the following singularities: 81* and 322. It lacks antiquity and adequate distribution.

Variant 3 ("in the Son of God") was first initiated into the Egyptian text tradition in the sub-branch headed by fourth-generation Exemplar Ex-144, after which it persisted throughout the history of that branch, except for MSS 01^1, 01^2, and P025*%. It also occurs independently in the following singularity: bo^a (not shown). It lacks antiquity and distribution.

Variant 4 ("Jesus Christ") occurs only as a singularity in MS Spec%. Variant 5 (omit the phrase) occurs only as a singularity in MS vg^b; They have no genealogical possibility of being original.

Ehrman was right, some scribes altered their text to more clearly distinguish God the Father from the Christ. But all such alterations were peripheral and had no effect on the content or orthodoxy of the canonical text.

"Him" or "Himself" in 5:18,2

Ehrman claimed that orthodox scribes altered the text at times in order to emphasize that the Christ was born not adopted (pp. 61 ff). Regarding First John 5:18 he stated:

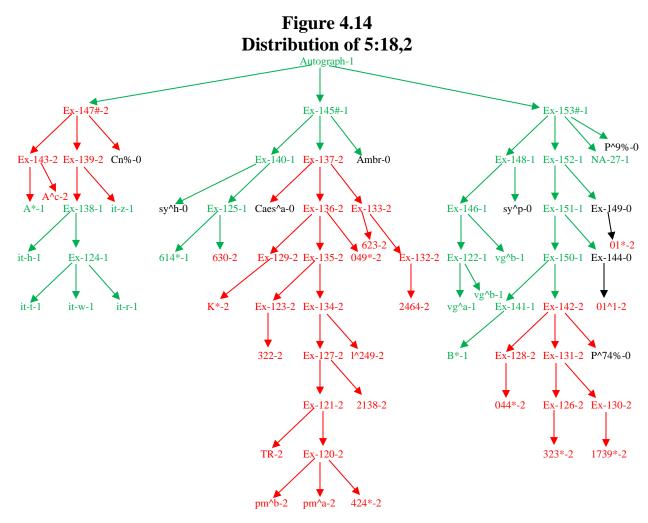
The textual corruption of another Johannine passage is somewhat more involved. The text of 1 John 5:18 has traditionally proved to be as difficult to interpret as to establish: "We know that everyone who is born from God (πᾶς ὁ γεγεννημένος ἐκ τοῦ θεου) does not sin, but the one who has been born from God keeps him" (ὁ γεννηθεὶς ἐκ τοῦ θεοῦ τηρεῖ αὐτὸν). The issue of interpretation has centered on the object of τηρεῖ, that is, whether it was originally a personal pronoun (αὐτὸν) or a reflexive (αὐτὸν)[sic ἑαυτὸν]. This decision depends in part on whether the preceding participial clause "the one who has been born from God" (ὁ γεννηθεὶς ἐκ τοῦ θεοῦ) refers to Christ or the believer. The exegetical choice is of some significance: the verse either means that Christ as

the one begotten of God protects the Christian from \sin or that a person is enabled to abstain from \sin by virtue of a spiritual birth. 48

First John 5:18 reads: "We know that whoever is born of God does not sin; but he who has been born of God keeps himself, and the wicked one does not touch him." Some witnesses have the word "himself" and some have "him." The variants are:

- (1) *αὐτον*—him
- (2) $\epsilon \alpha \nu \tau o \nu$ —himself

Figure 4.14 displays the genealogical distribution of these variants.



Variant 1 ("him") has the consensus of two if the first-generation recensions: Exemplar Ex-145#, the recension from which the Antiochian text tradition was derived, and Exemplar Ex-

-

⁴⁸ Ehrman, p. 70.

153#, the recension from which the Egyptian 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 Antiochian text tradition headed by first-generation Exemplar Ex-145#, except for MS 630 and those in the branch headed by second-generation Exemplar Ex-137. It has the support of all the witnesses in the Egyptian text tradition headed by first-generation Exemplar Ex-153#, except for MSS 01*, 01^1, 01^2, P025*%, Or^a%, and Or^b% (some not shown); and except for those in the branch headed by fifth-generation Exemplar Ex-142. It has the support by mixture of the witnesses in the Western text tradition in the branch headed by third-generation Exemplar Ex-138. It also occurs independently in the following singularities: MSS A* and it-z. It has the greatest antiquity, the better distribution, and good persistence.

Variant 2 ("himself") was first initiated into the Western text tradition in first-generation Exemplar Ex-147#, after which it persisted throughout the history of that branch, except for MSS A* and it-z; and except for the witnesses in the ranch headed by third-generation Exemplar Ex-138. It was then initiated by mixture into the Antiochian text tradition in the sub-branch headed by second-generation Exemplar Ex-137, after which it persisted throughout the history of that branch. It was then initiated by mixture into the Egyptian text tradition in the sub-branch headed by fifthgeneration Exemplar Ex-142, after which it persisted throughout the history of that branch. It also occurs independently in the following singularities: 01*, 01^1, 01^2, P025*%, 630, Or^a% and Or^b% (some not shown). It lacks antiquity and adequate distribution.

Ehrman was right; this variant was theologically motivated; and although it had no effect on the content or orthodoxy of the canonical text, it did appear in the Textus Receptus.

"Man" or "Phantom" in 5:20,2

Ehrman claimed that "a good deal of the orthodox polemic, however, dealt directly with what we might call the 'metaphysical' issue, the question of the materiality of Christ's existence. As opposed to the docetists, who claimed that Christ was a phantom, a man in appearance only" (p. 235). He stated:

A striking example occurs in the Latin tradition of 1 John 5:20. When the author says that "We know that the Son of God has come," several manuscripts of the Vulgate add "and [that he] was clothed with flesh for our sake, and suffered, and arose from the dead. And he took us to himself."

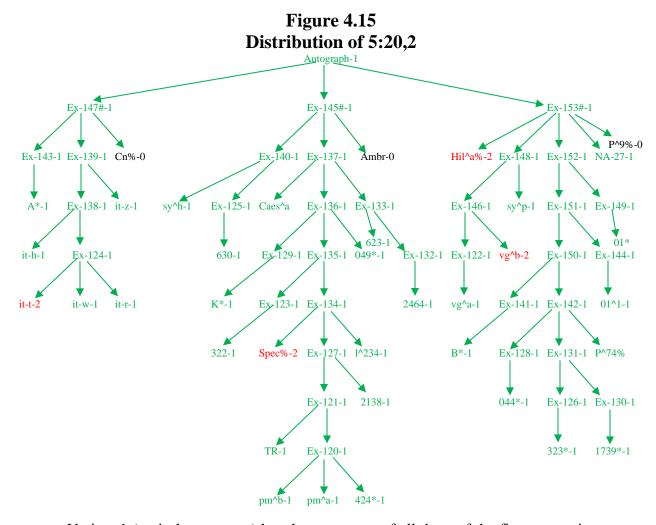
_

⁴⁹ Ehrman, p. 235.

First John 5:20 reads: "And we know that the Son of God has come and has given us an understanding, that we may know Him who is true; and we are in Him who is true, in His Son Jesus Christ. This is the true God and eternal life." Some witnesses have "and he was clothed with flesh for our sake, and suffered, and arose from the dead. And he took us to himself" after the sentence "And we know that the Son of God has come" and some do not; the variants are:

- (1) *ομιτ*—omit
- (2) et carnem induit nostri causa et passus est et resurrexit a mortuis adsumpsit nos

Figure 4.15 displays the genealogical distribution of these variants.



Variant 1 (omit the sentence) has the consensus of all three of the first-generation recensions: Exemplar Ex-145#, the recension from which the Antiochian text tradition was derived, Exemplar Ex-147#, the recension from which the Western text tradition was derived, and Exemplar Ex-153#, the recension from which the Egyptian 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 Antiochian text tradition headed by first-generation Exemplar Ex-145#, except for MS Spec%. It has the support of all the witnesses in the Western text tradition headed by first-generation Exemplar Ex-147#, except for MS it-t. It also has the support of all the witnesses in the Egyptian text tradition headed by first-generation Exemplar Ex-153#, except for MSS Hil^a% and vg^b. It has the greatest antiquity, the broadest distribution, and excellent persistence.

Variant 2 ("and he was clothed with flesh for our sake, and suffered, and arose from the dead. And he took us to himself.") occurs only as a singularity in MSS Spec%, Hil^a%, vg^b, and it-t. It has no genealogical possibility of being original.

Ehrman was right, some scribes altered their text to more clearly Christ's material existence. But all such alterations were peripheral and had no effect on the content or orthodoxy of the canonical text.

"Man" or "Phantom" in 5:9,2

Ehrman provided another example in 5:9 of an alteration to enhance Christ's material existence. He stated:

A comparable motivation may help to explain the interpolation found some verses earlier in 1 John 5:9, which speaks of God who "has borne witness concerning his son." In the fuller text that appears in several of our witnesses, the author speaks of ". . . his son whom [God] sent as a savior upon earth. And the son bore witness on earth by fulfilling the Scriptures; and we bear witness because we have seen him, and we proclaim to you that you may believe for this reason." ⁵⁰

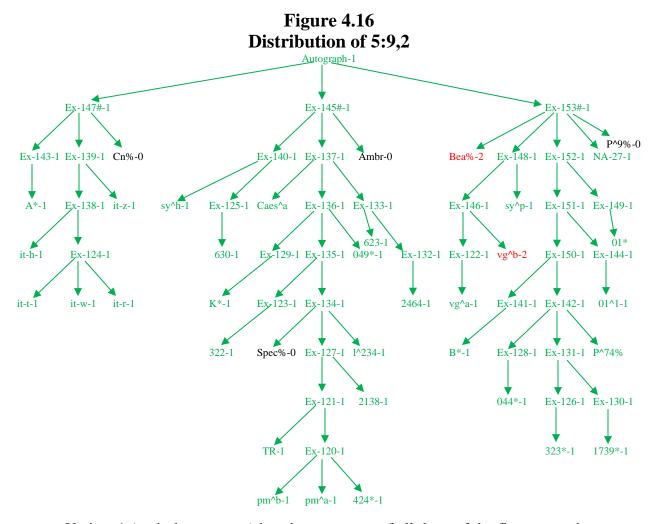
First John 5:9 reads: "If we receive the witness of men, the witness of God is greater; for this is the witness of God which He has testified of His Son." Some witnesses have "whom [God] sent as a savior upon earth. And the son bore witness on earth by fulfilling the Scriptures; and we bear witness because we have seen him, and we proclaim to you that you may believe for this reason" at the end of the verse and some do not; the variants are:

- (1) *ομιτ*—omit
- (2) quem misit salvatorem super terramà et filius testimonium perhibuit in terra scripturas perficiensà et nos testimonium perhibemus quoniam vidimus eum et adnuntiamus vobis ut credatisà et ideo

Figure 4.16 displays the genealogical distribution of these variants.

_

⁵⁰ Ehrman, p. 235.



Variant 1 (omit the sentence) has the consensus of all three of the first-generation recensions: Exemplar Ex-145#, the recension from which the Antiochian text tradition was derived, Exemplar Ex-147#, the recension from which the Western text tradition was derived; and Exemplar Ex-153#, the recension from which the Egyptian 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 Antiochian text tradition headed by first-generation Exemplar Ex-145#. It has the support of all the witnesses in the Western text tradition headed by first-generation Exemplar Ex-147#. It also has the support of all the witnesses in the Egyptian text tradition headed by first-generation Exemplar Ex-153#, except for MSS Bea% and vg^b. It has the greatest antiquity, the broadest distribution, and excellent persistence.

Variant 2 ("whom [God] sent as a savior upon earth. And the son bore witness on earth by fulfilling the Scriptures; and we bear witness because we have seen him, and we proclaim to you

that you may believe for this reason") occurs only as a singularity in MSS Bea% and vg^b. It has no genealogical possibility of being original.

Ehrman was right, some scribes altered their text to more clearly Christ's material existence. But all such alterations were peripheral and had no effect on the content or orthodoxy of the canonical text.

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 56 at reference 2:24,2:

First John 2:24 reads: "Therefore let that abide in you which you heard from the beginning. If what you heard from the beginning abides in you, you also will abide in the Son and in the Father." There are four variations of the phrase "in the Son and in the Father" 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:

_				
	56.1	2:24,2.1	υιω και έν τω πατρι	1

That is, the autographic reading is the first variant (56.1), $\upsilon\iota\omega$ και $\dot{\epsilon}\nu$ $\tau\omega$ πατρι "in the Son and in the Father" and that its probability is 1.00 (100%).

Appendix F reads:

56.2	2:24,2.2	Ex-156\$	1 2 4 5
56.3	2:24,2.3	Ex-157\$	5 2-4 1
56.4	2:24,2.4	Ex-158\$	υιω και εν τω πνευματι

Variant 2 is 1 2 4 5 = υιω και τω πατρι "the Son and the Father" initiated in virtual Exemplar Ex-156\$.

Variant 3 is 5 2-4 1 = πατρι και ἐν τω υιω "in the father and in the Son" initiated in virtual Exemplar Ex-157\$.

Variant 4 is υιω και εν τω πνευματι "in the Son and in the Spirit" initiated in virtual Exemplar Ex-158\$.

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

Appendix H reads:

56.1	2:24,2.1	[C^3%]<4>; [33*]<3>; [vg^a]<5>; Autograph;
56.2	2:24,2.2	[Ex-122]<4>; [Ex-139]<2>; [Ex-141]<5>; Ex-156\$<1>;
56.3	2:24,2.3	[01^1]<5>; [01^2]<5>; [623*]<4>; [sa^b]<5>; [Ex-148]<2>; [Ex-149]<3>; Ex-157\$<1>;
56.4	2:24,2.4	[945]<8>; [69]<4>; Ex-158\$<1>;

That is, the first variant was initiated in the Autograph and then by mixture in MSS vg^a, 33*, and C^3%.

The second variant was initiated in virtual Exemplar Ex-156\$, and then by mixture it was subsequently introduced in Exemplars Ex-122, Ex-139, and Ex-141.

The third variant was initiated in virtual Exemplar Ex-157\$, and then by mixture it was subsequently introduced in Exemplars Ex-148 and Ex-149, and in MSS 01^1, 01^2, 623*, and sa^a.

The fourth variant was initiated in virtual Exemplar Ex-158\$, and then by mixture it was subsequently introduced in MSS 69 and 945.

- **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 (1), red for the first variant (2), blue for the second variant (3), purple for the third variant (4), as illustrated in figure 4.17.
- **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 4.18. Witnesses marked with % are fragmentary; their readings are often lacking; they may be ignored in this step.



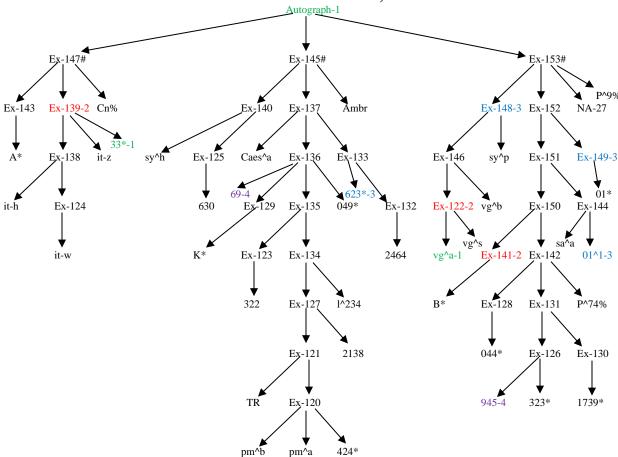
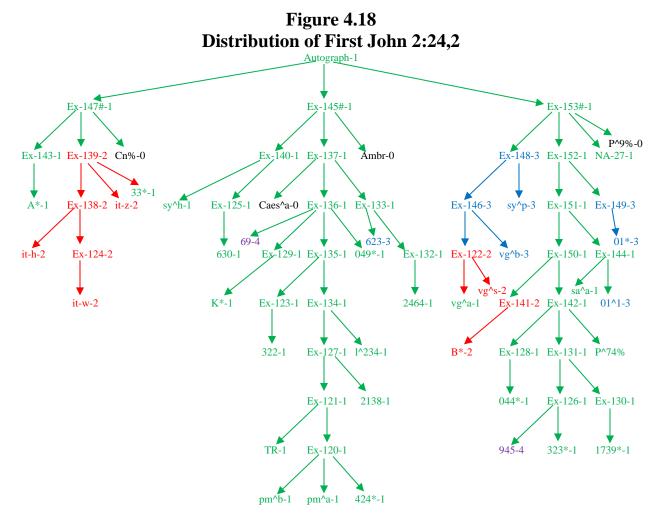


Figure 4.18 displays the distribution of the variants throughout genealogical history. Variant 1 (in the Son and in the Father) has the consensus of all three of the first-generation recensions: Exemplar Ex-145#, the recension from which the Antiochian text tradition was derived, Exemplar Ex-147#, the recension from which the Western text tradition was derived, and Exemplar Ex-153#, the recension from which the Egyptian 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 Antiochian text tradition headed by first-generation Exemplar Ex-145#, except for MSS 69 and 623. It has the support of all the witnesses in the Western text tradition headed by first-generation Exemplar Ex-147#, except for those in the branch headed by second-generation Exemplar Ex-139. It also has the support of all the witnesses in the Egyptian text tradition headed by first-generation Exemplar Ex-153#, except for MSS 01^1, 01^2, sa^b, and 945; and except for those in the subbranches headed by second-generation Exemplar Ex-149,

and fifth-generation Exemplar Ex-141. It also occurs independently in the following singularities: MSS C^3%, 33*, and vg^a. It has the greatest antiquity, the broadest distribution, and excellent persistence.



Variant 2 ("the Son and the Father") was first initiated in the branch of the Western text tradition 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 branch of the Egyptian text tradition headed by fourth-generation Exemplar Ex-122, after which it persisted throughout the history of that branch, except for MS vg^a. It was then initiated by mixture in the branch of the Egyptian text tradition headed by fifth-generation Exemplar Ex-141, 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 ("in the father and in the Son") was first initiated in the branch of the Egyptian text tradition headed by second-generation Exemplar Ex-148, after which it persisted throughout the history of that branch, except for those in the sub-branch headed by fourth-generation Exemplar Ex-122. It was then initiated by mixture into the branch of the Egyptian text tradition headed by fourth-generation Exemplar Ex-122, after which it persisted throughout the history of that branch, except for MS vg^a. It was then initiated by mixture in the branch of the Egyptian text tradition headed by third-generation Exemplar Ex-149, after which it persisted throughout the history of that branch, except for MS C^3%. It also occurs independently in the following singularities: MSS 01^1, 01^2, 623*, and sa^b. This reading lacks antiquity and adequate distribution, but it has good persistence once introduced.

Variant 4 ("in the Son and in the Spirit") only occurs as an independent singularity in MSS 69 and 945. This reading has no genealogical possibility of being original.

Conclusion

This chapter identifies the autographic readings of the Greek text of the Book of First John 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 John. The software made use of a modified version of the textual apparatus in the 27th 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. 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

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.

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. 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 24 out of 35 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

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.

indicates that 97.27% 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 First John. 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 October, 2021

APPENDIX A

List of Extant Witnesses to the Greek Text of the First Epistle of John

This appendix contains a list of the extant witnesses to the Greek text of the First Epistle of John. 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	Lan- guage	Content	No. of Readings	Percent Complete
P^9%	250	Greek	4:14-17	10	5.59%
P^74%	650	Greek	1:1-5; 2:1-2, 7, 13-14, 19, 25-26; 3:1, 8, 14, 19-20; 4:1, 6-7, 12, 16-17; 5:4, 9-10, 17	39	21.79%
01*	350	Greek	1:1-5:21	179	100.00%
01^1	550	Greek	1:1-2:17; 2:19-5:11; 5:14-21	171	95.53%
01^2	650	Greek	1:1-5:21	177	98.88%
A*	450	Greek	1:1-5:21	178	99.44%
A^c	550	Greek	1:1-5:21	178	99.44%
B*	350	Greek	1:1-5:21	179	100.00%
B^2	600	Greek	1:1-5:21	179	100.00%
C*%	450	Greek	1:3-4:2	113	63.13%
C^3%	850	Greek	1:3-4:2	113	63.13%
K*	850	Greek	1:1-5:21	179	100.00%
K^c	950	Greek	1:1-5:21	179	100.00%
L020*	850	Greek	1:1-5:21	179	100.00%
P025*%	850	Greek	1:1-3:19; 5:2-21	131	73.18%
044*	1000	Greek	1:1-5:21	179	100.00%
044^c	1050	Greek	1:1-5:21	179	100.00%
48%	450	Greek	4:6-5:4; 5:6-10, 17-18, 21	37	20.67%
049*	850	Greek	1:1-5:21	179	100.00%
245%	550	Greek	3:23-4:1; 4:3-6	13	7.26%
296%	550	Greek	5:4-13	14	7.82%
33*	850	Greek	1:1-5:1; 5:4-10, 13-21	168	93.85%
61*	1550	Greek	1:1-5:21	179	100.00%
81*	1044	Greek	1:1-5:21	179	100.00%
322	1450	Greek	1:1-5:21	179	100.00%
323*	1150	Greek	1:1-5:21	179	100.00%
424*	1050	Greek	1:1-5:21	179	100.00%
424^c	1100	Greek	1:1-5:21	179	100.00%
614*	1250	Greek	1:1-5:21	179	100.00%
623*	1037	Greek	1:1-5:21	179	100.00%
629*	1350	Greek	1:1-5:21	179	100.00%
630	1300	0	1:1-5:21	179	100.00%
918	1550	Greek	1:1-5:21	179	100.00%
945	1050	Greek	1:1-5:21	179	100.00%
1241*	1150	Greek	1:1-5:21	179	100.00%
1243	1050	Greek	1:1-5:21	179	100.00%
1505*	1150	Greek	1:1-5:21	179	100.00%

1611* 950 Greek 1:1-5:21 179 100.00% 1739*0 950 Greek 1:1-5:21 179 100.00% 1827 1295 Greek 1:1-5:21 179 100.00% 1846 1050 Greek 1:1-5:21 179 100.00% 1845 1250 Greek 1:1-5:21 179 100.00% 1852 1250 Greek 1:1-5:21 179 100.00% 1881* 1350 Greek 1:1-5:21 179 100.00% 1881* 1350 Greek 1:1-5:21 179 100.00% 1881* 1350 Greek 1:1-5:21 179 100.00% 12138 1072 Greek 1:1-5:21 179 100.00% 1238 1072 Greek 1:1-5:21 179 100.00% 1238 1072 Greek 1:1-5:21 179 100.00% 1238 1750 Greek 1:1-5:21 179 100.00% 12318 1750 Greek 1:1-5:21 179 100.00% 12464* 850 Greek 1:1-5:21 179 100.00% 12464* 12464* 12464* 12464* 12464* 12464* 12464* 12464* 12464* 12464* 12464* 12464* 12464* 12464* 12464* 12464* 12464* 12464* 12464* 12464* 12464* 12464* 12464* 12464* 12464* 12464* 12464* 12464* 12464* 12464* 12464* 12464* 12464* 12464* 12464* 12464* 12464* 12464* 12464* 12464* 12464* 12464* 12464* 12464* 12464* 12464* 12464* 12464* 12464* 12464* 12464* 12464* 12464* 12464* 12464* 12464* 12464* 12464* 12464* 12464* 12464* 12464* 12464* 12464* 12464* 12464* 12464* 12464* 12464* 12464* 12464* 12464* 12464* 12464* 12464* 12464* 12464* 12464* 12464* 12464* 12464* 12464* 12464* 12464* 12464* 12464* 12464* 12464* 12464* 12464* 12464* 12464* 12464* 12464* 12464*		, ,			Г	1
1739°C	1611*	950	Greek	1:1-5:21	179	100.00%
1827 1295 Greek 1:1-5:21 179 100.00% 1846 1050 Greek 1:1-5:21 179 100.00% 1852 1250 Greek 1:1-5:21 179 100.00% 1881* 1350 Greek 1:1-5:21 179 100.00% 12138 1072 Greek 1:1-5:21 179 100.00% 1238 1072 Greek 1:1-5:21 179 100.00% 1238 1750 Greek 1:1-5:21 179 100.00% 179 100.00% 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170 170	1739*	900	Greek	1:1-5:21	179	100.00%
1846 1050 Greek 1:1-5:21 179 100.00% 1852 1250 Greek 1:1-5:21 179 100.00% 1881* 1350 Greek 1:1-5:21 179 100.00% 2138 1072 Greek 1:1-5:21 179 100.00% 2298 1150 Greek 1:1-5:21 179 100.00% 2318 1750 Greek 1:1-5:21 179 100.00% 2464* 850 Greek 1:1-5:21 179 100.00% 2464* 850 Greek 1:1-5:21 179 100.00% 2464* 850 Greek 1:1-5:21 179 100.00% 2495 1450 Greek 1:1-5:21 179 100.00% 2495 1450 Greek 1:1-5:21 179 100.00% 2495 1450 Greek 1:1-5:21 179 100.00% 2495 Marcolouis 1:1-5:21 179 100.00% 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2	1739^c	950	Greek	1:1-5:11; 5:14-21	176	98.32%
1852 1250 Greek 1:1-5:21 179 100.00% 1881* 1350 Greek 1:1-5:21 179 100.00% 2138 1072 Greek 1:1-5:21 179 100.00% 2298 1150 Greek 1:1-5:21 179 100.00% 2318 1750 Greek 1:1-5:21 179 100.00% 2318 1750 Greek 1:1-5:21 179 100.00% 2464* 850 Greek 1:1-5:21 179 100.00% 2464* 850 Greek 1:1-5:21 179 100.00% 2495 1450 Greek 1:1-5:21 179 100.00% 2495 R892 Greek 1:1-5:21 179 100.00% 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495 2495	1827	1295	Greek	1:1-5:21	179	100.00%
1881* 1350 Greek 1:1-5:21 179 100.00% 2138 1072 Greek 1:1-5:21 179 100.00% 2298 1150 Greek 1:1-5:21 179 100.00% 2318 1750 Greek 1:1-5:21 179 100.00% 2464* 850 Greek 1:1-5:21 179 100.00% 2464* 850 Greek 1:1-5:21 179 100.00% 2464* 850 Greek 1:1-5:21 179 100.00% 2495 1450 Greek 1:1-5:21 179 100.00% pm^a 850 Greek 1:1-5:21 179 100.00% pm^b 850 Greek 1:1-5:21 179 100.00% pm^b 850 Greek 1:1-5:21 179 100.00% TR 1892 Greek 1:1-5:21 179 100.00% HF 1995 Greek 1:1-5:21 179 100.00% RP 1995 Greek 1:1-5:21 179 100.00% vg^a 400 1 1:1-2:17; 2:19-3:10; 3:13-4:21; 5:2-21 152 84.92% vg^b 400 1 1:1-2:17; 2:19-3:10; 3:13-4:21; 5:2-21 155 86.59% vg^c 1592 1 1:1-2:17; 2:19-3:10; 3:13-5:21 163 91.06% vg^s 1590 1 1:1-2:17; 2:19-3:10; 3:13-5:21 163 91.06% vg^n 1994 1 1:1-2:17; 2:19-3:10; 3:13-4:10; 4:13-21; 5:4, 6-11, 144 164 80.45% 164 164 164 164 164 164 164 164 164 164 164 164 164 164 164 164 164 164 164 164 164 164 164 1	1846	1050	Greek	1:1-5:21	179	100.00%
2138 1072 Greek 1:1-5:21 179 100.00% 2298 1150 Greek 1:1-5:21 179 100.00% 2318 1750 Greek 1:1-5:21 179 100.00% 2464* 850 Greek 1:1-5:21 179 100.00% 2464* 850 Greek 1:1-5:21 179 100.00% 2495 1450 Greek 1:1-5:21 179 100.00% 2495 1450 Greek 1:1-5:21 179 100.00% pm^a 850 Greek 1:1-5:21 179 100.00% pm^b 850 Greek 1:1-5:21 179 100.00% 178 1892 Greek 1:1-5:21 179 100.00% TR 1892 Greek 1:1-5:21 179 100.00% RP 1995 Greek 1:1-5:21 179 100.00% RP 1995 Greek 1:1-5:21 179 100.00% vg^a 400 1 1:1-2:17; 2:19-3:10; 3:13-4:21; 5:2-21 152 84.92% vg^b 400 1 1:1-2:17; 2:19-3:10; 3:13-4:21; 5:2-21 152 84.92% vg^b 400 1 1:1-2:17; 2:19-3:10; 3:13-4:21; 5:2-21 152 84.92% vg^b 400 1 1:1-2:17; 2:19-3:10; 3:13-5:21 163 91.06% vg^s 1590 1 1:1-2:17; 2:19-3:10; 3:13-5:21 163 91.06% vg^s 159	1852	1250	Greek	1:1-5:21	179	100.00%
2298 1150 Greek 1:1-5:21 179 100.00% 2318 1750 Greek 1:1-5:21 179 100.00% 2464* 850 Greek 1:1-5:21 179 100.00% 2464* 850 Greek 1:1-5:21 179 100.00% 2495 1450 Greek 1:1-5:21 179 100.00% 2495 1450 Greek 1:1-5:21 179 100.00% pm^b 850 Greek 1:1-5:21 179 100.00% pm^b 850 Greek 1:1-5:21 179 100.00% TR 1892 Greek 1:1-5:21 179 100.00% TR 1892 Greek 1:1-5:21 179 100.00% HF 1982 Greek 1:1-5:21 179 100.00% RP 1995 Greek 1:1-5:21 179 100.00% vg^a 400 1 1:1-2:17; 2:19-3:10; 3:13-4:21; 5:2-21 152 84.92% vg^b 400 1 1:1-2:17; 2:19-3:10; 3:13-4:21; 5:2-21 155 86.59% vg'cl 1592 1 1:1-2:17; 2:19-3:10; 3:13-4:21; 5:2-21 163 91.06% vg^s 1590 1 1:1-2:17; 2:19-3:10; 3:13-5:21 163 91.06% vg^ww 1889 1 1:1-2:17; 2:19-3:10; 3:13-5:21 163 91.06% vg^ww 1889 1 1:1-2:17; 2:19-3:10; 3:13-5:21 163 91.06% vg^ww 1889 1 1:1-2:5; 2:7-17, 19-3:8; 3:13-4:10; 4:13-21; 5:4, 6-11, 14-4 80.45% it-t 700 1 1:1-2:5; 2:7-17, 19-3:8; 3:13-4:21; 5:4, 6-11, 14-21 151 84.36% it-t 1000 1 1:1-2:5; 2:7-17, 19-3:8; 3:13-4:21; 5:4, 6-11, 14-21 151 84.36% it-w 1400 1 1:1-2:7; 2:19-3:10; 3:13-4:21; 5:4, 6-11, 14-21 151 84.36% it-w 1400 1 1:1-2:7; 2:19-3:8; 3:13-4:10; 4:13-21; 5:4, 6-11, 14-21 151 84.36% it-w 1400 1 1:1-2:5; 2:7-17, 19-3:8; 3:13-4:10; 4:13-5:1; 5:4, 6-11, 14-21 151 84.36% it-w 1400 1 1:1-2:7; 2:19-3:8; 3:13-4:10; 4:13-5:1; 5:4, 6-11, 14-21 151 84.36% it-w 1400 1 1:1-2:5; 2:7-17, 19-3:8; 3:13-4:10; 4:13-5:1; 5:4, 6-11, 14-21 151 84.36% it-w 1400 1 1:1-2:5; 2:7-17, 19-3:10; 3:13-4:10; 4:13-5:1; 5:4, 6-11, 14-21 151 84.36% it-w 1400 1 1:1-2:5; 2:7-17, 19-3:10; 3:13-4:10; 4:13-5:1; 5:4, 6-11, 14-21 151 84.36% it-w 1400 1 1:1-2:5; 2:7-17, 19-3:10; 3:13-4:10; 4:13-5:1; 5:4, 6-11, 14-21 151 84.36% it-w 1400 1 1:	1881*	1350	Greek	1:1-5:21	179	100.00%
2318 1750 Greek 1:1-5:21 179 100.00% 2464* 850 Greek 1:1-5:21 179 100.00% 2464^cc 900 Greek 1:1-5:21 179 100.00% 2495 1450 Greek 1:1-5:21 179 100.00% pm^a 850 Greek 1:1-5:21 179 100.00% pm^b 850 Greek 1:1-5:21 179 100.00% pm^b 850 Greek 1:1-5:21 179 100.00% TR 1892 Greek 1:1-5:21 179 100.00% TR 1892 Greek 1:1-5:21 179 100.00% RP 1995 Greek 1:1-5:21 179 100.00% vg^a 400 1 1:1-2:17; 2:19-3:10; 3:13-4:21; 5:2-21 152 84.92% vg^b 400 1 1:1-2:17; 2:19-3:10; 3:13-4:21; 5:2-21 155 86.59% vg^c 1592 1 1:1-2:17; 2:19-3:10; 3:13-5:21 163 91.06% vg^a 1590 1 1:1-2:17; 2:19-3:10; 3:13-5:21 163 91.06% vg^a 1889 1 1:1-2:17; 2:19-3:10; 3:13-5:21 163 91.06% vg^a 1889 1 1:1-2:17; 2:19-3:10; 3:13-5:21 163 91.06% vg^a 1889 1 1:1-2:5; 2:7-17, 19-3:8; 3:13-4:10; 4:13-21; 5:4, 6-11, 144 80.45% 14-21 14-21 14-21 151 84.03% 14-21 151 84.03% 14-21 151 152 152 152 152 153 153 154 154 154 154 154 154 154 154 154 154 154 154 154 154 154 154 154 154 154 154 154 154 154 154 154 154 154 154 154 154 154 154 154 154 154 154 154 154 154 154 154 154 154 154 154 154 154 154 154 154 154 154 154 154 154 154 154 154 154 154 154 154 154 154 154 154 154 154 154 154 154 154 154 154 154 154 154 154 154 154 154 154 154 154 154 154 154 154 154 154 154 154 154 154 154 154 154 154 154 154 154 154 154 154 154 154 154 154 154 154 154 154 154 154 154 154 154 154 154 154 154 154 154 154 154 154 154 154 154 154 154 154 154 154 154 154 154 154 154 154 154 154 154 154 154 154 154 154 154 154 154 154 154 154 154 154 154 154 15	2138	1072	Greek	1:1-5:21	179	100.00%
2464* 850 Greek 1:1-5:21 179 100.00% 2495 1450 Greek 1:1-5:21 179 100.00% 2495 1450 Greek 1:1-5:21 179 100.00% pm^a 850 Greek 1:1-5:21 179 100.00% pm^b 850 Greek 1:1-5:21 179 100.00% TR 1892 Greek 1:1-5:21 179 100.00% HF 1982 Greek 1:1-5:21 179 100.00% RP 1995 Greek 1:1-5:21 179 100.00% vg^a 400 1 1:1-2:17; 2:19-3:10; 3:13-4:21; 5:2-21 152 84.92% vg^b 400 1 1:1-2:17; 2:19-3:10; 3:13-4:21; 5:2-21 155 86.59% vg^c 1592 1 1:1-2:17; 2:19-3:10; 3:13-5:21 163 91.06% vg^a 1590 1 1:1-2:17; 2:19-3:10; 3:13-5:21 163 91.06% vg^h 1994 1 1:1-2:17; 2:19-3:10; 3:13-5:21 163 91.06% vg^h 1889 1 1:1-2:17; 2:19-3:10; 3:13-5:21 162 90.50% it-h* 450 1 1:1-2:5; 2:7-17, 19-3:8; 3:13-4:10; 4:13-21; 5:4, 6-11, 144 80.45% it-r 700 1 1:1-2:5; 2:7-17, 19-3:8; 3:13-4:10; 4:13-21; 5:4, 6-11, 144 80.45% it-w 1400 1 1:1-2:5; 2:7-17, 19-3:10; 3:13-4:21; 5:4, 6-11, 14-21 151 84.36% it-w 1400 1 1:1-2:17; 2:19-3:8; 3:13-4:10; 4:13-21; 5:4, 6-11, 14-2 148 82.68% sy^h 616 1 1:1-2:17; 2:19-3:8; 3:13-4:10; 4:13-5:1; 5:4, 6-10, 14-2 149 83.24% ac*% 250 1 1:1-2:5; 2:7-17, 19-3:8; 3:13-4:10; 4:13-5:1; 5:4, 6-10, 14-2 149 83.24% ac*% 250 1 1:1-2:5; 2:7-17, 19-3:10; 3:14-4:10; 4:13-5:1; 5:4, 6-10, 14-2 150 83.24% 11-2:5; 2:7-17, 19-3:10; 3:14-4:10; 4:13-5:1; 5:4, 6-10, 14-2 150 140 140 14-21 11-2:5; 2:7-17, 19-3:10; 3:14-4:10; 4:13-5:1; 5:4, 6-10, 14-2 149 83.24% 140.420 140.421 11-2:5; 2:7-17, 19-3:10; 3:14-4:10; 4:13-5:1; 5:4, 6-10, 14-2 149 83.24% 140.420 140.421 11-2:5; 2:7-17, 19-3:11; 3:14-4:10; 4:13-5:1; 5:4, 6-10, 14-2 150 140 140 140 140.421 140.421 140.421 140.421 140.421 140.421 140.421 140.421 140.421 140.421 140.421 140.421 140.421 140.421 140.421 140.421 140.421 140.421 140.421 140.421 140.421 140.421 140.421 140	2298	1150	Greek	1:1-5:21	179	100.00%
2464°c 900 Greek 1:1-5:21 179 100.00%	2318	1750	Greek	1:1-5:21	179	100.00%
2495 1450 Greek 1:1-5:21 179 100.00% pm^a 850 Greek 1:1-5:21 179 100.00% pm^b 850 Greek 1:1-5:21 179 100.00% TR 1892 Greek 1:1-5:21 179 100.00% HF 1982 Greek 1:1-5:21 179 100.00% RP 1995 Greek 1:1-5:21 179 100.00% vg^a 400 1 1:1-2:17; 2:19-3:10; 3:13-4:21; 5:2-21 152 84.92% vg^b 400 1 1:1-2:17; 2:19-3:10; 3:13-4:21; 5:2-21 155 86.59% vg^b 400 1 1:1-2:17; 2:19-3:10; 3:13-5:21 163 91.06% vg^s 1590 1 1:1-2:17; 2:19-3:10; 3:13-5:21 152 84.92% vg^st 1994 1 1:1-2:17; 2:19-3:10; 3:13-4:21; 5:4-21 162 90.50% it-h* 450 1 1:1-2:5; 2:7-17, 19-3:8; 3:13-4:10; 4:13-21; 5:4, 6-11, 14-21 144 80.45%	2464*	850	Greek	1:1-5:21	179	100.00%
pm^a 850 Greek 1:1-5:21 179 100.00% pm^b 850 Greek 1:1-5:21 179 100.00% TR 1892 Greek 1:1-5:21 179 100.00% HF 1982 Greek 1:1-5:21 179 100.00% RP 1995 Greek 1:1-5:21 179 100.00% vg^a 400 1 1:1-2:17; 2:19-3:10; 3:13-4:21; 5:2-21 152 84.92% vg^b 400 1 1:1-2:17; 2:19-3:10; 3:13-5:21 163 91.06% vg^s 1592 1 1:1-2:17; 2:19-3:10; 3:13-5:21 163 91.06% vg^s 1590 1 1:1-2:17; 2:19-3:10; 3:13-5:21 163 91.06% vg^s 1994 1 1:1-2:17; 2:19-3:10; 3:13-5:21 162 90.50% vg^ww 1889 1 1:1-2:17; 2:19-3:8; 3:13-4:10; 4:13-21; 5:4, 6-11, 14-4 80.45% it-r 700 1 1:1-2:5; 2:7-17, 19-3:8; 3:13-4:10; 4:13-5:1; 5:4, 6-11, 14-21 154 86.03% <	2464^c	900	Greek	1:1-5:21	179	100.00%
pm^b 850 Greek 1:1-5:21 179 100.00% TR 1892 Greek 1:1-5:21 179 100.00% HF 1982 Greek 1:1-5:21 179 100.00% RP 1995 Greek 1:1-5:21 179 100.00% vg^a 400 1 1:1-2:17; 2:19-3:10; 3:13-4:21; 5:2-21 152 84.92% vg^b 400 1 1:1-2:17; 2:19-3:10; 3:13-4:21; 5:2-21 155 86.59% vg^cl 1592 1 1:1-2:17; 2:19-3:10; 3:13-5:21 163 91.06% vg^s 1590 1 1:1-2:17; 2:19-3:10; 3:13-4:21; 5:2-21 152 84.92% vg^st 1994 1 1:1-2:17; 2:19-3:10; 3:13-4:21; 5:2-21 163 91.06% vg^ww 1889 1 1:1-2:17; 2:19-3:8; 3:13-4:10; 4:13-21; 5:4, 6-11, 14-2 162 90.50% it-h* 450 1 1:1-2:5; 2:7-17, 19-3:8; 3:13-4:10; 4:13-21; 5:4, 6-11, 14-21 151 84.36% it-t 1000 1 1:1-2:5; 2:7-17, 19-3	2495	1450	Greek	1:1-5:21	179	100.00%
TR 1892 Greek 1:1-5:21 179 100.00% HF 1982 Greek 1:1-5:21 179 100.00% RP 1995 Greek 1:1-5:21 179 100.00% vg^a 400 1 1:1-2:17; 2:19-3:10; 3:13-4:21; 5:2-21 152 84.92% vg^b 400 1 1:1-2:17; 2:19-3:10; 3:13-4:21; 5:2-21 155 86.59% vg^cl 1592 1 1:1-2:17; 2:19-3:10; 3:13-5:21 163 91.06% vg^s 1590 1 1:1-2:17; 2:19-3:10; 3:13-5:21 163 91.06% vg^st 1994 1 1:1-2:17; 2:19-3:10; 3:13-5:21 163 91.06% vg^ww 1889 1 1:1-2:17; 2:19-3:10; 3:13-5:21 162 90.50% it-h* 450 1 1:1-2:5; 2:7-17, 19-3:8; 3:13-4:10; 4:13-21; 5:4, 6-11, 144 80.45% it-r 700 1 1:1-2:5; 2:7-17, 19-3:8; 3:13-4:10; 4:13-21; 5:4, 6-11, 14-21 151 84.36% it-z* 750 1 1:1-2:17; 2:19-3:8;	pm^a	850	Greek	1:1-5:21	179	100.00%
HF 1982 Greek 1:1-5:21 179 100.00% RP 1995 Greek 1:1-5:21 179 100.00% vg^a 400 1 1:1-2:17; 2:19-3:10; 3:13-4:21; 5:2-21 152 84.92% vg^b 400 1 1:1-2:17; 2:19-3:10; 3:13-4:21; 5:2-21 155 86.59% vg^cl 1592 1 1:1-2:17; 2:19-3:10; 3:13-5:21 163 91.06% vg^s 1590 1 1:1-2:17; 2:19-3:10; 3:13-5:21 163 91.06% vg^st 1994 1 1:1-2:17; 2:19-3:10; 3:13-5:21 163 91.06% vg^ww 1889 1 1:1-2:17; 2:19-3:10; 3:13-5:21 162 90.50% it-h* 450 1 1:1-2:5; 2:7-17, 19-3:8; 3:13-4:10; 4:13-21; 5:4, 6-11, 14-21 144 80.45% it-r 700 1 1:1-2:5; 2:7-17, 19-3:8; 3:13-4:21; 5:4, 6-11, 14-21 151 84.36% it-w 1400 1 1:1-2:17; 2:19-3:8; 3:13-4:10; 4:13-21; 5:4, 6-11, 14-21 148 82.68% sy^h 616 <t< td=""><td>pm^b</td><td>850</td><td>Greek</td><td>1:1-5:21</td><td>179</td><td>100.00%</td></t<>	pm^b	850	Greek	1:1-5:21	179	100.00%
RP 1995 Greek 1:1-5:21 179 100.00% vg^a 400 1 1:1-2:17; 2:19-3:10; 3:13-4:21; 5:2-21 152 84.92% vg^b 400 1 1:1-2:17; 2:19-3:10; 3:13-4:21; 5:2-21 155 86.59% vg^cl 1592 1 1:1-2:17; 2:19-3:10; 3:13-5:21 163 91.06% vg^s 1590 1 1:1-2:17; 2:19-3:10; 3:13-5:21 163 91.06% vg^st 1994 1 1:1-2:17; 2:19-3:10; 3:13-5:21 163 91.06% vg^ww 1889 1 1:1-2:17; 2:19-3:10; 3:13-5:21 162 90.50% it-h* 450 1 1:1-2:5; 2:7-17, 19-3:8; 3:13-4:10; 4:13-21; 5:4, 6-11, 14-2 144 80.45% it-r 700 1 1:1-2:5; 2:7-17, 19-3:8; 3:13-4:10; 4:13-21; 5:4, 6-11, 14-21 151 84.36% it-w 1400 1 1:1-2:17; 2:19-3:8; 3:13-4:10; 4:13-5:1; 5:4, 6-11, 14-21 148 82.68% sy^h 616 1 1:1-2:17; 2:19-3:8; 3:13-4:10; 4:13-5:1; 5:4, 6-11, 14-2 148 82.68%	TR	1892	Greek	1:1-5:21	179	100.00%
vg^a 400 1 1:1-2:17; 2:19-3:10; 3:13-4:21; 5:2-21 152 84.92% vg^b 400 1 1:1-2:17; 2:19-3:10; 3:13-4:21; 5:2-21 155 86.59% vg^cl 1592 1 1:1-2:17; 2:19-3:10; 3:13-5:21 163 91.06% vg^s 1590 1 1:1-2:17; 2:19-3:10; 3:13-5:21 152 84.92% vg^st 1994 1 1:1-2:17; 2:19-3:10; 3:13-5:21 163 91.06% vg^ww 1889 1 1:1-2:17; 2:19-3:10; 3:13-5:21 162 90.50% it-h* 450 1 1:1-2:5; 2:7-17, 19-3:8; 3:13-4:10; 4:13-21; 5:4, 6-11, 14-4 80.45% it-r 700 1 1:1-2:5; 2:7-17, 19-3:8; 3:13-4:21; 5:4, 6-11, 14-21 151 86.03% it-t 1000 1 1:1-2:5; 2:7-17, 19-3:10; 3:13-4:21; 5:4, 6-11, 14-21 151 84.36% it-z* 750 1 1:1-2:17; 2:19-3:8; 3:13-4:10; 4:13-51; 5:4, 6-11, 14-21 148 82.68% sy^h 616 1 1:1-2:17; 2:19-3:8; 3:13-4:10; 4:13-5:1; 5:4, 6-11, 14-21 149 83.24% <td>HF</td> <td>1982</td> <td>Greek</td> <td>1:1-5:21</td> <td>179</td> <td>100.00%</td>	HF	1982	Greek	1:1-5:21	179	100.00%
vg^b 400 1 1:1-2:17; 2:19-3:10; 3:13-4:21; 5:2-21 155 86.59% vg^cl 1592 1 1:1-2:17; 2:19-3:10; 3:13-5:21 163 91.06% vg^s 1590 1 1:1-2:17; 2:19-3:10; 3:13-5:21 152 84.92% vg^st 1994 1 1:1-2:17; 2:19-3:10; 3:13-5:21 163 91.06% vg^ww 1889 1 1:1-2:17; 2:19-3:10; 3:13-5:21 162 90.50% it-h* 450 1 1:1-2:5; 2:7-17, 19-3:8; 3:13-4:10; 4:13-21; 5:4, 6-11, 144 80.45% it-r 700 1 1:1-2:5; 2:7-17, 19-3:8; 3:13-4:10; 4:13-21; 5:4, 6-11, 14-21 151 84.36% it-t 1000 1 1:1-2:5; 2:7-17, 19-3:10; 3:13-4:21; 5:4, 6-11, 14-21 151 84.36% it-w 1400 1 1:1-2:17; 2:19-3:8; 3:13-4:10; 4:13-21; 5:4, 6-11, 14-21 148 82.68% sy^h 616 1 1:1-2:17; 2:19-3:8; 3:13-4:10; 4:13-5:1; 5:4, 6-10, 14-21 148 82.68% sy^p 425 1 1:1-2:5; 2:7-17, 19, 21-23, 25-28; 3:1, 5-8, 14-4:10; 129	RP	1995	Greek	1:1-5:21	179	100.00%
vg^cl 1592 1 1:1-2:17; 2:19-3:10; 3:13-5:21 163 91.06% vg^s 1590 1 1:1-2:17; 2:19-3:10; 3:13-4:21; 5:2-21 152 84.92% vg^st 1994 1 1:1-2:17; 2:19-3:10; 3:13-5:21 163 91.06% vg^ww 1889 1 1:1-2:17; 2:19-3:10; 3:13-5:21 162 90.50% it-h* 450 1 1:1-2:5; 2:7-17, 19-3:8; 3:13-4:10; 4:13-21; 5:4, 6-11, 144 80.45% it-r 700 1 1:1-2:5; 2:7-17, 19-3:8; 3:13-4:10; 4:13-21; 5:4, 6-11, 14-21 154 86.03% it-t 1000 1 1:1-2:5; 2:7-17, 19-3:10; 3:13-4:21; 5:4, 6-11, 14-21 151 84.36% it-w 1400 1 1:1-2:17; 2:19-3:8; 3:13-4:10; 4:13-21; 5:4, 6-11, 14-21 148 82.68% sy^h 616 1 1:1-2:17; 2:19-3:8; 3:13-4:10; 4:13-5:1; 5:4, 6-10, 14-21 148 82.68% sy^p 425 1 1:1-2:5; 2:7-17, 19, 21-23, 25-28; 3:1, 5-8, 14-4:10; 149 83.24% ac*% 250 1 1:1-2:5; 2:7-17, 19-3:11; 3:14-4:10; 4:13-5:1; 5:4, 6-10, 14-21 </td <td>vg^a</td> <td>400</td> <td>1</td> <td>1:1-2:17; 2:19-3:10; 3:13-4:21; 5:2-21</td> <td>152</td> <td>84.92%</td>	vg^a	400	1	1:1-2:17; 2:19-3:10; 3:13-4:21; 5:2-21	152	84.92%
vg^s 1590 1 1:1-2:17; 2:19-3:10; 3:13-4:21; 5:2-21 152 84.92% vg^st 1994 1 1:1-2:17; 2:19-3:10; 3:13-5:21 163 91.06% vg^ww 1889 1 1:1-2:17; 2:19-3:10; 3:13-5:21 162 90.50% it-h* 450 1 1:1-2:5; 2:7-17, 19-3:8; 3:13-4:10; 4:13-21; 5:4, 6-11, 144 80.45% it-r 700 1 1:1-2:5; 2:7-17, 19-3:8; 3:13-4:21; 5:4, 6-11, 14-21 151 84.36% it-t 1000 1 1:1-2:5; 2:7-17, 19-3:10; 3:13-4:21; 5:4, 6-11, 14-21 151 84.36% it-w 1400 1 1:1-2:17; 2:19-3:8; 3:13-4:10; 4:13-21; 5:4, 6-11, 14-21 148 82.68% it-z* 750 1 1:1-2:17; 2:19-3:8; 3:13-4:10; 4:13-5:1; 5:4, 6-11, 14-21 148 82.68% sy^h 616 1 1:1-2:17; 2:19-3:8; 3:13-4:10; 4:13-5:1; 5:4, 6-11, 14-21 148 82.68% sy^p 425 1 1:1-2:17; 2:19-3:8; 3:13-4:10; 4:13-5:1; 5:4, 6-10, 14-21 149 83.24% ac*% 250 1 1:1-2:5; 2:7-17, 19-3:10; 3:14-4:10; 4:13-5:	vg^b	400	1	1:1-2:17; 2:19-3:10; 3:13-4:21; 5:2-21	155	86.59%
vg^st 1994 1 1:1-2:17; 2:19-3:10; 3:13-5:21 163 91.06% vg^ww 1889 1 1:1-2:17; 2:19-3:10; 3:13-5:21 162 90.50% it-h* 450 1 1:1-2:5; 2:7-17, 19-3:8; 3:13-4:10; 4:13-21; 5:4, 6-11, 144 80.45% it-r 700 1 1:1-2:5; 2:7-17, 19-3:8; 3:13-5:4; 5:6-21 154 86.03% it-t 1000 1 1:1-2:5; 2:7-17, 19-3:10; 3:13-4:21; 5:4, 6-11, 14-21 151 84.36% it-w 1400 1 1:1-2:17; 2:19-3:8; 3:13-4:10; 4:13-21; 5:4, 6-11, 14-21 148 82.68% it-z* 750 1 1:1-2:17; 2:19-3:8; 3:13-4:10; 4:13-21; 5:4, 6-11, 14-21 148 82.68% sy^h 616 1 1:1-2:17; 2:19-3:8; 3:13-4:10; 4:13-5:1; 5:4, 6-11, 14-21 148 82.68% sy^p 425 1 1:1-2:17; 2:19-3:8; 3:13-4:10; 4:13-5:1; 5:4, 6-10, 14-21 149 83.24% ac*% 250 1 1:1-2:5; 2:7-17, 19-3:10; 3:14-4:10; 4:13-5:1; 5:4, 6-10, 14-21 129 72.07% sa^a 250 1 1:1-2:5; 2:7-17, 19-3:11; 3:14-4	vg^cl	1592	1	1:1-2:17; 2:19-3:10; 3:13-5:21	163	91.06%
vg^w 1889 1 1:1-2:17; 2:19-3:10; 3:13-5:21 162 90.50% it-h* 450 1 1:1-2:5; 2:7-17, 19-3:8; 3:13-4:10; 4:13-21; 5:4, 6-11, 144 80.45% it-r 700 1 1:1-2:5; 2:7-17, 19-3:8; 3:13-5:4; 5:6-21 154 86.03% it-t 1000 1 1:1-2:5; 2:7-17, 19-3:10; 3:13-4:21; 5:4, 6-11, 14-21 151 84.36% it-w 1400 1 1:1-2:17; 2:19-3:8; 3:13-4:21; 5:4, 6-11, 14-21 148 82.68% it-z* 750 1 1:1-2:17; 2:19-3:8; 3:13-4:10; 4:13-21; 5:4, 6-11, 14-21 148 82.68% sy^h 616 1 1:1-2:17; 2:19-3:8; 3:13-4:10; 4:13-5:1; 5:4, 6-21 152 84.92% sy^p 425 1 1:1-2:17; 2:19-3:8; 3:13-4:10; 4:13-5:1; 5:4, 6-10, 14-21 149 83.24% ac*% 250 1 1:1-2:5; 2:7-17, 19, 21-23, 25-28; 3:1, 5-8, 14-4:10; 4:13-5:1; 5:4, 6-14 129 72.07% sa^a 250 1 1:1-2:5; 2:7-17, 19-3:11; 3:14-4:10; 4:13-5:1; 5:4, 6-14 145 81.01% bo^a 250 1 1:1-2:5; 2:7-17	vg^s	1590	1	1:1-2:17; 2:19-3:10; 3:13-4:21; 5:2-21	152	84.92%
it-h* 450 1 1:1-2:5; 2:7-17, 19-3:8; 3:13-4:10; 4:13-21; 5:4, 6-11, 14-21 144 80.45% it-r 700 1 1:1-2:5; 2:7-17, 19-3:8; 3:13-5:4; 5:6-21 154 86.03% it-t 1000 1 1:1-2:5; 2:7-17, 19-3:10; 3:13-4:21; 5:4, 6-11, 14-21 151 84.36% it-w 1400 1 1:1-2:17; 2:19-3:8; 3:13-4:21; 5:4, 6-11, 14-21 148 82.68% it-z* 750 1 1:1-2:17; 2:19-3:8; 3:13-4:10; 4:13-21; 5:4, 6-11, 14-21 148 82.68% sy^h 616 1 1:1-2:17; 2:19-3:8; 3:13-4:10; 4:13-5:1; 5:4, 6-21 152 84.92% sy^p 425 1 1:1-2:17; 2:19-3:8; 3:13-4:10; 4:13-5:1; 5:4, 6-10, 14-21 149 83.24% ac*% 250 1 1:1-2:5; 2:7-17, 19, 21-23, 25-28; 3:1, 5-8, 14-4:10; 4:13-5:1; 5:4, 6-10, 14-21 129 72.07% sa^a 250 1 1:1-2:5; 2:7-17, 19-3:10; 3:14-4:10; 4:13-5:1; 5:4, 6-14 145 81.01% sa^b 250 1 1:1-2:5; 2:7-17, 19-3:11; 3:14-4:10; 4:13-5:1; 5:4, 6-14 149 83.24% bo^a	vg^st	1994	1	1:1-2:17; 2:19-3:10; 3:13-5:21	163	91.06%
it-n* 450 1 14-21 144 80.43% it-r 700 1 1:1-2:5; 2:7-17, 19-3:8; 3:13-5:4; 5:6-21 154 86.03% it-t 1000 1 1:1-2:5; 2:7-17, 19-3:10; 3:13-4:21; 5:4, 6-11, 14-21 151 84.36% it-w 1400 1 1:1-2:17; 2:19-3:8; 3:13-4:21; 5:4, 6-11, 14-21 148 82.68% it-z* 750 1 1:1-2:17; 2:19-3:8; 3:13-4:10; 4:13-21; 5:4, 6-11, 14-21 148 82.68% sy^h 616 1 1:1-2:17; 2:19-3:10; 3:13-4:10; 4:13-5:1; 5:4, 6-21 152 84.92% sy^p 425 1 1:1-2:17; 2:19-3:8; 3:13-4:10; 4:13-5:1; 5:4, 6-10, 14-2 149 83.24% ac*% 250 1 1:1-2:5; 2:7-17, 19, 21-23, 25-28; 3:1, 5-8, 14-4:10; 4:13-5:1; 5:4, 6-10, 14-21 129 72.07% sa^a 250 1 1:1-2:5; 2:7-17, 19-3:10; 3:14-4:10; 4:13-5:1; 5:4, 6-14 145 81.01% bo^a 250 1 1:1-2:5; 2:7-17, 19-3:8; 3:11, 14-4:10; 4:13-5:1; 5:4, 6-14 149 83.24% bo^a 250 1 1:1-2:5; 2:7-	vg^ww	1889	1		162	90.50%
it-t 1000 1 1:1-2:5; 2:7-17, 19-3:10; 3:13-4:21; 5:4, 6-11, 14-21 151 84.36% it-w 1400 1 1:1-2:17; 2:19-3:8; 3:13-4:21; 5:4, 6-11, 14-21 148 82.68% it-z* 750 1 1:1-2:17; 2:19-3:8; 3:13-4:10; 4:13-21; 5:4, 6-11, 14-21 148 82.68% sy^h 616 1 1:1-2:17; 2:19-3:10; 3:13-4:10; 4:13-5:1; 5:4, 6-21 152 84.92% sy^p 425 1 1:1-2:17; 2:19-3:8; 3:13-4:10; 4:13-5:1; 5:4, 6-10, 14-21 149 83.24% ac*% 250 1 1:1-2:5; 2:7-17, 19, 21-23, 25-28; 3:1, 5-8, 14-4:10; 4:13-5:1; 5:4, 6-10, 14-21 129 72.07% sa^a 250 1 1:1-2:5; 2:7-17, 19-3:10; 3:14-4:10; 4:13-5:1; 5:4, 6-145 145 81.01% sa^b 250 1 1:1-2:5; 2:7-17, 19-3:11; 3:14-4:10; 4:13-5:1; 5:4, 6-145 149 83.24% bo^a 250 1 1:1-2:5; 2:7-17, 19-3:8; 3:11, 14-4:10; 4:13-21; 5:4, 6-145 149 83.24%	it-h*	450	1		144	80.45%
it-w 1400 1 1:1-2:17; 2:19-3:8; 3:13-4:21; 5:4, 6-11, 14-21 148 82.68% it-z* 750 1 1:1-2:17; 2:19-3:8; 3:13-4:10; 4:13-21; 5:4, 6-11, 14-21 148 82.68% sy^h 616 1 1:1-2:17; 2:19-3:10; 3:13-4:10; 4:13-5:1; 5:4, 6-21 152 84.92% sy^p 425 1 1:1-2:17; 2:19-3:8; 3:13-4:10; 4:13-5:1; 5:4, 6-10, 14-21 149 83.24% ac*% 250 1 1:1-2:5; 2:7-17, 19, 21-23, 25-28; 3:1, 5-8, 14-4:10; 4:13-5:1; 5:4, 6-10, 14-21 129 72.07% sa^a 250 1 1:1-2:5; 2:7-17, 19-3:10; 3:14-4:10; 4:13-5:1; 5:4, 6-14 145 81.01% sa^b 250 1 1:1-2:5; 2:7-17, 19-3:11; 3:14-4:10; 4:13-5:1; 5:4, 6-14 149 83.24% bo^a 250 1 1:1-2:5; 2:7-17, 19-3:8; 3:11, 14-4:10; 4:13-5:1; 5:4, 6-14 149 83.24%	it-r	700	1	1:1-2:5; 2:7-17, 19-3:8; 3:13-5:4; 5:6-21	154	86.03%
it-z* 750 1 1:1-2:17; 2:19-3:8; 3:13-4:10; 4:13-21; 5:4, 6-11, 14-21 148 82.68% sy^h 616 1 1:1-2:17; 2:19-3:10; 3:13-4:10; 4:13-5:1; 5:4, 6-21 152 84.92% sy^p 425 1 1:1-2:17; 2:19-3:8; 3:13-4:10; 4:13-5:1; 5:4, 6-10, 14-21 149 83.24% ac*% 250 1 1:1-2:5; 2:7-17, 19, 21-23, 25-28; 3:1, 5-8, 14-4:10; 4:13-5:1; 5:4, 6-10, 14-21 129 72.07% sa^a 250 1 1:1-2:5; 2:7-17, 19-3:10; 3:14-4:10; 4:13-5:1; 5:4, 6-145 145 81.01% sa^b 250 1 1:1-2:5; 2:7-17, 19-3:11; 3:14-4:10; 4:13-5:1; 5:4, 6-145 149 83.24% bo^a 250 1 1:1-2:5; 2:7-17, 19-3:8; 3:11, 14-4:10; 4:13-21; 5:4, 6-145 147 82.12%	it-t	1000	1	1:1-2:5; 2:7-17, 19-3:10; 3:13-4:21; 5:4, 6-11, 14-21	151	84.36%
sy^h 616 1 1:1-2:17; 2:19-3:10; 3:13-4:10; 4:13-5:1; 5:4, 6-21 152 84.92% sy^p 425 1 1:1-2:17; 2:19-3:8; 3:13-4:10; 4:13-5:1; 5:4, 6-10, 14-21 149 83.24% ac*% 250 1 1:1-2:5; 2:7-17, 19, 21-23, 25-28; 3:1, 5-8, 14-4:10; 4:13-5:1; 5:4, 6-10, 14-21 129 72.07% sa^a 250 1 1:1-2:5; 2:7-17, 19-3:10; 3:14-4:10; 4:13-5:1; 5:4, 6-10, 14-21 145 81.01% sa^b 250 1 1:1-2:5; 2:7-17, 19-3:11; 3:14-4:10; 4:13-5:1; 5:4, 6-10, 14-21 149 83.24% bo^a 250 1 1:1-2:5; 2:7-17, 19-3:11; 3:14-4:10; 4:13-5:1; 5:4, 6-10, 14-21 149 83.24% bo^a 250 1 1:1-2:5; 2:7-17, 19-3:8; 3:11, 14-4:10; 4:13-21; 5:4, 6-10, 14-21 149 83.24%	it-w	1400	1		148	82.68%
sy^p 425 1 1:1-2:17; 2:19-3:8; 3:13-4:10; 4:13-5:1; 5:4, 6-10, 14-21 149 83.24% ac*% 250 1 1:1-2:5; 2:7-17, 19, 21-23, 25-28; 3:1, 5-8, 14-4:10; 4:13-5:1; 5:4, 6-10, 14-21 129 72.07% sa^a 250 1 1:1-2:5; 2:7-17, 19-3:10; 3:14-4:10; 4:13-5:1; 5:4, 6-10, 14-21 145 81.01% sa^b 250 1 1:1-2:5; 2:7-17, 19-3:11; 3:14-4:10; 4:13-5:1; 5:4, 6-10, 14-21 149 83.24% bo^a 250 1 1:1-2:5; 2:7-17, 19-3:8; 3:11, 14-4:10; 4:13-21; 5:4, 6-10, 14-21 147 82.12%	it-z*	750	1		148	82.68%
sy*p 425 1 21 149 83.24% ac*% 250 1 1:1-2:5; 2:7-17, 19, 21-23, 25-28; 3:1, 5-8, 14-4:10; 4:13-5:1; 5:4, 6-10, 14-21 129 72.07% sa^a 250 1 1:1-2:5; 2:7-17, 19-3:10; 3:14-4:10; 4:13-5:1; 5:4, 6-10, 14-21 145 81.01% sa^b 250 1 1:1-2:5; 2:7-17, 19-3:11; 3:14-4:10; 4:13-5:1; 5:4, 6-10, 14-21 149 83.24% bo^a 250 1 1:1-2:5; 2:7-17, 19-3:8; 3:11, 14-4:10; 4:13-21; 5:4, 6-10, 14-21 147 82.12%	sy^h	616	1		152	84.92%
ac*% 250 1 4:13-19, 21; 5:4, 6-10, 14-21 129 72.07% sa^a 250 1 1:1-2:5; 2:7-17, 19-3:10; 3:14-4:10; 4:13-5:1; 5:4, 6-10, 14-21 145 81.01% sa^b 250 1 1:1-2:5; 2:7-17, 19-3:11; 3:14-4:10; 4:13-5:1; 5:4, 6-10, 14-21 149 83.24% bo^a 250 1 1:1-2:5; 2:7-17, 19-3:8; 3:11, 14-4:10; 4:13-21; 5:4, 6-10, 14-7 147 82.12%	sy^p	425	1	21	149	83.24%
sa^a 250 1 10, 14-21 145 81.01% sa^b 250 1 1:1-2:5; 2:7-17, 19-3:11; 3:14-4:10; 4:13-5:1; 5:4, 6-10, 14-21 149 83.24% bo^a 250 1 1:1-2:5; 2:7-17, 19-3:8; 3:11, 14-4:10; 4:13-21; 5:4, 6-147 147 82.12%	ac*%	250	1	4:13-19, 21; 5:4, 6-10, 14-21	129	72.07%
sarb 250 1 10, 14-21 149 83.24% bo^a 250 1 1:1-2:5; 2:7-17, 19-3:8; 3:11, 14-4:10; 4:13-21; 5:4, 6-	sa^a	250	1	10, 14-21	145	81.01%
1 NOV9 1 /3U 1 1 1 X/ 1/%	sa^b	250	1		149	83.24%
	bo^a	250	1		147	82.12%

bo^b	250	1	1:1-2:5; 2:7-17, 19-3:8; 3:11, 14-4:10; 4:13-5:1; 5:4, 6-10, 14-21	149	83.24%
1^249	850	Greek	1:1-5:21	179	100.00%
1^846	850	Greek	1:1-5:21	179	100.00%
1	1150	Greek	1:1-5:21	179	100.00%
131*	1350	Greek	1:1-5:21	179	100.00%
131^c	1300	Greek	1:1-5:21	179	100.00%
209	1350	Greek	1:1-5:21	179	100.00%
1582	949	Greek	1:1-5:21	179	100.00%
13	1250	Greek	1:1-5:21	179	100.00%
69	1450	Greek	1:1-5:21	179	100.00%
346	1150	Greek	1:1-5:21	179	100.00%
543	1150	Greek	1:1-5:21	179	100.00%
788	1050	Greek	1:1-5:21	179	100.00%
826	1150	Greek	1:1-5:21	179	100.00%
828	1150	Greek	1:1-5:21	179	100.00%
983	1150	Greek	1:1-5:21	179	100.00%
NA-27	1979	Greek	1:1-5:21	179	100.00%
Ambr^a%	397	1	2:19, 29; 4:3; 5:6	4	2.23%
Aug^a%	430	1	1:4; 2:5, 17, 24, 27, 29; 3:19; 4:3; 5:2, 10	12	6.70%
Aug^b%	430	1	1:4; 2:5, 14, 17, 24, 27, 29; 3:19, 21; 4:3; 5:2, 10	16	8.94%
Bea%	750	1	5:09	1	0.56%
Beda^a%	735	1	2:05	1	0.56%
Cass^a%	580	1	1:7; 3:14	2	1.12%
Cl^a%	215	0	1:7; 2:6, 19; 3:18-19; 5:17	7	3.91%
Cl^b%	215	0	1:7; 2:4, 6, 19; 3:18-19; 5:17	8	4.47%
Cl^lat%	215	1	1:7; 2:7, 19; 3:1, 8, 21, 24; 5:6	9	5.03%
Cn%	435	1	2:15	1	0.56%
Cyp^a%	258	1	2:6, 17, 19, 23; 3:10; 4:3, 20	7	3.91%
Cyr^a%	444	0	2:14, 27	2	1.12%
Did^a%	398	0	2:12, 19; 3:16, 21; 5:21	7	3.91%
Did^b%	398	0	2:12, 19; 3:16, 21; 5:21	7	3.91%
Eus^a%	339	0	1:05	1	0.56%
Fulg%	527	1	5:07	1	0.56%
Hes%	451	0	2:20	1	0.56%
Hier^a%	420	1	1:7; 2:8, 12, 27	7	3.91%
Hil^a%	367	1	5:20	1	0.56%
Irlat^a%	395	1	2:19; 4:2-3	4	2.23%
Lcf%	371	1	2:4, 10, 17; 3:8, 11, 21, 23; 4:3, 20; 5:2	10	5.59%
Meth%	250	0	3:21	2	1.12%

Or^a%	254	0	2:17-18, 23; 3:2, 10, 21; 4:3, 20; 5:18	12	6.70%
Or^b%	254	0	1:5; 2:17-18, 23; 3:2, 10, 21; 4:3, 20; 5:18	13	7.26%
Or^lat^a%	254	1	2:14	1	0.56%
Prisc%	385	1	5:07	1	0.56%
Spec%	450	0	5:7, 10, 20	3	1.68%
Tert^a%	220	1	1:7; 2:19; 3:10; 5:6	5	2.79%
Тус%	390	1	3:14	1	0.56%
Hier^b%	420	1	1:7; 2:6, 8, 12, 27	8	4.47%

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, 5-1:4,2 indicates that the 5th place of variation occurs in chapter 1, verse 4, and is the 2th place of variation in that verse.

Reference at Each Place of Variation

		rector enter a	t Buch I face	or turium		
1- 1:2,1	2- 1:3,1	3- 1:3,2	4- 1:4,1	5- 1:4,2	6- 1:4,3	7- 1:5,1
8- 1:5,2	9- 1:5,3	10- 1:7,1	11- 1:7,2	12- 1:7,3	13- 1:7,4	14- 1:8,1
15- 1:8,2	16- 1:9,1	17- 1:9,2	18- 1:10,1	19- 1:10,2	20- 2:1,1	21- 2:2,1
22- 2:3,1	23- 2:4,1	24- 2:4,2	25- 2:4,3	26- 2:5,1	27- 2:5,2	28- 2:6,1
29- 2:7,1	30- 2:7,2	31- 2:8,1	32- 2:8,2	33-2:8,3	34- 2:9,1	35- 2:10,1
36- 2:11,1	37- 2:12,1	38- 2:12,2	39- 2:13,1	40- 2:14,1	41- 2:14,2	42- 2:14,3
43- 2:15,1	44- 2:15,2	45- 2:17,1	46- 2:17,2	47- 2:17,3	48- 2:18,1	49- 2:19,1
50- 2:19,2	51- 2:19,3	52- 2:20,1	53- 2:21,1	54- 2:23,1	55- 2:24,1	56- 2:24,2
57- 2:25,1	58- 2:26,1	59- 2:27,1	60- 2:27,2	61- 2:27,3	62- 2:27,4	63- 2:27,5
64- 2:27,6	65- 2:28,1	66- 2:28,2	67- 2:28,3	68- 2:28,4	69- 2:29,1	70- 3:1,1
71- 3:1,2	72- 3:1,3	73- 3:2,1	74- 3:5,1	75- 3:5,2	76- 3:7,1	77- 3:7,2
78- 3:8,1	79- 3:10,1	80- 3:11,1	81- 3:13,1	82- 3:13,2	83- 3:14,1	84- 3:14,2
85- 3:15,1	86- 3:15,2	87- 3:16,1	88- 3:16,2	89- 3:17,1	90- 3:17,2	91- 3:17,3
92- 3:17,4	93- 3:18,1	94- 3:18,2	95- 3:19,1	96- 3:19,2	97- 3:19,3	98- 3:20,1
99- 3:20,2	100-3:21,1	101-3:21,2	102-3:21,3	103- 3:21,4	104- 3:22,1	105- 3:22,2
106- 3:23,1	107- 3:23,2	108- 3:23,3	109- 3:23,4	110- 3:24,1	111-4:1,1	112- 4:2,1
113-4:2,2	114- 4:2,3	115- 4:3,1	116- 4:3,2	117- 4:3,3	118- 4:3,4	119- 4:3,5
120- 4:6,1	121- 4:6,2	122- 4:7,1	123- 4:8,1	124- 4:10,1	125-4:10,2	126- 4:10,3
127-4:10,4	128- 4:12,1	129- 4:13,1	130- 4:14,1	131- 4:15,1	132- 4:15,2	133- 4:15,3
134- 4:16,1	135- 4:16,2	136- 4:17,1	137- 4:17,2	138- 4:17,3	139- 4:17,4	140- 4:19,1
141-4:19,2	142- 4:19,3	143- 4:20,1	144- 4:21,1	145- 5:1,1	146- 5:2,1	147- 5:4,1
148- 5:5,1	149- 5:6,1	150- 5:6,2	151- 5:6,3	152- 5:6,4	153- 5:7,1	154- 5:9,1
155- 5:9,2	156- 5:10,1	157- 5:10,2	158- 5:10,3	159- 5:10,4	160- 5:11,1	161- 5:13,1
162- 5:13,2	163- 5:14,1	164- 5:14,2	165- 5:14,3	166- 5:15,1	167- 5:15,2	168- 5:16,1
169- 5:17,1	170- 5:18,1	171- 5:18,2	172- 5:20,1	173- 5:20,2	174- 5:20,3	175- 5:20,4
176- 5:20,5	177- 5:20,6	178- 5:21,1	179- 5:21,2			
			•			

Appendix C

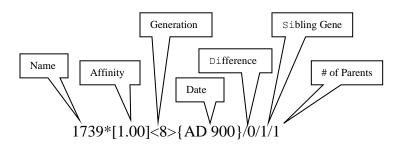
The Genealogical Tree Diagram of

The Textual History of the First Epistle of

John

This appendix contains the tree diagram of the genealogical history of the Greek text of the First Epistle of John. 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-145#, ⁵³ Ex-147#, and Ex-153#. 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.



⁵³ 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).

Genealogical Tree of Galatians

```
Autograph[0.00]<0>{AD 75}/0/0/0
 |-Ex-147\#[0.83]<1>{AD 80}/30/30/2
   |-Cn%[1.00]<2>{AD 435}/0/30/1
   |-Meth%[1.00]<2>{AD 250}/0/30/1
   |-Ex-143[0.83]<2>{AD 400}/30/30/4
   | |-A*[0.99]<3>{AD 450}/2/30/2
   | |-A^c[0.99]<3>{AD 550}/2/30/3
   |-Ex-139[0.88]<2>{AD 100}/21/30/6
      |-it-z*[0.80]<3>{AD 750}/29/21/6
      |-33*[0.96]<3>{AD 850}/6/21/3
      |-Ex-138[0.80]<3>{AD 120}/33/21/6
        |-it-h*[0.97]<4>{AD 450}/4/33/4
        |-Ex-124[0.98]<4>{AD 170}/3/33/3
          |-it-w[0.99]<5>{AD 1400}/2/3/3
          |-it-r[0.95]<5>{AD 700}/8/3/5
          |-it-t[0.93]<5>{AD 1000}/11/3/7
          |-Tert^a%[0.80]<5>{AD 220}/1/3/2
 |-Ex-153#[0.93]<1>{AD 80}/12/12/2
   |-P^9%[0.90]<2>{AD 250}/1/12/1
   |-0296%[0.93]<2>{AD 550}/1/12/2
   |-NA-27[0.94]<2>{AD 1979}/10/12/3
 | |-Bea%[0.00]<2>{AD 750}/1/12/2
   |-Cyr^a\%[1.00]<2>{AD 444}/0/12/1
 | |-Hil^a%[0.00]<2>{AD 367}/1/12/2
  |-Or^lat^a%[1.00]<2>{AD 254}/0/12/1
   |-Ex-148[0.86]<2>{AD 115}/23/12/4
   |-sy^p[0.97]<3>{AD 425}/5/23/4
   | |-0245%[0.92]<3>{AD 550}/1/23/2
   | |-Cl^lat%[0.56]<3>{AD 215}/4/23/3
     |-Cyp^a%[0.71]<3>{AD 258}/2/23/2
     |-Tyc%[1.00]<3>{AD 390}/0/23/1
     |-Ex-146[0.89]<3>{AD 165}/18/23/5
        |-vg^b[0.76]<4>{AD 400}/37/18/8
        |-Cl^a%[0.57]<4>{AD 215}/3/18/4
        |-Ex-122[0.95]<4>{AD 350}/8/18/5
          |-vg^s[1.00] < 5 > {AD 1590}/0/8/1
          |-vg^a[0.97]<5>{AD 400}/4/8/4
          |-vg^ww[0.96]<5>{AD 1889}/6/8/6
          |-vg^cl[0.93]<5>{AD 1592}/12/8/10
          |-vg^st[0.96]<5>{AD 1994}/7/8/4
   |-Ex-152[1.00]<2>{AD 100}/0/12/1
      |-Ex-149[0.89]<3>{AD 200}/17/0/5
     b c
 a
```

```
b c
a
    | |-bo^a[0.97]<4>{AD 250}/4/17/4
      |-bo^b[0.95]<4>{AD 250}/7/17/4
      |-01*[0.74]<4>{AD 350}/39/17/5
    | |-C^3%[0.80]<4>{AD 850}/19/17/8
      |-ac*%[0.98]<4>{AD 250}/2/17/2
      |-Aug^b%[0.38]<4>{AD 430}/8/17/5
    | |-Did^a%[0.33]<4>{AD 398}/2/17/2
      |-Did^b%[0.33]<4>{AD 398}/2/17/2
      |-Irlat^a%[0.50]<4>{AD 395}/1/17/2
    | |-Or^b%[0.43]<4>{AD 254}/4/17/4
    |-Ex-151[1.00]<3>{AD 150}/0/0/1
       |-Ex-144[0.94]<4>{AD 200}/9/0/5
        |-sa^a[0.98]<5>{AD 250}/3/9/4
         |-sa^b[0.95]<5>{AD 250}/8/9/6
       | |-01^1[0.76]<5>{AD 550}/35/9/12
         |-01^2[0.75]<5>{AD 650}/37/9/13
       | -C^*\%[0.81] < 5 > \{AD 450\}/18/9/10
       | |-P025*%[0.78]<5>{AD 850}/24/9/12
        |-Or^a%[0.71]<5>{AD 254}/2/9/3
       |-Ex-150[1.00]<4>{AD 239}/0/0/1
         |-Ex-141[0.88]<5>{AD 289}/21/0/6
         | |-B^2[0.99]<6>{AD 600}/1/21/2
         | |-B*[0.99]<6>{AD 350}/1/21/2
         | |-Eus^a%[1.00]<6>{AD 339}/0/21/1
         |-Ex-142[0.91]<5>{AD 401}/17/0/8
           |-P^74%[0.97]<6>{AD 650}/1/17/2
           |-Hes%[1.00]<6>{AD 451}/0/17/1
           |-Ex-128[0.86]<6>{AD 685}/25/17/11
           | |-044<sup>c</sup>[1.00]<7>{AD 1050}/0/25/1
           | |-044*[0.98]<7>{AD 1000}/3/25/3
           | |-Beda^a%[1.00]<7>{AD 735}/0/25/1
           |-Ex-131[0.88]<6>{AD 800}/21/17/13
             |-Ex-130[0.99]<7>{AD 850}/1/21/2
             | |-1739<sup>c</sup>[0.99]<8>{AD 950}/2/1/2
             | |-1739*[1.00]<8>{AD 900}/0/1/1
             |-Ex-126[0.89]<7>{AD 1000}/19/21/7
                |-323*[0.93]<8>{AD 1150}/12/19/6
                |-945[0.91]<8>{AD 1050}/17/19/10
                |-1241*[0.92]<8>{AD 1150}/14/19/8
|-Ex-145#[0.85]<1>{AD 90}/26/26/2
  |-Ambr^a%[0.75]<2>{AD 397}/1/26/2
  |-Ex-140[0.87]<2>{AD 321}/24/26/5
  a b
```

```
a b
  |-sy^h[0.84]<3>{AD 616}/25/24/6
  |-Lcf%[0.50]<3>{AD 371}/5/24/3
  |-Ex-125[1.00]<3>{AD 1100}/0/24/1
    |-630[0.96]<4>{AD 1300}/7/0/4
    |-614*[0.91]<4>{AD 1250}/17/0/8
    |-1505*[0.91]<4>{AD 1150}/17/0/6
|-Ex-137[0.88]<2>{AD 95}/21/26/4
  |-Cass^a%[0.50]<3>{AD 580}/1/21/1
  |-Ex-133[0.89]<3>{AD 115}/20/21/7
  | |-623*[0.97]<4>{AD 1037}/6/20/3
    |-Ex-132[0.96]<4>{AD 165}/7/20/3
       |-2464^c[0.99]<5>{AD 900}/2/7/3
       |-2464*[0.99]<5>{AD 850}/1/7/1
       |-Cl^b%[0.63]<5>{AD 215}/3/7/3
  |-Ex-136[0.97]<3>{AD 235}/5/21/3
     |-049*[0.96]<4>{AD 850}/8/5/6
     |-L020*[0.93]<4>{AD 850}/12/5/5
     |-69[0.87]<4>{AD 1450}/24/5/8
     |-HF[0.98]<4>{AD 1982}/3/5/4
     |-Ex-129[0.95]<4>{AD 400}/9/5/5
     | |-K^c[1.00]<5>{AD 950}/0/9/1
    | |-K*[0.99]<5>{AD 850}/2/9/3
     | |-81*[0.78]<5>{AD 1044}/40/9/8
      |-048%[0.84]<5>{AD 450}/6/9/3
     |-Ex-135[0.96]<4>{AD 285}/7/5/4
       |-Ex-123[0.97]<5>{AD 370}/5/7/2
       | |-322[0.97]<6>{AD 1450}/6/5/6
       | |-1881*[0.94]<6>{AD 1350}/11/5/8
       | |-Hier^a%[0.57]<6>{AD 420}/3/5/4
       | |-Hier^b%[0.63]<6>{AD 420}/3/5/4
       |-Ex-134[0.97]<5>{AD 335}/5/7/4
         |-1^249[1.00]<6>{AD 850}/0/5/1
         |-1^846[1.00]<6>{AD 850}/0/5/1
         |-Aug^a%[0.58]<6>{AD 430}/5/5/3
         |-Fulg%[1.00]<6>{AD 527}/0/5/1
         |-Prisc%[1.00]<6>{AD 385}/0/5/1
         |-Spec%[0.33]<6>{AD 450}/2/5/2
         |-Ex-127[0.97]<6>{AD 700}/6/5/4
           |-2138[0.98]<7>{AD 1072}/4/6/3
           |-RP[1.00]<7>{AD 1995}/0/6/1
           |-Ex-121[0.99]<7>{AD 750}/1/6/2
             |-2318[1.00]<8>{AD 1750}/0/1/1
             a
```

```
|-61*[0.99]<8>{AD 1550}/1/1/2
|-629*[0.99]<8>{AD 1350}/1/1/2
|-918[1.00]<8>{AD 1550}/0/1/1
|-TR[0.95]<8>{AD 1892}/9/1/7
|-Ex-120[0.99]<8>{AD 800}/1/1/2
  |-424*[1.00]<9>{AD 1050}/0/1/1
  |-424^c[0.99]<9>{AD 1100}/1/1/1
  |-1243[0.91]<9>{AD 1050}/16/1/10
  |-1611*[0.99]<9>{AD 950}/1/1/2
  |-1827[0.99]<9>{AD 1295}/1/1/1
  |-1846[0.97]<9>{AD 1050}/5/1/3
  |-1852[0.91]<9>{AD 1250}/16/1/8
  |-2298[0.97]<9>{AD 1150}/5/1/4
  |-2495[0.99]<9>{AD 1450}/2/1/3
  |-pm^a[1.00]<9>{AD 850}/0/1/1
  |-pm^b[0.97]<9>{AD 850}/5/1/4
  |-1[0.99]<9>{AD 1150}/2/1/3
  |-131*[1.00]<9>{AD 1350}/0/1/1
  |-131^c[1.00]<9>{AD 1300}/0/1/1
  |-209[0.99]<9>{AD 1350}/1/1/2
  |-1582[1.00]<9>{AD 949}/0/1/1
  |-13[1.00]<9>{AD 1250}/0/1/1
  |-346[1.00]<9>{AD 1150}/0/1/1
  |-543[1.00]<9>{AD 1150}/0/1/1
  |-788[1.00]<9>{AD 1050}/0/1/1
  |-826[1.00]<9>{AD 1150}/0/1/1
  |-828[1.00]<9>{AD 1150}/0/1/1
  |-983[1.00]<9>{AD 1150}/0/1/1
```

Appendix D

List of Autographic Readings

For First John

This appendix contains the list of autographic readings for the Greek text of the First Epistle of John 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	1:2,1.1	⊤ ομιτ	1
2.1	1:3,1.1	°και	0.67
3.1	1:3,2.1	∘δε	1
4.1	1:4,1.1	「ημεις	0.67
5.1	1:4,2.1	⊤ ομιτ	1
6.2	1:4,3.2	υμων	0.67
7.1	1:5,1.1	5 εστιν αυτη T	0.67
8.1	1:5,2.1	Γἀγγελια	1
9.1	1:5,3.1	⁵ ἐν αὐτω οὐκ εστιν [™]	1
10.1	1:7,1.1	°δε	1
11.1	1:7,2.1	「ἀλληλων	1
12.1	1:7,3.1	Ίησου του υιου αὐτου	0.67
13.1	1:7,4.1	^Γ καθαριζει	1
14.1	1:8,1.1	⊤ ομιτ	1
15.1	1:8,2.1	⁵ οὐκ εστιν ἐν ημιν [™]	0.67
16.1	1:9,1.1	⊤ ομιτ	0.67
17.1	1:9,2.1	Γκαθαριση	0.67
18.1	1:10,1.1	Γημαρτηκαμεν	1
19.1	1:10,2.1	⁵ οὐκ εστιν ἐν ημιν [™]	1
20.1	2:1,1.1	Γαμαρτητε	1
21.1	2:2,1.1	Γμονον	1
22.1	2:3,1.1	「τηρωμεν	1
23.1	2:4,1.1	οστι	0.67
24.1	2:4,2.1	′και ἐν τουτω	0.67
25.1	2:4,3.1	'η ἀληθεια	1
26.1	2:5,1.1	ਂ ἀληθως	1
27.1	2:5,2.1	⊤ ομιτ	1
28.1	2:6,1.1	ουτως	0.67
29.1	2:7,1.1	Γ'Αγαπητοι	0.67
30.1	2:7,2.1	⊤ ομιτ	0.67
31.1	2:8,1.1	΄ἀληθες ἐν αὐτω	1
32.1	2:8,2.1	Γυμιν	1
33.1	2:8,3.1	^F σκοτια	1
34.1	2:9,1.1	⊤ ομιτ	1
35.1	2:10,1.1	⁵ ἐν αὐτω οὐκ εστιν [™]	1
36.1	2:11,1.1	Γἐστιν	1
37.1	2:12,1.1	「τεκνια	1
38.1	2:12,2.1	^г սμιν	1

39.1	2:13,1.1	Γτον	1
40.1	2:14,1.1	Γεγραψα	1
41.1	2:14,2.1	^F τον	1
42.1	2:14,3.1	□του θεου	0.67
43.1	2:15,1.1	οτω	1
44.1	2:15,2.1	「πατρος	0.67
45.1	2:17,1.1	ο αύτου	0.67
46.1	2:17,2.1	′του θεου	1
47.1	2:17,3.1	Τ ομιτ	1
48.3	2:18,1.3	οτι ὁ	0.67
49.1	2:19,1.1	⁵ έξ ημων ησαν [™]	0.67
50.1	2:19,2.1	「φανερωθωσιν	1
51.1	2:19,3.1	'εἰσιν παντες	1
52.3	2:20,1.3	κ. οιδ. παντα	0.67
53.1	2:21,1.1	οπαν	1
54.1	2:23,1.1	ο ομολογων τον υιον και τον πατερα εχει	1
55.1	2:24,1.1	⊤ ομιτ	1
56.1	2:24,2.1	ύιω και έν τω πατρι	1
57.1	2:25,1.1	「ημιν	1
58.1	2:26,1.1	⊤ ομιτ	1
59.1	2:27,1.1	「χρισμα	1
60.1	2:27,2.1	΄μενει ἐν υμιν	1
61.1	2:27,3.1	'ἀλλ' ως	1
62.1	2:27,4.1	'αὐτου χρισμα	1
63.1	2:27,5.1	°και	1
64.1	2:27,6.1	Γμενετε	1
65.1	2:28,1.1	'Λαι νυν τεκνια μενετε ἐν αὐτω	1
66.1	2:28,2.1	Γέαν	0.67
67.1	2:28,3.1	^Γ σχωμεν	0.67
68.1	2:28,4.1	$^{\it s}$ άπ' αὐτου $\dot{\epsilon}$ ν τη παρουσια αὐτου $^{\rm T}$	1
69.2	2:29,1.2	ο ομιτ	1
70.2	3:1,1.2	€δ— ημ—	0.67
71.1	3:1,2.1	□και ἐσμεν	0.67
72.1	3:1,3.1	「ημας	1
73.1	3:2,1.1	τ ομιτ	0.67
74.1	3:5,1.1	Γοιδατε	1
75.1	3:5,2.1	Τ ομιτ	0.67
76.1	3:7,1.1	ΓΥεκνια	0.67
77.1	3:7,2.1	Γμηδεις	1

78.1	3:8,1.1	٥	1
79.1	3:10,1.1	΄ποιων δικαιοσυνην	1
80.1	3:11,1.1	Γάγγελια	0.67
81.2	3:13,1.2	ο ομιτ	0.67
82.1	3:13,2.1	Τ ομιτ	0.67
83.1	3:14,1.1	τ ομιτ	1
84.1	3:14,2.1	т оµіт	1
85.1	3:15,1.1	Γαύτου	1
86.1	3:15,2.1	^Γ αὐτω	0.67
87.1	3:16,1.1	「υπερ	1
88.1	3:16,2.1	^Γ θειναι	0.67
89.1	3:17,1.1	Γεχη	1
90.1	3:17,2.1	^F θεωρη	0.67
91.1	3:17,3.1	Γκλειση	1
92.1	3:17,4.1	Γμενει	1
93.1	3:18,1.1	⊤ ομιτ	0.67
94.1	3:18,2.1	΄μηδε τη	1
95.1	3:19,1.1	'Λαι ἐν τουτω	0.67
96.1	3:19,2.1	Γγνωσομεθα	0.67
97.1	3:19,3.1	'πεισομεν την καρδιαν	0.67
98.1	3:20,1.1	⊤ ομιτ	1
99.1	3:20,2.1	°οτι	0.67
100.1	3:21,1.1	Γ'Αγαπητοι	1
101.2	3:21,2.2	[•] —	0.67
102.2	3:21,3.2	ημων	0.67
103.1	3:21,4.1	Γεχομεν	0.67
104.1	3:22,1.1	Γἀπ'	0.67
105.1	3:22,2.1	^Γ τηρουμε <i>ν</i>	1
106.1	3:23,1.1	「πιστευσωμεν	0.67
107.1	3:23,2.1	′τω ὀνοματι	1
108.1	3:23,3.1	□του υιου	1
109.1	3:23,4.1	°ημιν	1
110.1	3:24,1.1	5 ημιν ϵ δωκ ϵ ν †	1
111.1	4:1,1.1	′τα πνευματα	1
112.1	4:2,1.1	「γινωσκετε	1
113.1	4:2,2.1	$^{\mathfrak{s}}$ Ίησουν X ριστον T	1
114.1	4:2,3.1	Γέληλυθοτα	1
115.1	4:3,1.1	΄μη ομολογει	1
116.1	4:3,2.1	'τον Ίησουν	1

117.1	4:3,3.1	τ ομιτ	0.67
118.1	4:3,4.1	°є́к	1
119.1	4:3,5.1	٥	1
120.1	4:6,1.1	□ος οὐκ εστιν ἐκ του θεου οὐκ ἀκουει ημων	1
121.1	4:6,2.1	΄έκ τουτου	1
122.1	4:7,1.1	τ ομιτ	1
123.1	4:8,1.1	΄οὐκ εγνω τον θεον	0.67
124.1	4:10,1.1	τ ομιτ	1
125.2	4:10,2.2	—σαμεν	0.67
126.1	4:10,3.1	^Γ αύτος	1
127.1	4:10,4.1	Γάπεστειλεν	1
128.1	4:12,1.1	΄ἐν ημιν τετελειωμενη ἐστιν	1
129.1	4:13,1.1	「δεδωκεν	0.67
130.1	4:14,1.1	「τεθεαμεθα	0.67
131.1	4:15,1.1	΄ἐαν ομολογηση	0.67
132.1	4:15,2.1	τ ομιτ	1
133.1	4:15,3.1	΄τω θεω	1
134.1	4:16,1.1	Γπεπιστευκαμεν	0.67
135.1	4:16,2.1	ομενει	0.67
136.1	4:17,1.1	Γημερα	1
137.1	4:17,2.1	τ ομιτ	1
138.1	4:17,3.1	Fέστιν	1
139.1	4:17,4.1	Γέσμεν	1
140.1	4:19,1.1	⊤ ομιτ	0.67
141.1	4:19,2.1	т оµіт	1
142.1	4:19,3.1	'αὐτος πρωτος	0.67
143.1	4:20,1.1	Γοὐ	0.67
144.1	4:21,1.1	'ἀπ' αὐτου	1
145.1	5:1,1.1	′και τον	0.67
146.1	5:2,1.1	「ποιωμεν	1
147.1	5:4,1.1	「ημων	1
148.1	5:5,1.1	΄δ∈ ἐστιν	1
149.1	5:6,1.1	Γαιματος	1
150.1	5:6,2.1	^г μονον	1
151.1	5:6,3.1	΄υδατι και ἐν τω αιματι	1
152.1	5:6,4.1	'το πνευμα	1
153.1	5:7,1.1	ſ	1
154.1	5:9,1.1	Γοτι	0.67
155.1	5:9,2.1	τ ομιτ	1

156.1	5:10,1.1	⊤ ομιτ	0.67
157.1	5:10,2.1	Γεαυτω	0.67
158.1	5:10,3.1	′τω θεω	1
159.1	5:10,4.1	ήν μεμαρτυρηκεν ο θεος	1
160.1	5:11,1.1	΄ημιν ο θεος	0.67
161.2	5:13,1.2	toig pistenongin fig to on, ton hi, ton θ .	0.33
162.1	5:13,2.1	′τοις πιστευουσιν	0.67
163.1	5:14,1.1	Γεχομεν	1
164.1	5:14,2.1	′οτι ἐαν τι	1
165.1	5:14,3.1	^Γ θελημα	1
166.1	5:15,1.1	「ήτηκαμεν	1
167.1	5:15,2.1	िंदंπ'	0.67
168.1	5:16,1.1	τοις αμαρτανουσιν	1
169.1	5:17,1.1	Γοὐ	1
170.1	5:18,1.1	΄ο γεννηθεις ἐκ	1
171.1	5:18,2.1	「αὐτον	0.67
172.2	5:20,1.2	και οιδ.	1
173.1	5:20,2.1	⊤ ομιτ	1
174.1	5:20,3.1	「δεδωκεν	0.67
175.1	5:20,4.1	^г γινωσκωμεν	0.67
176.1	5:20,5.1	΅ ομιτ	0.67
177.1	5:20,6.1	ζωη αίωνιος	0.67
178.1	5:21,1.1	Γεαυτα	0.67
179.1	5:21,2.1	⊤ ομιτ	1

Appendix E

List of the Places the Lachmann-10 Text

Differs from the NA-27 Text

for the First Epistle of John

Ref.		NA-27 Reading		Lochmann Reading	Prob.
1:4,3.2	Replace NA-27 =>	^Γ ημων	with =>	υμων	[0.67]
2:18,1.3	Replace NA-27 =>	Γοτι	with =>	οτι δ	[0.67]
2:20,1.3	Replace NA-27 =>	′και οιδατε παντες	with =>	κ. οιδ. παντα	[0.67]
2:29,1.2	Omit NA-27 =>	∘και			[1.00]
3:1,1.2	Replace NA-27 =>	΄δεδωκεν ημιν	with =>	<i>εδ</i> — ημ—	[0.67]
3:13,1.2	Omit NA-27 =>	∘Λαι			[0.67]
3:21,2.2	Replace NA-27 =>	^F ημων	with =>	° —	[0.67]
3:21,3.2	At NA-27 =>	⊤ ομιτ	insert =>	ημων	[0.67]
4:10,2.2	Replace NA-27 =>	「ἠγαπηκαμεν	with =>	<i>—</i> σαμεν	[0.67]
5:13,1.2	At NA-27 =>	⊤ ομιτ	insert =>	τοις πιστευουσιν εις το ον. του υι. του θ .	[0.33]
5:20,1.2	Replace NA-27 =>	′οιδαμεν δε	with =>	και οιδ.	[1.00]

Appendix F

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

This appendix lists the place in the genealogical history of the text of the Book of First John 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:

23.2	2.412	Ex-145#	ομιτ
43.4	4.4,1.4	$L\Lambda^{-1}+J\pi$	oper

- 23.2 refers to the second variant at variation unit 23.
- (1) 2:4,1.2 is the reference where this place of variation occurs: chapter 2, verse 4, the first place of variation in this verse, the second variant there.
- (2) This variant was initiated in Exemplar Ex-145#.
- (3) The variant reads: $o\mu\iota\tau$ (omit)
- (4) 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-145#) unless otherwise altered in one of its subsequent branches.

The following line means:

101.3	3:21,2.3	1505*	υμων
-------	----------	-------	------

- (1) 101.3 refers to the third variant at variation unit 101.
- (2) 3:21,2.3 is the reference where this place of variation occurs: chapter 3, verse 21, the second place of variation in this verse, the third variant there.
- (3) This variant was initiated in terminal witness MS 1505*
- (4) The variant reads: υμων (you)

Since the variant was initiated in a terminal witness, it is a singularity with no inheritance.

The following line means:

3.2	1:3,2.2	Ex-155\$	ο ομιτ
-----	---------	----------	--------

- (1) 3.2 refers to the second variant at variation unit 3.
- (2) 1:3,2.2 is the reference where this place of variation occurs: chapter 1, verse 3, the second place of variation in this verse, the second variant there.
- (3) This variant was initiated in exemplar Ex-155\$, a virtual exemplar, a source of mixture.
- (4) The variant reads: $o\mu\iota\tau$ (omit).

VarUnit	Reference	Source	Reading
1.2	1:2,1.2	Ex-141	Ö
2.2	1:3,1.2	Ex-145#	ο ομιτ
3.2	1:3,2.2	Ex-155\$	ο ομιτ
4.2	1:4,1.2	Ex-159\$	υμιν
5.2	1:4,2.2	Ex-155\$	γαυδεατισ ετ
6.1	1:4,3.1	Ex-159\$	^F ημων
7.2	1:5,1.2	Ex-147#	2 1
8.2	1:5,2.2	Ex-156\$	επαγγελια
8.3	1:5,2.3	Ex-157\$	αγαπη της επαγγελιας
9.2	1:5,3.2	Ex-155\$	3 4 1 2
10.2	1:7,1.2	Ex-155\$	ο ομιτ
11.2	1:7,2.2	Ex-155\$	αυτου
12.2	1:7,3.2	Ex-156\$	2-4
12.3	1:7,3.3	Ex-147#	Ι. Χριστου τ. υι. αυτ.
12.4	1:7,3.4	Cass^a%	Ι. Χριστου
13.2	1:7,4.2	Ex-155\$	καθαριει
14.2	1:8,1.2	Ex-140	του θεου
15.2	1:8,2.2	Ex-159\$	3 4 1 2
16.2	1:9,1.2	Ex-159\$	ημων
17.2	1:9,2.2	Ex-147#	—σει
18.2	1:10,1.2	Ex-155\$	ημαρτομεν
19.2	1:10,2.2	Ex-155\$	3 4 1 2
20.2	2:1,1.2	Ex-140	—τανητ ∈
21.2	2:2,1.2	Ex-155\$	μονων
22.2	2:3,1.2	Ex-155\$	τηρησωμεν
22.3	2:3,1.3	01*	φυλαξωμεν
23.2	2:4,1.2	Ex-145#	ο ομιτ
24.2	2:4,2.2	Ex-156\$	1
24.3	2:4,2.3	Ex-159\$	2 3
25.2	2:4,3.2	Ex-155\$	2
25.3	2:4,3.3	Ex-156\$	η αληθεια του θεου
26.2	2:5,1.2	Ex-123	ο ομιτ
27.2	2:5,2.2	Ex-155\$	εαν εις αυτον τελειωθωμεν
28.2	2:6,1.2	Ex-159\$	ο ομιτ
29.2	2:7,1.2	Ex-145#	αδελφοι
30.2	2:7,2.2	Ex-145#	απ' αρχης
31.2	2:8,1.2	Ex-143	2 3 1
31.3	2:8,1.3	Ex-155\$	αλ. και εν αυτω
32.2	2:8,2.2	Ex-155\$	ημιν
33.2	2:8,3.2	Ex-143	σκια
34.2	2:9,1.2	Ex-155\$	ψευστης εστιν και
35.2	2:10,1.2	Ex-155\$	3 4 1 2

36.2	2:11,1.2	Ex-155\$	μενει			
37.2	2:12,1.2	630	τ. μου			
37.3	2:12,1.3	Ex-155\$	παιδια			
38.2	2:12,2.2	Ex-155\$	υμων			
39.2	2:13,1.2	Ex-155\$	το			
40.2	2:14,1.2	Ex-156\$	γραφω			
41.2	2:14,2.2	Ex-155\$	το			
42.2	2:14,3.2	Ex-153#	□ ομιτ			
43.2	2:15,1.2	Ex-155\$	∘ ομιτ			
44.2	2:15,2.2	Ex-159\$	θεου			
44.3	2:15,2.3	Ex-156\$	θεου και πατρ.			
45.2	2:17,1.2	Ex-159\$	ο ομιτ			
46.2	2:17,2.2	1827	αυτου			
47.2	2:17,3.2	Ex-155\$	θυομοδο [ετ ιπσε μανετ ιν αετερνυμ			
48.1	2:18,1.1	Ex-153#	Γοτι			
48.2	2:18,1.2	Ex-155\$	δ			
49.2	2:19,1.2	Ex-159\$	3 1 2			
50.2	2:19,2.2	Ex-156\$	—ρωθη			
51.2	2:19,3.2	Ex-156\$	1			
51.3	2:19,3.3	Ex-148	ησαν			
52.1	2:20,1.1	Ex-155\$	'και οιδατε παντες			
52.2	2:20,1.2	Ex-153#	2 3			
53.2	2:21,1.2	Ex-155\$	∘ ομιτ			
54.2	2:23,1.2	Ex-155\$	□ ομιτ			
55.2	2:24,1.2	Ex-155\$	ουν			
56.2	2:24,2.2	Ex-156\$	1 2 4 5			
56.3	2:24,2.3	Ex-157\$	5 2-4 1			
56.4	2:24,2.4	Ex-158\$	υιω και εν τω πνευματι			
57.2	2:25,1.2	Ex-155\$	υμιν			
58.2	2:26,1.2	Ex-155\$	δε			
59.2	2:27,1.2	Ex-155\$	χαρισμα			
60.2	2:27,2.2	Ex-156\$	μενετω εν υμ—			
60.3	2:27,2.3	A*	μενει εν ημ—			
61.2	2:27,3.2	Ex-155\$	αλλα			
62.2	2:27,4.2	Ex-156\$	αυτο χρ.			
62.3	2:27,4.3	Ex-157\$	αυτου χαρισμα			
62.4	2:27,4.4	Ex-149	αυτου πνευμα			
63.2	2:27,5.2	Ex-143	∘ ομιτ			
64.2	2:27,6.2	Ex-155\$	—νεἷτε			
65.2	2:28,1.2	Ex-155\$	_			
65.3	2:28,1.3	81*	1-4			
66.2	2:28,2.2	Ex-145#	οταν			
67.2	2:28,3.2	Ex-145#	εχωμεν			

68.2	2:28,4.2	Ex-155\$	3-6 1 2			
69.1	2:29,1.1	Ex-155\$	°και			
70.1	3:1,1.1	Ex-159\$	(δεδωκεν ημιν			
70.3	3:1,1.3	Ex-155\$	<i>ε</i> δ— υμ—			
70.4	3:1,1.4	Ex-156\$	δεδ— υμ—			
70.5	3:1,1.5	1241*	δεδ—			
71.2	3:1,2.2	Ex-145#	ομιτ			
72.2	3:1,3.2	Ex-155\$	υμας			
73.2	3:2,1.2	Ex-145#	δε			
74.2	3:5,1.2	Ex-155\$	οιδαμεν			
75.2	3:5,2.2	Ex-159\$	ημων			
76.2	3:7,1.2	Ex-147#	παιδια			
77.2	3:7,2.2	Ex-143	μη τις			
78.2	3:8,1.2	Ex-155\$	ο δε			
78.3	3:8,1.3	Ex-128	και ο			
79.2	3:10,1.2	Ex-156\$	π. την δικ.			
79.3	3:10,1.3	Ex-157\$	ων δικαιος			
80.2	3:11,1.2	Ex-153#	επαγγελια			
81.1	3:13,1.1	Ex-153#	∘Λαι			
82.2	3:13,2.2	Ex-159\$	μου			
83.2	3:14,1.2	Ex-155\$	ημων			
84.2	3:14,2.2	Ex-155\$	τον αδελφον			
84.3	3:14,2.3	Ex-156\$	τον αδ. αυτου			
85.2	3:15,1.2	Ex-141	Ε αυτου			
86.2	3:15,2.2	Ex-159\$	€αυ—			
87.2	3:16,1.2	Ex-155\$	περι			
88.2	3:16,2.2	Ex-145#	τιθεναι			
88.3	3:16,2.3	Ex-128	_			
89.2	3:17,1.2	Ex-156\$	εχει			
90.2	3:17,2.2	Ex-145#	θεωρει			
91.2	3:17,3.2	Ex-156\$	κλεισει			
92.2	3:17,4.2	Ex-155\$	μενεῖ			
93.2	3:18,1.2	Ex-145#	μου			
94.2	3:18,2.2	Ex-156\$	1			
94.3	3:18,2.3	Ex-157\$	και			
95.2	3:19,1.2	Ex-159\$	^e 2 3			
95.3	3:19,1.3	Ex-156\$	και εκ τουτου			
96.2	3:19,2.2	Ex-145#	γινωσκομεν			
97.2	3:19,3.2	Ex-155\$	—σωμεν την —διαν			
97.3	3:19,3.3	Ex-156\$	—σωμεν τας —διας			
97.4	3:19,3.4	Ex-159\$	—σομεν τας —διας			
98.2	3:20,1.2	Ex-155\$	μη			
99.2	3:20,2.2	Ex-159\$	ο ομιτ			

100.2	3:21,1.2	Ex-155\$	αδελφοι
101.1	3:21,2.1	Ex-159\$	^Γ ημων
101.3	3:21,2.3	1505*	υμων
102.1	3:21,3.1	Ex-159\$	΄ ομιτ
102.3	3:21,3.3	Ex-155\$	υμων
103.2	3:21,4.2	Ex-153#	έχει
103.3	3:21,4.3	Ex-156\$	εχωμεν
104.2	3:22,1.2	Ex-145#	παρ'
105.2	3:22,2.2	Ex-155\$	—ρωμεν
106.2	3:23,1.2	Ex-147#	—€υωμ€ <i>ν</i>
107.2	3:23,2.2	Ex-156\$	εν τω —ματι
107.3	3:23,2.3	Ex-133	εις το —μα
107.4	3:23,2.4	Ex-139	_
108.2	3:23,3.2	Ex-155\$	□ ομιτ
109.2	3:23,4.2	Ex-156\$	∘ ομιτ
110.2	3:24,1.2	Ex-155\$	2 1
111.2	4:1,1.2	Ex-129	παντα τα πν.
111.3	4:1,1.3	Ex-128	παν πνευμα
112.2	4:2,1.2	Ex-156\$	—κεται
112.3	4:2,1.3	630	—κομε <i>ν</i>
113.2	4:2,2.2	Ex-155\$	2 1
114.2	4:2,3.2	Ex-141	—θεναι
115.2	4:3,1.2	Ex-155\$	λυει
116.3	4:3,2.3	Ex-155\$	τον Ι. Χριστον
116.4	4:3,2.4	1846	τον Χρ.
116.5	4:3,2.5	Ex-156\$	I.
117.2	4:3,3.2	Ex-159\$	εν σαρκι εληλυθοτα
118.2	4:3,4.2	Ex-136	ο ομιτ
119.2	4:3,5.2	Ex-155\$	οτι
119.3	4:3,5.3	Ex-156\$	οὖ
120.2	4:6,1.2	Ex-155\$	ομιτ
121.2	4:6,2.2	Ex-156\$	εν τουτω
122.2	4:7,1.2	Ex-143	τον θεον
123.2	4:8,1.2	Ex-147#	ου γινωσκει τον θ.
123.3	4:8,1.3	Ex-156\$	ουκ εγνωκεν τον θ.
123.4	4:8,1.4	Ex-157\$	ουκ εγνωκεν
124.2	4:10,1.2	Ex-155\$	του θεου
125.1	4:10,2.1	Ex-159\$	「ήγαπηκαμεν
126.2	4:10,3.2	Ex-143	ΕΚΕ Ιν Ο ζ
127.2	4:10,4.2	Ex-155\$	απεσταλκεν
128.2	4:12,1.2	Ex-141	^a 3 1 2 4
128.3	4:12,1.3	Ex-156\$	3 4 1 2
128.4	4:12,1.4	1241*	3 4

129.2 4:13,1.2 Ex-147# εδωκεν 130.2 4:14,1.2 Ex-147# εθεασαμεθα 131.2 4:15,1.2 Ex-159\$ αν ομολογη 131.3 4:15,1.3 Ex-128 ομολογησει				
131.2 4:15,1.2 Ex-159\$ αν ομολογη 131.3 4:15,1.3 Ex-128 ομολογησει				
131.3 4:15,1.3 Ex-128 ομολογησει				
132.2 4:15,2.2 Ex-155\$ Χριστος				
133.2 4:15,3.2 Ex-156\$ αυτω				
133.3 4:15,3.3 Ρ^9% αυτω εστιν				
134.2 4:16,1.2 Ex-159\$ πιστευομεν				
135.2 4:16,2.2 Ex-159\$ ° ομιτ				
136.2 4:17,1.2 Ex-155\$ αγαπη				
137.2 4:17,2.2 Ex-155\$ προς τον ενανθρωπησαντα	προς τον ενανθρωπησαντα			
138.2 4:17,3.2 2138 ην εν τω κοσμω αμωμος και καθαρος, ουτως				
139.2 4:17,4.2 Ex-155\$ εσομεθα				
140.2 4:19,1.2 Ex-159\$ ουν				
141.2 4:19,2.2 Ex-155\$ τον θεον				
141.3 4:19,2.3 Ex-156\$ αυτον				
142.2 4:19,3.2 Ex-159\$ ο θεος πρωτος				
142.3 4:19,3.3 Ex-156\$ ο θεος πρωτον				
143.2 4:20,1.2 Ex-159\$ πως				
144.2 4:21,1.2 Ex-155\$ απο του θεου				
145.2 5:1,1.2 Ex-159\$ [°] τον				
145.3 5:1,1.3 Ex-156\$ και το				
146.2 5:2,1.2 Εx-156\$ τηρωμεν				
147.2 5:4,1.2 Ex-159\$ υμων				
148.2 5:5,1.2 Ex-141 ° 2 1				
148.3 5:5,1.3 Ex-155\$ 2				
149.2 5:6,1.2 Ex-155\$ πνευματος				
149.3 5:6,1.3 Ex-156\$ αιμ. και πν.				
149.4 5:6,1.4 Ex-157\$ πν. και αιμ.				
150.2 5:6,2.2 Ex-155\$ μονω				
151.2 5:6,3.2 Ex-155\$ 5 2-4 1				
151.3 5:6,3.3 Ex-143 υδ. κ. εν τω πνευματι				
151.4 5:6,3.4 424^c αιμ. κ. εν τω πνευμ.				
151.5 5:6,3.5 Εχ-156\$ αιμ. κ. εν τω υδ. κ. πνευμ.				
152.2 5:6,4.2 Ex-155\$ χριστος				
153.2 $Ex-155$ \$ $Ex-155$	εν τω ουρανω, ο πατηρ, ο λογος και το αγιον πνευμα, και ουτοι οι τρεις $\tilde{\epsilon}$ ν εισιν. 8 και τρεις εισιν οι μαρτυρουντες εν τη γη, το πν. κ. το υδ. κ. το			
153.3 5:7,1.3 Εχ-159\$ $\frac{1}{6}$ εχυντ το χαελο, πατερ, ερβύμ ετ σπιριτύσ, ετ ηι τρέσ υνύμ συντ				
154.2 5:9,1.2 Ex-145# η ν				
	θυεμ μισιτ σαλατορεμ συπερ τερραμ, ετ φιλιυσ τεστιμονιυμ περηιβυιτ ιν τερρα σχριπτυρασ περφιχιενσ, ετ νοσ τεστιμονιυμ περηιβεμυσ θυονιαμ'ιδἷ			
156.2 5:10,1.2 Ex-159\$ του θεου				

1.55.0	- 10 a a	- 445"	<u> </u>			
157.2	5:10,2.2	Ex-147#	[*] αυτω			
158.2	5:10,3.2	Ex-156\$	τω υιω			
158.3	5:10,3.3	Ex-157\$	τω υιω του θεου			
158.4	5:10,3.4	Spec%	Ιεσυ Χηριστο			
158.5	5:10,3.5	vg^b	_			
159.2	5:10,4.2	Ex-155\$	1 2			
159.3	5:10,4.3	048%	_			
160.2	5:11,1.2	Ex-153#	^a 2 3 1			
160.3	5:11,1.3	1241*	υμ— ο θ.			
161.1	5:13,1.1	Ex-153#	⊤ ομιτ			
161.3	5:13,1.3	Ex-159\$	οι πιστευοντες			
162.2	5:13,2.2	Ex-145#	αι ινα πιστευητε			
163.2	5:14,1.2	Ex-155\$	εχωμεν			
164.2	5:14,2.2	Ex-155\$	οτι ο αν			
164.3	5:14,2.3	Ex-156\$	οτι αν			
165.2	5:14,3.2	Ex-143	ονομα			
166.2	5:15,1.2	Ex-155\$	<i>−</i> σαμεν			
167.2	5:15,2.2	Ex-145#	παρ'			
167.3	5:15,2.3	2464*	_			
168.2	5:16,1.2	Ex-155\$	τω —τανοντι			
168.3	5:16,1.3	Ex-143	τοις μη —τανουσιν αμαρτιαν			
169.2	5:17,1.2	Ex-156\$	_			
169.3	5:17,1.3	Ex-159\$	μη			
170.2	5:18,1.2	33*	εγεννηθη· ο δε γεννηθεις εκ			
170.3	5:18,1.3	Ex-156\$	η γεννησις			
170.4	5:18,1.4	Ex-157\$	ο γεγεννημενος εκ			
171.2	5:18,2.2	Ex-147#	εαυτον			
172.1	5:20,1.1	Ex-155\$	′οιδαμεν δε			
172.3	5:20,1.3	Ex-157\$	οιδ.			
173.2	5:20,2.2	Ex-155\$	ετ χαρνεμ ινδυιτ νοστρι χαυσα ετ πασσυσ εστ ετ ρεσυρρεξιτ α μορτυισ αδ συμπσιτ νοσ			
174.2	5:20,3.2	Ex-159\$	εδωκεν			
175.2	5:20,4.2	Ex-159\$	—κομεν			
176.2	5:20,5.2	Ex-159\$	$\theta \epsilon o \nu$			
177.2	5:20,6.2	Ex-159\$	η ζ. η αι.			
177.3	5:20,6.3	Ex-128	ζωην αιωνιον παρεχων			
178.2	5:21,1.2	Ex-147#	<i>ε</i> αυτους			
179.2	5:21,2.2	Ex-155\$	αμην			

Appendix G

Places Where the Non-Autographic Variants Were Initiated
in the Textual History of First John
Arranged in Order by Witness

List of Places Where Non-Autographic Variants Were Initiated in the Genealogical History, Arranged in Order by Witness Total = 278

		10	tal = 278
Witness	Place of Variation	Reference	Variant Reading
P^9%	133.3	4:15,3.3	αυτω εστιν
Total for P^9% = 1			
01*	22.3	2:3,1.3	φυλαξωμεν
01*	48.1	2:18,1.1	Γοτι
01*	67.2	2:28,3.2	εχωμεν
01*	81.1	3:13,1.1	οΛαι
01*	112.3	4:2,1.3	—коμεν
01*	116.2	4:3,2.2	Ι. κυριον
01*	128.2	4:12,1.2	[°] 3 1 2 4
01*	161.1	5:13,1.1	⊤ ομιτ
Total for $01* = 8$			
01^1	116.2	4:3,2.2	Ι. κυριον
01^1	128.2	4:12,1.2	² 3 1 2 4
Total for $01^1 = 2$			
01^2	116.2	4:3,2.2	Ι. κυριον
01^2	128.2	4:12,1.2	² 3 1 2 4
Total for $01^2 = 2$			
A*	60.3	2:27,2.3	μενει εν ημ—
Total for $A^* = 1$			
C*%	48.1	2:18,1.1	Γοτι
Total for $C^*\% = 1$			
GACC!	40.4	2.10.1.1	[
C^3%	48.1	2:18,1.1	TOTL
C^3%	79.2	3:10,1.2	π. την δικ.
C^3%	81.1	3:13,1.1	οΛαι
C^3%	102.1	3:21,3.1	⊤ ομιτ
Total for $C^3\% = 4$			
P025*%	48.1	2:18,1.1	Γοτι
Total for $P025*\% = 1$	10.1	2.10,1.1	
10tt 10t 1023 /0 = 1	L	l .	

		<u> </u>	
48%	159.3	5:10,4.3	
Total for 048% = 1	139.3	3.10,4.3	
10tal 101 04870 = 1			
245%	106.2	3:23,1.2	—€υωμ€ν
Total for $0245\% = 1$	100.2	3.23,1.2	Cooper
10tai 101 024370 = 1			
33*	170.2	5:18,1.2	εγεννηθη· ο δε γεννηθεις εκ
Total for $33* = 1$	17012	0.10,1.2	1 1 1 1 2
100010133			
81*	65.3	2:28,1.3	1-4
Total for 81* = 1		,	
424^c	151.4	5:6,3.4	αιμ. κ. εν τω πνευμ.
Total for $424^c = 1$			
630	37.2	2:12,1.2	τ. μου
630	112.3	4:2,1.3	—коµєν
Total for $630 = 2$			
1241*	70.5	3:1,1.5	$\delta\epsilon\delta$ —
1241*	128.4	4:12,1.4	3 4
1241*	160.3	5:11,1.3	υμ— ο θ.
Total for $1241* = 3$			
1505*	101.3	3:21,2.3	υμων
Total for 1505* = 1			
1827	46.2	2:17,2.2	αυτου
Total for 1827 = 1			
1846	116.4	4:3,2.4	τον Χρ.
Total for 1846 = 1			
2138	138.2	4:17,3.2	ην εν τω κοσμω αμωμος και καθαρος, ουτως
Total for 2138 = 1			
2464*	167.3	5:15,2.3	-
Total for 2464* = 1			

vg^b	158.5	5:10,3.5	_
Total for $vg^b = 1$,	
Cass^a%	12.4	1:7,3.4	Ι. Χριστου
Total for Cass^a% = 1			
Did^a%	49.2	2:19,1.2	3 1 2
Did^a%	88.1	3:16,2.1	^Γ θειναι
Total for Did^a% = 2			
Did^b%	49.2	2:19,1.2	3 1 2
Did^b%	88.1	3:16,2.1	^τ θειναι
Did^b%	102.1	3:21,3.1	⊤ ομιτ
Total for Did^b% = 3			
Irlat^a%	49.2	2:19,1.2	3 1 2
Total for Irlat^a% = 1			
Or^a%	48.1	2:18,1.1	Γοτι
Or^a%	101.2	3:21,2.2	° —
Or^a%	102.1	3:21,3.1	⊤ ομιτ
Or^a%	116.1	4:3,2.1	'τον Ίησουν
Total for Or^a% = 4			
Or^b%	48.1	2:18,1.1	Γοτι
Or^b%	102.1	3:21,3.1	⊤ ομιτ
Total for Or^b% = 2			
Spec%	158.4	5:10,3.4	Ιεσυ Χηριστο
Total for Spec% = 1			
Ex-123	26.2	2:5,1.2	° оµιτ
Total for $Ex-123 = 1$			
Ex-128	78.3	3:8,1.3	και ο
Ex-128	88.3	3:16,2.3	_
Ex-128	111.3	4:1,1.3	παν πνευμα
Ex-128	131.3	4:15,1.3	ομολογησει

Ex-128	177.3	5:20,6.3	ζωην αιωνιον παρεχων
Total for Ex-128 = 5		,	
Ex-129	111.2	4:1,1.2	παντα τα πν.
Total for Ex-129 = 1			
Ex-133	107.3	3:23,2.3	εις το —μα
Total for $Ex-133 = 1$			
Ex-136	118.2	4:3,4.2	ο ομιτ
Total for Ex-136 = 1			
Ex-139	107.4	3:23,2.4	_
Total for Ex-139 = 1			
Ex-140	14.2	1:8,1.2	του θεου
Ex-140	20.2	2:1,1.2	—τανητ ε
Total for $Ex-140 = 2$			
Ex-141	1.2	1:2,1.2	ő
Ex-141	85.2	3:15,1.2	εαυτου
Ex-141	114.2	4:2,3.2	—θεναι
Ex-141	128.2	4:12,1.2	[°] 3 1 2 4
Ex-141	148.2	5:5,1.2	^a 2 1
Total for $Ex-141 = 5$			
Ex-143	31.2	2:8,1.2	2 3 1
Ex-143	33.2	2:8,3.2	σκια
Ex-143	63.2	2:27,5.2	ο ομιτ
Ex-143	77.2	3:7,2.2	μη τις
Ex-143	122.2	4:7,1.2	τον θεον
Ex-143	126.2	4:10,3.2	ΕΚΕΙ ν Ο ζ
Ex-143	151.3	5:6,3.3	υδ. κ. εν τω πνευματι
Ex-143	165.2	5:14,3.2	ονομα
Ex-143	168.3	5:16,1.3	τοις μη —τανουσιν αμαρτιαν
Total for $Ex-143 = 9$			
Ex-145#	2.2	1:3,1.2	ο ομιτ
Ex-145#	23.2	2:4,1.2	ο ομιτ

Ex-145# 29.2 2:7,1.2 αδελφοι	
Ex-145# 66.2 2:28,2.2 σταν Ex-145# 67.2 2:28,3.2 εχωμεν Ex-145# 71.2 3:1,2.2 □ ομιτ Ex-145# 73.2 3:2,1.2 δε Ex-145# 88.2 3:16,2.2 τιθεναι Ex-145# 90.2 3:17,2.2 θεωρει Ex-145# 93.2 3:18,1.2 μου Ex-145# 96.2 3:19,2.2 γινωσκομεν Ex-145# 104.2 3:22,1.2 παρ' Ex-145# 154.2 5:9,1.2 ἢ ν Ex-145# 162.2 5:13,2.2 αι ινα πιστευητε Ex-145# 167.2 5:15,2.2 παρ' Total for Ex-145# 12.3 1:7,3.3 1. Χριστου τ. υι. αυτ. Ex-147# 17.2 1:9,2.2 — σει Ex-147# 76.2 3:7,1.2 παιδια Ex-147# 106.2 3:23,1.2 — ευωμεν Ex-147# 106.2 3:23,1.2 — ευωμεν Ex-147# 123.2 4:8,1.2 ου γινωσκει τον θ.	
Ex-145# 67.2 2:28,3.2 $\epsilon χωμεν$ Ex-145# 71.2 3:1,2.2 \Box ομιτ Ex-145# 73.2 3:2,1.2 δε Ex-145# 88.2 3:16,2.2 \Box τιθεναι Ex-145# 90.2 3:17,2.2 θεωρει Ex-145# 93.2 3:18,1.2 μου Ex-145# 96.2 3:19,2.2 γινωσκομεν Ex-145# 104.2 3:22,1.2 \Box	
Ex-145# 71.2 3:1,2.2 □ ομιτ	
Ex-145# 73.2 3:2,1.2 δε	
Ex-145# 88.2 3:16,2.2 τιθεναι	
Ex-145# 90.2 3:17,2.2 θεωρεί	
Ex-145# 93.2 3:18,1.2 μου	
Ex-145# 96.2 3:19,2.2 γινωσκομεν	
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	
Ex-145# 154.2 5:9,1.2 η ν Ex-145# 162.2 5:13,2.2 αι ινα πιστευητε Ex-145# 167.2 5:15,2.2 παρ' Total for Ex-145# 7.2 1:5,1.2 2 1 Ex-147# 12.3 1:7,3.3 Ι. Χριστου τ. υι. αυτ. Ex-147# 17.2 1:9,2.2 — σει Ex-147# 76.2 3:7,1.2 παιδια Ex-147# 106.2 3:23,1.2 — ευωμεν Ex-147# 123.2 4:8,1.2 ου γινωσκει τον θ.	
Ex-145# 162.2 5:13,2.2 αι ινα πιστευητε	
Ex-145# 167.2 5:15,2.2 παρ'	
Total for Ex-145# = 16	
Ex-147#	
Ex-147# 12.3 1:7,3.3 I. Χριστου τ. υι. αυτ.	
Ex-147# 12.3 1:7,3.3 I. Χριστου τ. υι. αυτ.	
Ex-147# 17.2 1:9,2.2 — σει Ex-147# 76.2 3:7,1.2 παιδια Ex-147# 106.2 3:23,1.2 — ευωμεν Ex-147# 123.2 4:8,1.2 ου γινωσκει τον θ.	
Ex-147# 76.2 3:7,1.2 παιδια Ex-147# 106.2 3:23,1.2 —€υωμεν Ex-147# 123.2 4:8,1.2 ου γινωσκει τον θ.	
Ex-147# 106.2 3:23,1.2 — ευωμεν Ex-147# 123.2 4:8,1.2 ου γινωσκει τον θ.	
Ex-147# 123.2 4:8,1.2 ου γινωσκει τον θ.	
Ex-147# 129.2 4:13,1.2 εδωκεν	
1	
Εχ-147# 130.2 4:14,1.2 εθεασαμεθα	
Ex-147# 157.2 5:10,2.2 [°] αυτω	
Ex-147# 171.2 5:18,2.2 εαυτον	
Εχ-147# 178.2 5:21,1.2 εαυτους	
Total for Ex-147# = 11	
Ex-148 51.3 2:19,3.3 ησαν	
Total for Ex-148 = 1	
Ex-149 62.4 2:27,4.4 αυτου πνευμα	
Total for Ex-149 = 1	
Ex-153# 42.2 2:14,3.2 [□] ομιτ	
Ex-153# 48.1 2:18,1.1 ^[OTL]	
Ex-153# 52.2 2:20,1.2 2 3	
Ex-153# 80.2 3:11,1.2 επαγγελια	

Ex-153#	81.1	3:13,1.1	°Λαι
Ex-153#	103.2	3:21,4.2	εχει
Ex-153#	160.2	5:11,1.2	² 2 3 1
Ex-153#	161.1	5:13,1.1	⊤ ομιτ
Total for $Ex-153# = 8$			
Ex-155\$	3.2	1:3,2.2	ο ομιτ
Ex-155\$	5.2	1:4,2.2	γαυδεατισ ετ
Ex-155\$	9.2	1:5,3.2	3 4 1 2
Ex-155\$	10.2	1:7,1.2	ο ομιτ
Ex-155\$	11.2	1:7,2.2	αυτου
Ex-155\$	13.2	1:7,4.2	καθαριει
Ex-155\$	18.2	1:10,1.2	ημαρτομεν
Ex-155\$	19.2	1:10,2.2	3 4 1 2
Ex-155\$	21.2	2:2,1.2	μονων
Ex-155\$	22.2	2:3,1.2	τηρησωμεν
Ex-155\$	25.2	2:4,3.2	2
Ex-155\$	27.2	2:5,2.2	εαν εις αυτον τελειωθωμεν
Ex-155\$	31.3	2:8,1.3	αλ. και εν αυτω
Ex-155\$	32.2	2:8,2.2	ημιν
Ex-155\$	34.2	2:9,1.2	ψευστης εστιν και
Ex-155\$	35.2	2:10,1.2	3 4 1 2
Ex-155\$	36.2	2:11,1.2	μενει
Ex-155\$	37.3	2:12,1.3	παιδια
Ex-155\$	38.2	2:12,2.2	υμων
Ex-155\$	39.2	2:13,1.2	то
Ex-155\$	41.2	2:14,2.2	то
Ex-155\$	43.2	2:15,1.2	ο ομιτ
Ex-155\$	47.2	2:17,3.2	θυομοδο [ετ ιπσε μανετ ιν αετερνυμ
Ex-155\$	48.2	2:18,1.2	δ
Ex-155\$	52.1	2:20,1.1	΄και οιδατε παντες
Ex-155\$	53.2	2:21,1.2	ο ομιτ
Ex-155\$	54.2	2:23,1.2	□ ομιτ
Ex-155\$	55.2	2:24,1.2	ουν
Ex-155\$	57.2	2:25,1.2	υμιν
Ex-155\$	58.2	2:26,1.2	δε
Ex-155\$	59.2	2:27,1.2	χαρισμα
Ex-155\$	61.2	2:27,3.2	αλλα
Ex-155\$	64.2	2:27,6.2	—νε ι τε

Ex-155\$	65.2	2:28,1.2	_
Ex-155\$	68.2	2:28,4.2	3-6 1 2
Ex-155\$	69.1	2:29,1.1	°και
Ex-155\$	70.3	3:1,1.3	<i>ε</i> δ— υμ—
Ex-155\$	72.2	3:1,3.2	υμας
Ex-155\$	74.2	3:5,1.2	οιδαμεν
Ex-155\$	78.2	3:8,1.2	ο δε
Ex-155\$	83.2	3:14,1.2	ημων
Ex-155\$	84.2	3:14,2.2	τον αδελφον
Ex-155\$	87.2	3:16,1.2	περι
Ex-155\$	92.2	3:17,4.2	μενεί
Ex-155\$	97.2	3:19,3.2	—σωμεν την —διαν
Ex-155\$	98.2	3:20,1.2	μη
Ex-155\$	100.2	3:21,1.2	αδελφοι
Ex-155\$	102.3	3:21,3.3	υμων
Ex-155\$	105.2	3:22,2.2	—ρωμεν
Ex-155\$	108.2	3:23,3.2	□ ομιτ
Ex-155\$	110.2	3:24,1.2	2 1
Ex-155\$	113.2	4:2,2.2	2 1
Ex-155\$	115.2	4:3,1.2	λυει
Ex-155\$	116.3	4:3,2.3	τον Ι. Χριστον
Ex-155\$	119.2	4:3,5.2	οτι
Ex-155\$	120.2	4:6,1.2	□ ομιτ
Ex-155\$	124.2	4:10,1.2	του θεου
Ex-155\$	127.2	4:10,4.2	απεσταλκεν
Ex-155\$	132.2	4:15,2.2	Χριστος
Ex-155\$	136.2	4:17,1.2	αγαπη
Ex-155\$	137.2	4:17,2.2	προς τον ενανθρωπησαντα
Ex-155\$	139.2	4:17,4.2	εσομεθα
Ex-155\$	141.2	4:19,2.2	τον θεον
Ex-155\$	144.2	4:21,1.2	απο του θεου
Ex-155\$	148.3	5:5,1.3	2
Ex-155\$	149.2	5:6,1.2	πνευματος
Ex-155\$	150.2	5:6,2.2	μονω
Ex-155\$	151.2	5:6,3.2	5 2-4 1
Ex-155\$	152.2	5:6,4.2	χριστος
Ex-155\$	153.2	5:7,1.2	εν τω ουρανω, ο πατηρ, ο λογος και το αγιον πνευμα, και ουτοι οι τρεις $\tilde{\epsilon}$ ν εισιν. 8 και τρεις εισιν οι μα $\hat{\rho}$ τυρουντες ϵ ν τη γη, το πν. κ. το υδ. κ. το αι., κ. οι τρ. εις το $\tilde{\epsilon}$ ν εισιν.

Ex-155\$	155.2	5:9,2.2	θυεμ μισιτ σαλατορεμ συπερ τερραμ, ετ φιλιυσ τεστιμό νιυμ περηιβυιτ ιν τερρα σχριπτυρασ περφιχιενσ, ετ νοσ τεστιμονιυμ περηιβεμυσ θυονιαμ'ιδιμυσ ευμ ετ αδνυν τιαμυσ'οβισ υτ χρεδατισ, ετ ιδεο
Ex-155\$	159.2	5:10,4.2	1 2
Ex-155\$	163.2	5:14,1.2	εχωμεν
Ex-155\$	164.2	5:14,2.2	οτι ο αν
Ex-155\$	166.2	5:15,1.2	—σαμε <i>ν</i>
Ex-155\$	168.2	5:16,1.2	τω —τανοντι
Ex-155\$	172.1	5:20,1.1	'οιδαμεν δε
Ex-155\$	173.2	5:20,2.2	ετ χαρνεμ ινδυιτ νοστρι χαυσα ετ πασσυσ εστ ετ ρεσυρ ρεξιτ α μορτυισ αδσυμπσιτ νοσ
Ex-155\$	179.2	5:21,2.2	αμην
Total for $Ex-155\$ = 79$			
Ex-156\$	8.2	1:5,2.2	ε παγγ ε λια
Ex-156\$	12.2	1:7,3.2	2-4
Ex-156\$	24.2	2:4,2.2	1
Ex-156\$	25.3	2:4,3.3	η αληθεια του θεου
Ex-156\$	40.2	2:14,1.2	γραφω
Ex-156\$	44.3	2:15,2.3	θεου και πατρ.
Ex-156\$	50.2	2:19,2.2	—ρωθη
Ex-156\$	51.2	2:19,3.2	1
Ex-156\$	56.2	2:24,2.2	1 2 4 5
Ex-156\$	60.2	2:27,2.2	μενετω εν υμ
Ex-156\$	62.2	2:27,4.2	αυτο χρ.
Ex-156\$	70.4	3:1,1.4	δεδ— υμ—
Ex-156\$	79.2	3:10,1.2	π. την δικ.
Ex-156\$	84.3	3:14,2.3	τον αδ. αυτου
Ex-156\$	89.2	3:17,1.2	εχει
Ex-156\$	91.2	3:17,3.2	κλεισει
Ex-156\$	94.2	3:18,2.2	1
Ex-156\$	95.3	3:19,1.3	και εκ τουτου
Ex-156\$	97.3	3:19,3.3	—σωμεν τας —διας
Ex-156\$	103.3	3:21,4.3	εχωμεν
Ex-156\$	107.2	3:23,2.2	εν τω —ματι
Ex-156\$	109.2	3:23,4.2	ο ομιτ
Ex-156\$	112.2	4:2,1.2	—κεται
Ex-156\$	116.5	4:3,2.5	I.
Ex-156\$	119.3	4:3,5.3	οῦ
Ex-156\$	121.2	4:6,2.2	εν τουτω

Ex-156\$	123.3	4:8,1.3	ουκ εγνωκεν τον θ.
Ex-156\$	128.3	4:12,1.3	3 4 1 2
Ex-156\$	133.2	4:15,3.2	αυτω
Ex-156\$	141.3	4:19,2.3	αυτον
Ex-156\$	142.3	4:19,3.3	ο θεος πρωτον
Ex-156\$	145.3	5:1,1.3	και το
Ex-156\$	146.2	5:2,1.2	τηρωμεν
Ex-156\$	149.3	5:6,1.3	αιμ. και πν.
Ex-156\$	151.5	5:6,3.5	αιμ. κ. εν τω υδ. κ. πνευμ.
Ex-156\$	158.2	5:10,3.2	τω υιω
Ex-156\$	164.3	5:14,2.3	οτι αν
Ex-156\$	169.2	5:17,1.2	_
Ex-156\$	170.3	5:18,1.3	η γεννησις
Total for Ex-156\$ = 39			
Ex-157\$	8.3	1:5,2.3	αγαπη της επαγγελιας
Ex-157\$	56.3	2:24,2.3	5 2-4 1
Ex-157\$	62.3	2:27,4.3	αυτου χαρισμα
Ex-157\$	79.3	3:10,1.3	ων δικαιος
Ex-157\$	94.3	3:18,2.3	και
Ex-157\$	123.4	4:8,1.4	ουκ εγνωκεν
Ex-157\$	149.4	5:6,1.4	πν. και αιμ.
Ex-157\$	158.3	5:10,3.3	τω υιω του θεου
Ex-157\$	170.4	5:18,1.4	ο γεγεννημενος εκ
Ex-157\$	172.3	5:20,1.3	οιδ.
Total for Ex-157\$ = 10			
Ex-158\$	56.4	2:24,2.4	υιω και εν τω πνευματι
Total for $Ex-158$ \$ = 1			
Ex-159\$	4.2	1:4,1.2	υμιν
Ex-159\$	6.1	1:4,3.1	^Γ ημων
Ex-159\$	15.2	1:8,2.2	3 4 1 2
Ex-159\$	16.2	1:9,1.2	ημων
Ex-159\$	24.3	2:4,2.3	2 3
Ex-159\$	28.2	2:6,1.2	ο ομιτ
Ex-159\$	44.2	2:15,2.2	θεου
Ex-159\$	45.2	2:17,1.2	ο ομιτ
Ex-159\$	49.2	2:19,1.2	3 1 2

Ex-159\$	70.1	3:1,1.1	΄δεδωκεν ημιν
Ex-159\$	75.2	3:5,2.2	ημων
Ex-159\$	82.2	3:13,2.2	μου
Ex-159\$	86.2	3:15,2.2	εαυ—
Ex-159\$	95.2	3:19,1.2	² 2 3
Ex-159\$	97.4	3:19,3.4	—σομεν τας —διας
Ex-159\$	99.2	3:20,2.2	ο ομιτ
Ex-159\$	101.1	3:21,2.1	^r ημων
Ex-159\$	102.1	3:21,3.1	⊤ ομιτ
Ex-159\$	117.2	4:3,3.2	εν σαρκι εληλυθοτα
Ex-159\$	125.1	4:10,2.1	「ἦγαπηκαμεν
Ex-159\$	131.2	4:15,1.2	αν ομολογη
Ex-159\$	134.2	4:16,1.2	πιστευομεν
Ex-159\$	135.2	4:16,2.2	ο ομιτ
Ex-159\$	140.2	4:19,1.2	ουν
Ex-159\$	142.2	4:19,3.2	ο θεος πρωτος
Ex-159\$	143.2	4:20,1.2	πως
Ex-159\$	145.2	5:1,1.2	ˆ τον
Ex-159\$	147.2	5:4,1.2	υμων
Ex-159\$	153.3	5:7,1.3	ιν τερρα, σπιριτυσ ετ αθυα ετ σανγυισ . 8 ετ τρεσ συντ, θυι τεστιμονιυμ διχυντ ιν χαελο, πατερ, ερβυμ ετ σπιρί τυσ, ετ ηι τρεσ υνυμ συντ
Ex-159\$	156.2	5:10,1.2	του θεου
Ex-159\$	161.3	5:13,1.3	οι πιστευοντες
Ex-159\$	169.3	5:17,1.3	μη
Ex-159\$	174.2	5:20,3.2	εδωκεν
Ex-159\$	175.2	5:20,4.2	—коµєν
Ex-159\$	176.2	5:20,5.2	θεον
Ex-159\$	177.2	5:20,6.2	η ζ. η αι.
Total for $Ex-159\$ = 36$			

Appendix H

Every Place Where a Variant is Initiated in the Textual History of First John

Arranged in Order by Reference

This appendix lists every place a variant is introduced into the textual history of First John 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 $\langle \rangle$ is the generation of the preceding witness. For example, the following line means:

		50413 4 504443 5 1
1 81	1.5.2.1	[01*]<4>; [01^1]<5>; Autograph;
0.1	1.5,2.1	[[01] \ 17 , [01 1] \ 05 , Matograph,

- (1) 8.1 refers to the first variant in variation unit 8.
- (2) 1:5,2.1 is the reference where this place of variation occurs: chapter 1, verse 5, the second 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 MSS 01* and 01^1.

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:

5.2	1:4,2.2	[vg^cl]<5>; [vg^ww]<5>; Ex-155\$<1>;
-----	---------	--------------------------------------

- (1) 5.2 refers to the second variant in variation unit 5.
- (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) The variant was first initiated in first-generation virtual exemplar Ex-155\$, and subsequently initiated by mixture from Ex-155\$ into MSS vg^cl and vg^ww.

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:

_	int tone wing into mount.			
	22.3	2:3,1.3	01*<4>;	

- (1) 22.3 refers to the third variant in variation unit 22.
- (2) 2:3,1.3 is the reference where this place of variation occurs: chapter 2, verse 3, the first place of variation in this verse, the third variant there.

(3) The variant was first initiated only in second-generation extant MS 01*. This is a singularity; it has no heredity.

Place of Variation	Reference	Places Variant is Introduced
1.1	1:2,1.1	Autograph;
1.2	1:2,1.2	Ex-141<5>;
2.1	1:3,1.1	[01*]<4>; [C^3%]<4>; [81*]<5>; [vg^st]<5>; Autograph;
2.2	1:3,1.2	[323*]<8>; [sa^a]<5>; [Ex-138]<3>; Ex-145#<1>; [Ex-146]<3>; [Ex-149]<3>;
3.1	1:3,2.1	[01^1]<5>; [01^2]<5>; [614*]<4>; [it-z*]<3>; [Ex-138]<3>; Autograph;
3.2	1:3,2.2	[81*]<5>; [Ex-131]<6>; [Ex-139]<2>; [Ex-140]<2>; [Ex-144]<4>; Ex-155\$<1>;
4.1	1:4,1.1	[01*]<4>; Autograph;
4.2	1:4,1.2	[A^c]<3>; [C*%]<5>; [sa^b]<5>; [Ex-131]<6>; [Ex-138]<3>; [Ex-145#]<1>; [Ex-148]<2>; [Ex-149]<3>; [Ex-155\$]<1>; Ex-159\$<1>;
5.1	1:4,2.1	Autograph;
5.2	1:4,2.2	[vg^cl]<5>; [vg^ww]<5>; Ex-155\$<1>;
6.1	1:4,3.1	[01*]<4>; [1241*]<8>; [pm^b]<9>; [it-z*]<3>; [Ex-136]<3>; [Ex-153#]<1>; [Ex-155\$]<1>; Ex-159\$<1>;
6.2	1:4,3.2	[C*%]<5>; [P025*%]<5>; [vg^cl]<5>; [Ex-129]<4>; [Ex-131]<6>; [Ex-135]<4>; [Ex-149]<3>; Autograph;
7.1	1:5,1.1	[it-z*]<3>; [Ex-138]<3>; Autograph;
7.2	1:5,1.2	[81*]<5>; [TR]<8>; [Ex-131]<6>; Ex-147#<1>;
8.1	1:5,2.1	[01*]<4>; [01^1]<5>; Autograph;
8.2	1:5,2.2	[81*]<5>; [69]<4>; [Ex-131]<6>; [Ex-139]<2>; [Ex-140]<2>; [Ex-144]<4>; [Ex-149]<3>; Ex-156\$<1>;
8.3	1:5,2.3	[01^2]<5>; [Ex-128]<6>; Ex-157\$<1>;
9.1	1:5,3.1	[Ex-138]<3>; Autograph;
9.2	1:5,3.2	[81*]<5>; [69]<4>; [Or^b%]<4>; [Ex-139]<2>; [Ex-141]<5>; Ex-155\$<1>;
10.1	1:7,1.1	[Ex-127]<6>; Autograph;
10.2	1:7,1.2	[1243]<9>; [it-z*]<3>; [bo^b]<4>; [Ex-135]<4>; [Ex-142]<5>; Ex-155\$<1>;
11.1	1:7,2.1	[it-r]<5>; Autograph;
11.2	1:7,2.2	[vg^b]<4>; [Cl^a%]<4>; [Cl^b%]<5>; [Hier^a%]<6>; [Hier^b%]<6>; [Ex-124]<4>; [Ex-143]<2>; Ex-155\$<1>;
12.1	1:7,3.1	[vg^st]<5>; [Cl^b%]<5>; [Ex-134]<5>; Autograph;
12.2	1:7,3.2	[1243]<9>; [vg^b]<4>; [Cl^lat%]<3>; [Tert^a%]<5>; Ex-156\$<1>;
12.3	1:7,3.3	[614*]<4>; [bo^a]<4>; [Ex-122]<4>; [Ex-127]<6>; [Ex-137]<2>; Ex-147#<1>;
12.4	1:7,3.4	Cass^a%<3>;
13.1	1:7,4.1	[323*]<8>; Autograph;
13.2	1:7,4.2	[1852]<9>; [Ex-131]<6>; [Ex-133]<3>; Ex-155\$<1>;
14.1	1:8,1.1	Autograph;
14.2	1:8,1.2	Ex-140<2>;
15.1	1:8,2.1	[81*]<5>; Autograph;

15.2	1:8,2.2	[C*%]<5>; [C^3%]<4>; [P025*%]<5>; [69]<4>; [Ex-129]<4>; [Ex-131]<6>; [Ex-140]<2>; [Ex-146]<3>; [Ex-147#]<1>; [Ex-155\$]<1>; Ex-159\$<1>;
16.1	1:9,1.1	[Ex-136]<3>; Autograph;
16.2	1:9,1.2	[01*]<4>; [01^1]<5>; [01^2]<5>; [C*%]<5>; [C^3%]<4>; [81*]<5>; [1852]<9>; [vg^cl]<5>; [vg^ww]<5>; [sy^p]<3>; [Ex-128]<6>; [Ex-145#]<1>; [Ex-155\$]<1>; Ex-159\$<1>;
17.1	1:9,2.1	[it-z*]<3>; [Ex-138]<3>; Autograph;
17.2	1:9,2.2	[C^3%]<4>; [1243]<9>; [1852]<9>; [Ex-133]<3>; Ex-147#<1>;
18.1	1:10,1.1	Autograph;
18.2	1:10,1.2	[2298]<9>; [Ex-123]<5>; [Ex-131]<6>; Ex-155\$<1>;
19.1	1:10,2.1	Autograph;
19.2	1:10,2.2	[1852]<9>; [vg^b]<4>; [Ex-140]<2>; Ex-155\$<1>;
20.1	2:1,1.1	[sy^h]<3>; Autograph;
20.2	2:1,1.2	Ex-140<2>;
21.1	2:2,1.1	Autograph;
21.2	2:2,1.2	[614*]<4>; [1243]<9>; [1]<9>; [Ex-141]<5>; Ex-155\$<1>;
22.1	2:3,1.1	Autograph;
22.2	2:3,1.2	[1852]<9>; [Ex-128]<6>; Ex-155\$<1>;
22.3	2:3,1.3	01*<4>;
23.1	2:4,1.1	[sy^h]<3>; Autograph;
23.2	2:4,1.2	[C*%]<5>; [C^3%]<4>; [P025*%]<5>; [Ex-126]<7>; Ex-145#<1>;
24.1	2:4,2.1	[it-z*]<3>; [Ex-126]<7>; [Ex-138]<3>; Autograph;
24.2	2:4,2.2	[01*]<4>; [01^1]<5>; [01^2]<5>; Ex-156\$<1>;
24.3	2:4,2.3	[P025*%]<5>; [322]<6>; [323*]<8>; [1243]<9>; [vg^st]<5>; [it-h*]<4>; [Ex-142]<5>; [Ex-147#]<1>; [Ex-157\$]<1>; Ex-159\$<1>;
25.1	2:4,3.1	Autograph;
25.2	2:4,3.2	[623*]<4>; [945]<8>; [1505*]<4>; [1852]<9>; [Ex-128]<6>; Ex-155\$<1>;
25.3	2:4,3.3	[01*]<4>; [01^1]<5>; [01^2]<5>; Ex-156\$<1>;
26.1	2:5,1.1	[945]<8>; Autograph;
26.2	2:5,1.2	Ex-123<5>; [Ex-131]<6>;
27.1	2:5,2.1	Autograph;
27.2	2:5,2.2	[vg^b]<4>; [it-t]<5>; [Aug^a%]<6>; [Aug^b%]<4>; [Ex-128]<6>; Ex-155\$<1>;
28.1	2:6,1.1	[01*]<4>; [01^1]<5>; [01^2]<5>; [C*%]<5>; [C^3%]<4>; [P025*%]<5>; [2464^c]<5>; Autograph;
28.2	2:6,1.2	[Ex-133]<3>; [Ex-141]<5>; [Ex-147#]<1>; [Ex-148]<2>; [Ex-155\$]<1>; Ex-159\$<1>;
29.1	2:7,1.1	[sy^h]<3>; Autograph;
29.2	2:7,1.2	[Ex-126]<7>; Ex-145#<1>;
30.1	2:7,2.1	[sy^h]<3>; Autograph;
30.2	2:7,2.2	Ex-145#<1>;
31.1	2:8,1.1	Autograph;
31.2	2:8,1.2	Ex-143<2>;

31.3	2:8,1.3	[01*]<4>; [01^1]<5>; [01^2]<5>; [1241*]<8>; [Hier^a%]<6>; [Hier^b%]<6>; [Ex-146]<3>; Ex-155\$<1>;
32.1	2:8,2.1	[1241*]<8>; Autograph;
32.2	2:8,2.2	[049*]<4>; [2298]<9>; [vg^b]<4>; [it-h*]<4>; [it-t]<5>; [sa^b]<5>; [bo^b]<4>; [69]<4>; [Ex-123]<5>; [Ex-131]<6>; [Ex-143]<2>; Ex-155\$<1>;
33.1	2:8,3.1	Autograph;
33.2	2:8,3.2	Ex-143<2>;
34.1	2:9,1.1	Autograph;
34.2	2:9,1.2	[01*]<4>; [01^1]<5>; [01^2]<5>; [614*]<4>; Ex-155\$<1>;
35.1	2:10,1.1	Autograph;
35.2	2:10,1.2	[01*]<4>; [01^1]<5>; [01^2]<5>; [C*%]<5>; [C^3%]<4>; [81*]<5>; [Lcf%]<3>; [Ex-133]<3>; [Ex-143]<2>; Ex-155\$<1>;
36.1	2:11,1.1	Autograph;
36.2	2:11,1.2	[P025*%]<5>; [1243]<9>; Ex-155\$<1>;
37.1	2:12,1.1	Autograph;
37.2	2:12,1.2	630<4>;
37.3	2:12,1.3	[2298]<9>; [Ex-123]<5>; [Ex-131]<6>; Ex-155\$<1>;
38.1	2:12,2.1	[sy^h]<3>; Autograph;
38.2	2:12,2.2	[L020*]<4>; [69]<4>; [Did^a%]<4>; [Did^b%]<4>; [Ex-128]<6>; [Ex-132]<4>; [Ex-140]<2>; Ex-155\$<1>;
39.1	2:13,1.1	Autograph;
39.2	2:13,1.2	[01*]<4>; [01^1]<5>; [01^2]<5>; [209]<9>; Ex-155\$<1>;
40.1	2:14,1.1	[L020*]<4>; [33*]<3>; [vg^st]<5>; Autograph;
40.2	2:14,1.2	[Ex-137]<2>; [Ex-139]<2>; [Ex-146]<3>; Ex-156\$<1>;
41.1	2:14,2.1	Autograph;
41.2	2:14,2.2	[044*]<7>; [Aug^b%]<4>; [Ex-141]<5>; Ex-155\$<1>;
42.1	2:14,3.1	[01^1]<5>; [01^2]<5>; [C*%]<5>; [P025*%]<5>; [NA-27]<2>; [Ex-142]<5>; [Ex-148]<2>; [Ex-149]<3>; Autograph;
42.2	2:14,3.2	Ex-153#<1>;
43.1	2:15,1.1	[323*]<8>; Autograph;
43.2	2:15,1.2	[1505*]<4>; [1881*]<6>; [69]<4>; [Ex-126]<7>; Ex-155\$<1>;
44.1	2:15,2.1	[Ex-138]<3>; Autograph;
44.2	2:15,2.2	[C*%]<5>; [C^3%]<4>; [it-w]<5>; [bo^a]<4>; [Ex-147#]<1>; [Ex-155\$]<1>; Ex-159\$<1>;
44.3	2:15,2.3	[614*]<4>; [bo^b]<4>; Ex-156\$<1>;
45.1	2:17,1.1	[it-z*]<3>; [Ex-138]<3>; Autograph;
45.2	2:17,1.2	[P025*%]<5>; [vg^b]<4>; [it-h*]<4>; [sa^b]<5>; [Or^a%]<5>; [Or^b%]<4>; [Ex-131]<6>; [Ex-132]<4>; [Ex-147#]<1>; [Ex-156\$]<1>; Ex-159\$<1>;
46.1	2:17,2.1	Autograph;
46.2	2:17,2.2	1827<9>;
47.1	2:17,3.1	Autograph;
47.2	2:17,3.2	[vg^b]<4>; [it-t]<5>; [sa^b]<5>; [Aug^a%]<6>; [Aug^b%]<4>; [Cyp^a%]<3>; [Lcf%]<3>; Ex-155\$<1>;

48.1	2:18,1.1	01*<4>; C*%<5>; C^3%<4>; P025*%<5>; Or^a%<5>; Or^b%<4>; Ex-153#<1>;
48.2	2:18,1.2	[L020*]<4>; [1881*]<6>; [Ex-143]<2>; Ex-155\$<1>;
48.3	2:18,1.3	[01^2]<5>; [Ex-126]<7>; Autograph;
49.1	2:19,1.1	[C*%]<5>; [C^3%]<4>; Autograph;
49.2	2:19,1.2	[01*]<4>; [01^1]<5>; [01^2]<5>; [P025*%]<5>; Did^a%<4>; Did^b%<4>; Irlat^a%<4>; [Ex-131]<6>; [Ex-137]<2>; [Ex-147#]<1>; [Ex-148]<2>; [Ex-155\$]<1>; Ex-159\$<1>;
50.1	2:19,2.1	[614*]<4>; [sy^h]<3>; Autograph;
50.2	2:19,2.2	[it-h*]<4>; [it-z*]<3>; [Ex-140]<2>; Ex-156\$<1>;
51.1	2:19,3.1	[614*]<4>; [Ex-122]<4>; Autograph;
51.2	2:19,3.2	[vg^a]<5>; [Cl^lat%]<3>; [Irlat^a%]<4>; [Ex-140]<2>; Ex-156\$<1>;
51.3	2:19,3.3	Ex-148<2>;
52.1	2:20,1.1	[01*]<4>; [01^1]<5>; [01^2]<5>; [P025*%]<5>; [NA-27]<2>; [Ex-142]<5>; Ex-155\$<1>;
52.2	2:20,1.2	Ex-153#<1>;
52.3	2:20,1.3	[C*%]<5>; [Ex-131]<6>; [Ex-148]<2>; [Ex-149]<3>; Autograph;
53.1	2:21,1.1	Autograph;
53.2	2:21,1.2	[C*%]<5>; [C^3%]<4>; Ex-155\$<1>;
54.1	2:23,1.1	[323*]<8>; Autograph;
54.2	2:23,1.2	[vg^b]<4>; [it-z*]<3>; [bo^b]<4>; [Ex-126]<7>; [Ex-137]<2>; Ex-155\$<1>;
55.1	2:24,1.1	Autograph;
55.2	2:24,1.2	[614*]<4>; [Aug^b%]<4>; [Ex-137]<2>; Ex-155\$<1>;
56.1	2:24,2.1	[C^3%]<4>; [33*]<3>; [vg^a]<5>; Autograph;
56.2	2:24,2.2	[Ex-122]<4>; [Ex-139]<2>; [Ex-141]<5>; Ex-156\$<1>;
56.3	2:24,2.3	[01^1]<5>; [01^2]<5>; [623*]<4>; [sa^b]<5>; [Ex-148]<2>; [Ex-149]<3>; Ex-157\$<1>;
56.4	2:24,2.4	[945]<8>; [69]<4>; Ex-158\$<1>;
57.1	2:25,1.1	Autograph;
57.2	2:25,1.2	[1241*]<8>; [1881*]<6>; [vg^b]<4>; [Ex-141]<5>; Ex-155\$<1>;
58.1	2:26,1.1	Autograph;
58.2	2:26,1.2	[01*]<4>; [01^1]<5>; [01^2]<5>; [1852]<9>; [sy^p]<3>; Ex-155\$<1>;
59.1	2:27,1.1	Autograph;
59.2	2:27,1.2	[1505*]<4>; [vg^b]<4>; [Ex-141]<5>; Ex-155\$<1>;
60.1	2:27,2.1	[01*]<4>; [01^1]<5>; [01^2]<5>; [C*%]<5>; [C^3%]<4>; [614*]<4>; [vg^st]<5>; Autograph;
60.2	2:27,2.2	[P025*%]<5>; [69]<4>; [Ex-139]<2>; [Ex-140]<2>; [Ex-142]<5>; [Ex-148]<2>; Ex-156\$<1>;
60.3	2:27,2.3	A*<3>;
61.1	2:27,3.1	Autograph;
61.2	2:27,3.2	[vg^b]<4>; [Aug^a%]<6>; [Aug^b%]<4>; [Hier^a%]<6>; [Hier^b%]<6>; [Ex-141]<5>; Ex-155\$<1>;
62.1	2:27,4.1	[C^3%]<4>; [it-z*]<3>; [Ex-138]<3>; Autograph;
62.2	2:27,4.2	[Aug^b%]<4>; [Ex-137]<2>; [Ex-143]<2>; Ex-156\$<1>;

62.3	2.27.4.2	[1505*] (A) ([2405] (D) ([Er 120] (2) (Er 157¢ (1))
	2:27,4.3	[1505*]<4>; [2495]<9>; [Ex-139]<2>; Ex-157\$<1>;
62.4	2:27,4.4	Ex-149<3>;
63.1	2:27,5.1	Autograph;
63.2	2:27,5.2	Ex-143<2>;
64.1	2:27,6.1	[81*]<5>; Autograph;
64.2	2:27,6.2	[945]<8>; [Ex-137]<2>; Ex-155\$<1>;
65.1	2:28,1.1	Autograph;
65.2	2:28,1.2	[01*]<4>; [01^1]<5>; [01^2]<5>; [630]<4>; [vg^b]<4>; [69]<4>; Ex-155\$<1>;
65.3	2:28,1.3	81*<5>;
66.1	2:28,2.1	[01*]<4>; [01^1]<5>; [01^2]<5>; [C*%]<5>; [C^3%]<4>; [P025*%]<5>; [81*]<5>; Autograph;
66.2	2:28,2.2	Ex-145#<1>;
67.1	2:28,3.1	[01^2]<5>; [C*%]<5>; [C^3%]<4>; [P025*%]<5>; [81*]<5>; Autograph;
67.2	2:28,3.2	01*<4>; [Ex-139]<2>; Ex-145#<1>;
68.1	2:28,4.1	Autograph;
68.2	2:28,4.2	[01*]<4>; [01^1]<5>; [01^2]<5>; Ex-155\$<1>;
69.1	2:29,1.1	[01*]<4>; [01^1]<5>; [01^2]<5>; [C*%]<5>; [C^3%]<4>; [P025*%]<5>; [33*]<3>; [sa^a]<5>; [NA-27]<2>; [Ex-131]<6>; [Ex-140]<2>; [Ex-143]<2>; [Ex-148]<2>; Ex-155\$<1>;
69.2	2:29,1.2	[vg^b]<4>; [sy^h]<3>; Autograph;
70.1	3:1,1.1	[01*]<4>; [01^1]<5>; [01^2]<5>; [C*%]<5>; [C^3%]<4>; [P025*%]<5>; [NA-27]<2>; [Ex-145#]<1>; [Ex-157\$]<1>; Ex-159\$<1>;
70.2	3:1,1.2	[L020*]<4>; Autograph;
70.3	3:1,1.3	[81*]<5>; [623*]<4>; Ex-155\$<1>;
70.4	3:1,1.4	[K*]<5>; [049*]<4>; [1505*]<4>; [Ex-141]<5>; Ex-156\$<1>;
70.5	3:1,1.5	1241*<8>;
71.1	3:1,2.1	[sy^h]<3>; Autograph;
71.2	3:1,2.2	[vg^b]<4>; [Ex-126]<7>; Ex-145#<1>;
72.1	3:1,3.1	[TR]<8>; Autograph;
72.2	3:1,3.2	[01*]<4>; [C*%]<5>; [C^3%]<4>; [P025*%]<5>; [1241*]<8>; [vg^b]<4>; [Ex-137]<2>; Ex-155\$<1>;
73.1	3:2,1.1	[01*]<4>; [C^3%]<4>; [81*]<5>; [sy^h]<3>; Autograph;
73.2	3:2,1.2	[sy^p]<3>; [sa^b]<5>; Ex-145#<1>; [Ex-149]<3>;
74.1	3:5,1.1	Autograph;
74.2	3:5,1.2	[01*]<4>; [01^1]<5>; [01^2]<5>; [vg^b]<4>; [sa^b]<5>; [bo^b]<4>; Ex-155\$<1>;
75.1	3:5,2.1	[vg^st]<5>; [sy^h]<3>; Autograph;
75.2	3:5,2.2	[01*]<4>; [01^1]<5>; [01^2]<5>; [C*%]<5>; [C^3%]<4>; [sa^a]<5>; [Ex-128]<6>; [Ex-145#]<1>; [Ex-148]<2>; [Ex-156\$]<1>; Ex-159\$<1>;
76.1	3:7,1.1	[it-z*]<3>; [Ex-138]<3>; Autograph;
76.2	3:7,1.2	[C*%]<5>; [C^3%]<4>; [P025*%]<5>; [Ex-142]<5>; Ex-147#<1>;
77.1	3:7,2.1	Autograph;
77.2	3:7,2.2	Ex-143<2>;

70.1	2.0 1 1	Autograph
78.1	3:8,1.1	Autograph;
78.2	3:8,1.2	[vg^b]<4>; [it-t]<5>; [Cl^lat%]<3>; [Lcf%]<3>; [Ex-143]<2>; Ex-155\$<1>;
78.3	3:8,1.3	Ex-128<6>;
79.1	3:10,1.1	[01*]<4>; [01^1]<5>; [01^2]<5>; Autograph;
79.2	3:10,1.2	[C*%]<5>; C^3%<4>; [P025*%]<5>; [69]<4>; [Ex-129]<4>; [Ex-131]<6>; [Ex-143]<2>; Ex-156\$<1>;
79.3	3:10,1.3	[Or^b%]<4>; [Ex-128]<6>; [Ex-138]<3>; [Ex-144]<4>; [Ex-148]<2>; Ex-157\$<1>;
80.1	3:11,1.1	[NA-27]<2>; [Ex-141]<5>; Autograph;
80.2	3:11,1.2	[Ex-140]<2>; Ex-153#<1>;
81.1	3:13,1.1	01*<4>; [01^1]<5>; [01^2]<5>; [C*%]<5>; C^3%<4>; [P025*%]<5>; [it-r]<5>; [it-
81.2	3:13,1.2	[Ex-122]<4>; [Ex-141]<5>; Autograph;
82.1	3:13,2.1	[01*]<4>; [01^1]<5>; [01^2]<5>; [C*%]<5>; [C^3%]<4>; [P025*%]<5>; [69]<4>; [Ex-122]<4>; Autograph;
82.2	3:13,2.2	[Ex-145#]<1>; [Ex-148]<2>; [Ex-155\$]<1>; Ex-159\$<1>;
83.1	3:14,1.1	Autograph;
83.2	3:14,1.2	[01*]<4>; [01^1]<5>; [01^2]<5>; [vg^b]<4>; [Ex-128]<6>; Ex-155\$<1>;
84.1	3:14,2.1	[Ex-122]<4>; Autograph;
84.2	3:14,2.2	[C*%]<5>; [C^3%]<4>; [vg^a]<5>; [Ex-128]<6>; [Ex-137]<2>; Ex-155\$<1>;
84.3	3:14,2.3	[P025*%]<5>; [69]<4>; [Ex-140]<2>; [Ex-148]<2>; Ex-156\$<1>;
85.1	3:15,1.1	Autograph;
85.2	3:15,1.2	Ex-141<5>;
86.1	3:15,2.1	[614*]<4>; [TR]<8>; [Ex-126]<7>; [Ex-136]<3>; Autograph;
86.2	3:15,2.2	[01*]<4>; [01^1]<5>; [01^2]<5>; [C*%]<5>; [C^3%]<4>; [L020*]<4>; [P025*%]<5>; [81*]<5>; [945]<8>; [HF]<4>; [Ex-135]<4>; [Ex-142]<5>; [Ex-143]<2>; [Ex-145#]<1>; [Ex-155\$]<1>; Ex-159\$<1>;
87.1	3:16,1.1	Autograph;
87.2	3:16,1.2	[P025*%]<5>; [1243]<9>; [Ex-128]<6>; Ex-155\$<1>;
88.1	3:16,2.1	[01*]<4>; [01^1]<5>; [01^2]<5>; [C*%]<5>; [C^3%]<4>; [P025*%]<5>; [81*]<5>; [1852]<9>; Did^a%<4>; Did^b%<4>; Autograph;
88.2	3:16,2.2	[323*]<8>; Ex-145#<1>;
88.3	3:16,2.3	Ex-128<6>;
89.1	3:17,1.1	[945]<8>; [it-z*]<3>; [Ex-138]<3>; Autograph;
89.2	3:17,1.2	[L020*]<4>; [322]<6>; [614*]<4>; [1243]<9>; [Ex-126]<7>; [Ex-133]<3>; [Ex-139]<2>; Ex-156\$<1>;
90.1	3:17,2.1	[630]<4>; [945]<8>; [HF]<4>; [sy^h]<3>; [Ex-133]<3>; [Ex-135]<4>; Autograph;
90.2	3:17,2.2	[pm^b]<9>; [Ex-126]<7>; Ex-145#<1>;
91.1	3:17,3.1	[it-z*]<3>; [Ex-138]<3>; Autograph;
91.2	3:17,3.2	[L020*]<4>; [1243]<9>; [1881*]<6>; [2495]<9>; [Ex-133]<3>; [Ex-139]<2>; Ex-156\$<1>;
92.1	3:17,4.1	[01*]<4>; [01^1]<5>; [01^2]<5>; [C*%]<5>; [C^3%]<4>; [P025*%]<5>; [81*]<5>; Autograph;
92.2	3:17,4.2	[B^2]<6>; [L020*]<4>; [1505*]<4>; [Ex-129]<4>; Ex-155\$<1>;
93.1	3:18,1.1	[sy^h]<3>; Autograph;
	*	•

93.2	3:18,1.2	[Ex-126]<7>; Ex-145#<1>;
94.1	3:18,2.1	[323*]<8>; [it-z*]<3>; [Ex-130]<7>; [Ex-138]<3>; Autograph;
94.2	3:18,2.2	[P025*%]<5>; [1881*]<6>; [TR]<8>; [1]<9>; [Cl^a%]<4>; [Ex-132]<4>; [Ex-139]<2>; [Ex-142]<5>; Ex-156\$<1>;
94.3	3:18,2.3	[01*]<4>; [01^1]<5>; [01^2]<5>; Ex-157\$<1>;
95.1	3:19,1.1	[Ex-124]<4>; Autograph;
95.2	3:19,1.2	[it-t]<5>; [bo^a]<4>; [Ex-133]<3>; [Ex-141]<5>; [Ex-146]<3>; [Ex-147#]<1>; [Ex-155\$]<1>; Ex-159\$<1>;
95.3	3:19,1.3	[1852]<9>; [Ex-140]<2>; Ex-156\$<1>;
96.1	3:19,2.1	[33*]<3>; [sy^h]<3>; Autograph;
96.2	3:19,2.2	[Ex-126]<7>; [Ex-139]<2>; Ex-145#<1>; [Ex-146]<3>;
97.1	3:19,3.1	[Aug^a%]<6>; Autograph;
97.2	3:19,3.2	[322]<6>; [Ex-142]<5>; Ex-155\$<1>;
97.3	3:19,3.3	[630]<4>; [1243]<9>; [vg^st]<5>; [69]<4>; [Ex-133]<3>; Ex-156\$<1>;
97.4	3:19,3.4	[01*]<4>; [01^1]<5>; [01^2]<5>; [A^c]<3>; [C*%]<5>; [C^3%]<4>; [P025*%]<5>; [vg^cl]<5>; [it-t]<5>; [Ex-145#]<1>; [Ex-157\$]<1>; Ex-159\$<1>;
98.1	3:20,1.1	[it-r]<5>; Autograph;
98.2	3:20,1.2	[vg^b]<4>; [Ex-124]<4>; [Ex-128]<6>; Ex-155\$<1>;
99.1	3:20,2.1	[01*]<4>; [C^3%]<4>; [ac*%]<4>; Autograph;
99.2	3:20,2.2	[sa^b]<5>; [Ex-146]<3>; [Ex-147#]<1>; [Ex-149]<3>; [Ex-156\$]<1>; Ex-159\$<1>;
100.1	3:21,1.1	Autograph;
100.2	3:21,1.2	[01*]<4>; [01^1]<5>; [01^2]<5>; Ex-155\$<1>;
101.1	3:21,2.1	[01*]<4>; [01^1]<5>; [01^2]<5>; [C*%]<5>; [C^3%]<4>; [NA-27]<2>; [Did^a%]<4>; [Did^b%]<4>; [Or^b%]<4>; [Ex-138]<3>; [Ex-145#]<1>; [Ex-148]<2>; [Ex-155\$]<1>; Ex-159\$<1>;
101.2	3:21,2.2	[322]<6>; [vg^st]<5>; [Aug^b%]<4>; Or^a%<5>; Autograph;
101.3	3:21,2.3	1505*<4>;
102.1	3:21,3.1	[C*%]<5>; C^3%<4>; [vg^b]<4>; [Aug^b%]<4>; Did^b%<4>; Or^a%<5>; Or^b%<4>; [Ex-153#]<1>; [Ex-156\$]<1>; Ex-159\$<1>;
102.2	3:21,3.2	[01*]<4>; [01^1]<5>; [01^2]<5>; [Did^a%]<4>; [Ex-142]<5>; [Ex-148]<2>; Autograph;
102.3	3:21,3.3	[1241*]<8>; [1505*]<4>; Ex-155\$<1>;
103.1	3:21,4.1	[945]<8>; [it-z*]<3>; [NA-27]<2>; [Ex-138]<3>; [Ex-144]<4>; [Ex-148]<2>; [Ex-149]<3>; Autograph;
103.2	3:21,4.2	[322]<6>; Ex-153#<1>;
103.3	3:21,4.3	[1243]<9>; [vg^b]<4>; [Lcf%]<3>; [Ex-139]<2>; Ex-156\$<1>;
104.1	3:22,1.1	[sy^h]<3>; Autograph;
104.2	3:22,1.2	[Ex-126]<7>; Ex-145#<1>;
105.1	3:22,2.1	[81*]<5>; Autograph;
105.2	3:22,2.2	[01*]<4>; [01^1]<5>; [01^2]<5>; [1881*]<6>; [vg^b]<4>; [Ex-128]<6>; [Ex-129]<4>; [Ex-132]<4>; [Ex-143]<2>; Ex-155\$<1>;
106.1	3:23,1.1	Autograph;
106.2	3:23,1.2	[01*]<4>; [01^1]<5>; [01^2]<5>; [C*%]<5>; [C^3%]<4>; 0245%<3>; [81*]<5>; [Ex-140]<2>; [Ex-142]<5>; Ex-147#<1>;

107.1	2.22.2.1	[i4 -*] 2> . [E-, 120] 2> . Auto-mark.
107.1	3:23,2.1	[it-z*]<3>; [Ex-138]<3>; Autograph;
107.2	3:23,2.2	[614*]<4>; [Ex-146]<3>; Ex-156\$<1>;
107.3	3:23,2.3	Ex-133<3>;
107.4	3:23,2.4	Ex-139<2>;
108.1	3:23,3.1	Autograph;
108.2	3:23,3.2	[1846]<9>; [vg^b]<4>; [Ex-143]<2>; Ex-155\$<1>;
109.1	3:23,4.1	[81*]<5>; [TR]<8>; Autograph;
109.2	3:23,4.2	[945]<8>; [Ex-137]<2>; Ex-156\$<1>;
110.1	3:24,1.1	[sy^h]<3>; Autograph;
110.2	3:24,1.2	[01*]<4>; [01^1]<5>; [01^2]<5>; [945]<8>; [1243]<9>; [vg^cl]<5>; [it-r]<5>; [69]<4>; [Cl^lat%]<3>; [Ex-129]<4>; [Ex-140]<2>; Ex-155\$<1>;
111.1	4:1,1.1	[81*]<5>; Autograph;
111.2	4:1,1.2	Ex-129<4>;
111.3	4:1,1.3	Ex-128<6>;
112.1	4:2,1.1	[01^2]<5>; [C*%]<5>; [C^3%]<4>; [L020*]<4>; [33*]<3>; [945]<8>; [1852]<9>; [1881*]<6>; [TR]<8>; [Irlat^a%]<4>; Autograph;
112.2	4:2,1.2	[044*]<7>; [1505*]<4>; [Ex-126]<7>; [Ex-137]<2>; [Ex-139]<2>; [Ex-148]<2>; Ex-156\$<1>;
112.3	4:2,1.3	01*<4>; 630<4>;
113.1	4:2,2.1	Autograph;
113.2	4:2,2.2	[C*%]<5>; [C^3%]<4>; Ex-155\$<1>;
114.1	4:2,3.1	Autograph;
114.2	4:2,3.2	Ex-141<5>;
115.1	4:3,1.1	Autograph;
115.2	4:3,1.2	[Lcf%]<3>; [Ex-146]<3>; Ex-155\$<1>;
116.1	4:3,2.1	[81*]<5>; Or^a%<5>; [Or^b%]<4>; Autograph;
116.2	4:3,2.2	01*<4>; 01^1<5>; 01^2<5>;
116.3	4:3,2.3	[614*]<4>; [Ex-137]<2>; [Ex-148]<2>; Ex-155\$<1>;
116.4	4:3,2.4	1846<9>;
116.5	4:3,2.5	[1881*]<6>; [Ex-132]<4>; Ex-156\$<1>;
117.1	4:3,3.1	[Ex-122]<4>; [Ex-138]<3>; Autograph;
117.2	4:3,3.2	[01*]<4>; [01^1]<5>; [01^2]<5>; [Aug^b%]<4>; [Ex-128]<6>; [Ex-139]<2>; [Ex-145#]<1>; [Ex-148]<2>; [Ex-156\$]<1>; Ex-159\$<1>;
118.1	4:3,4.1	[81*]<5>; [HF]<4>; [69]<4>; [Ex-135]<4>; Autograph;
118.2	4:3,4.2	Ex-136<3>;
119.1	4:3,5.1	Autograph;
119.2	4:3,5.2	[01*]<4>; [01^1]<5>; [01^2]<5>; [Ex-133]<3>; Ex-155\$<1>;
119.3	4:3,5.3	[vg^cl]<5>; [vg^ww]<5>; [it-r]<5>; [Ex-128]<6>; Ex-156\$<1>;
120.1	4:6,1.1	Autograph;
120.2	4:6,1.2	[L020*]<4>; [1241*]<8>; [1881*]<6>; [vg^b]<4>; [Ex-143]<2>; Ex-155\$<1>;
121.1	4:6,2.1	[01*]<4>; [01^1]<5>; [01^2]<5>; [0245%]<3>; Autograph;

121.2	4:6,2.2	[81*]<5>; [Ex-143]<2>; [Ex-144]<4>; [Ex-148]<2>; [Ex-149]<3>; Ex-156\$<1>;
122.1	4:7,1.1	Autograph;
122.2	4:7,1.2	Ex-143<2>;
123.1	4:8,1.1	[it-z*]<3>; [Ex-138]<3>; Autograph;
123.2	4:8,1.2	[81*]<5>; [sy^h]<3>; [Ex-133]<3>; Ex-147#<1>;
123.3	4:8,1.3	[044*]<7>; [69]<4>; Ex-156\$<1>;
123.4	4:8,1.4	[01*]<4>; [01^2]<5>; Ex-157\$<1>;
124.1	4:10,1.1	Autograph;
124.2	4:10,1.2	[01*]<4>; [vg^b]<4>; [Ex-144]<4>; Ex-155\$<1>;
125.1	4:10,2.1	[81*]<5>; [1505*]<4>; [Ex-153#]<1>; [Ex-155\$]<1>; Ex-159\$<1>;
125.2	4:10,2.2	[01*]<4>; Autograph;
126.1	4:10,3.1	Autograph;
126.2	4:10,3.2	Ex-143<2>;
127.1	4:10,4.1	Autograph;
127.2	4:10,4.2	[01*]<4>; [01^1]<5>; [01^2]<5>; Ex-155\$<1>;
128.1	4:12,1.1	[048%]<5>; [81*]<5>; [it-t]<5>; [69]<4>; Autograph;
128.2	4:12,1.2	01*<4>; 01^1<5>; 01^2<5>; Ex-141<5>;
128.3	4:12,1.3	[Ex-128]<6>; [Ex-137]<2>; [Ex-138]<3>; Ex-156\$<1>;
128.4	4:12,1.4	1241*<8>;
129.1	4:13,1.1	[it-z*]<3>; [Ex-138]<3>; Autograph;
129.2	4:13,1.2	[Ex-131]<6>; Ex-147#<1>;
130.1	4:14,1.1	[it-z*]<3>; [Ex-138]<3>; Autograph;
130.2	4:14,1.2	[81*]<5>; [Ex-142]<5>; Ex-147#<1>;
131.1	4:15,1.1	[it-z*]<3>; [Ex-138]<3>; Autograph;
131.2	4:15,1.2	[623*]<4>; [Ex-147#]<1>; [Ex-155\$]<1>; Ex-159\$<1>;
131.3	4:15,1.3	Ex-128<6>;
132.1	4:15,2.1	Autograph;
132.2	4:15,2.2	[vg^b]<4>; [Ex-141]<5>; Ex-155\$<1>;
133.1	4:15,3.1	[1505*]<4>; [sy^h]<3>; Autograph;
133.2	4:15,3.2	[vg^b]<4>; [Ex-140]<2>; Ex-156\$<1>;
133.3	4:15,3.3	P^9%<2>;
134.1	4:16,1.1	[it-z*]<3>; [Ex-138]<3>; Autograph;
134.2	4:16,1.2	[vg^ww]<5>; [it-t]<5>; [Ex-147#]<1>; [Ex-156\$]<1>; Ex-159\$<1>;
135.1	4:16,2.1	[it-z*]<3>; [Ex-138]<3>; Autograph;
135.2	4:16,2.2	[614*]<4>; [1846]<9>; [2298]<9>; [TR]<8>; [it-w]<5>; [Ex-133]<3>; [Ex-146]<3>; [Ex-147#]<1>; [Ex-156\$]<1>; Ex-159\$<1>;
136.1	4:17,1.1	Autograph;
136.2	4:17,1.2	[01*]<4>; [01^1]<5>; [01^2]<5>; Ex-155\$<1>;
137.1	4:17,2.1	Autograph;
137.2	4:17,2.2	[1505*]<4>; [1611*]<9>; [2138]<7>; Ex-155\$<1>;

138.1	4:17,3.1	Autograph;
138.2	4:17,3.2	2138<7>;
139.1	4:17,4.1	Autograph;
139.2	4:17,4.2	[01*]<4>; [01^1]<5>; [01^2]<5>; [2138]<7>; Ex-155\$<1>;
140.1	4:19,1.1	[it-z*]<3>; [Ex-138]<3>; Autograph;
140.2	4:19,1.2	[048%]<5>; [it-r]<5>; [69]<4>; [Ex-133]<3>; [Ex-146]<3>; [Ex-147#]<1>; [Ex-156\$]<1>; Ex-159\$<1>;
141.1	4:19,2.1	Autograph;
141.2	4:19,2.2	[01^1]<5>; [01^2]<5>; [048%]<5>; [81*]<5>; [vg^cl]<5>; [sy^p]<3>; [Ex-139]<2>; [Ex-140]<2>; [Ex-149]<3>; Ex-155\$<1>;
141.3	4:19,2.3	[Ex-128]<6>; [Ex-137]<2>; Ex-156\$<1>;
142.1	4:19,3.1	Autograph;
142.2	4:19,3.2	[81*]<5>; [Ex-146]<3>; [Ex-147#]<1>; [Ex-155\$]<1>; Ex-159\$<1>;
142.3	4:19,3.3	[1505*]<4>; [Ex-133]<3>; Ex-156\$<1>;
143.1	4:20,1.1	[01*]<4>; [323*]<8>; [Cyp^a%]<3>; [Or^b%]<4>; Autograph;
143.2	4:20,1.2	[614*]<4>; [Ex-126]<7>; [Ex-137]<2>; [Ex-147#]<1>; [Ex-148]<2>; [Ex-149]<3>; [Ex-156\$]<1>; Ex-159\$<1>;
144.1	4:21,1.1	Autograph;
144.2	4:21,1.2	[048%]<5>; [vg^cl]<5>; [it-r]<5>; [Ex-143]<2>; Ex-155\$<1>;
145.1	5:1,1.1	[vg^cl]<5>; [sy^p]<3>; [NA-27]<2>; [Ex-131]<6>; Autograph;
145.2	5:1,1.2	[048%]<5>; [Ex-139]<2>; [Ex-153#]<1>; [Ex-155\$]<1>; Ex-159\$<1>;
145.3	5:1,1.3	[01*]<4>; [01^1]<5>; [01^2]<5>; [69]<4>; Ex-156\$<1>;
146.1	5:2,1.1	[81*]<5>; [623*]<4>; [Aug^b%]<4>; [Ex-134]<5>; Autograph;
146.2	5:2,1.2	[01*]<4>; [01^1]<5>; [01^2]<5>; [P025*%]<5>; [1241*]<8>; [vg^b]<4>; [Ex-127]<6>; [Ex-137]<2>; [Ex-143]<2>; Ex-156\$<1>;
147.1	5:4,1.1	[K*]<5>; [69]<4>; [Ex-135]<4>; Autograph;
147.2	5:4,1.2	[1241*]<8>; [pm^b]<9>; [vg^b]<4>; [Ex-136]<3>; [Ex-155\$]<1>; [Ex-156\$]<1>; Ex-159\$<1>;
148.1	5:5,1.1	[01*]<4>; [01^1]<5>; [01^2]<5>; [P025*%]<5>; [Ex-129]<4>; Autograph;
148.2	5:5,1.2	Ex-141<5>;
148.3	5:5,1.3	[81*]<5>; [Ex-128]<6>; [Ex-137]<2>; [Ex-143]<2>; [Ex-148]<2>; Ex-155\$<1>;
149.1	5:6,1.1	[323*]<8>; Autograph;
149.2	5:6,1.2	[Ambr^a%]<2>; [Ex-126]<7>; Ex-155\$<1>;
149.3	5:6,1.3	[1739°c]<8>; [vg°b]<4>; [Ex-140]<2>; [Ex-143]<2>; [Ex-144]<4>; [Ex-149]<3>; Ex-156\$<1>;
149.4	5:6,1.4	[P025*%]<5>; [0296%]<2>; [81*]<5>; [630]<4>; [1243]<9>; [1846]<9>; [1852]<9>; [vg^a]<5>; [Ex-133]<3>; Ex-157\$<1>;
150.1	5:6,2.1	Autograph;
150.2	5:6,2.2	[81*]<5>; [Ex-141]<5>; Ex-155\$<1>;
151.1	5:6,3.1	[01*]<4>; [01^1]<5>; [01^2]<5>; Autograph;
151.2	5:6,3.2	[P025*%]<5>; [69]<4>; [Ex-131]<6>; Ex-155\$<1>;
151.3	5:6,3.3	Ex-143<2>;
151.4	5:6,3.4	424^c<9>;

151.5	5:6,3.5	[1739^c]<8>; [vg^b]<4>; Ex-156\$<1>;
152.1	5:6,4.1	Autograph;
152.2	5:6,4.2	[61*]<8>; [Ex-146]<3>; Ex-155\$<1>;
153.1	5:7,1.1	[Ex-120]<8>; [Ex-127]<6>; Autograph;
153.2	5:7,1.2	[vg^cl]<5>; [Ex-121]<7>; Ex-155\$<1>;
153.3	5:7,1.3	[vg^b]<4>; [it-r]<5>; [Ex-134]<5>; [Ex-156\$]<1>; Ex-159\$<1>;
154.1	5:9,1.1	[1505*]<4>; Autograph;
154.2	5:9,1.2	[P025*%]<5>; Ex-145#<1>;
155.1	5:9,2.1	Autograph;
155.2	5:9,2.2	[vg^b]<4>; [Bea%]<2>; Ex-155\$<1>;
156.1	5:10,1.1	[323*]<8>; Autograph;
156.2	5:10,1.2	[P^74%]<6>; [81*]<5>; [Ex-126]<7>; [Ex-133]<3>; [Ex-146]<3>; [Ex-147#]<1>; [Ex-155\$]<1>; Ex-159\$<1>;
157.1	5:10,2.1	[01*]<4>; [01^1]<5>; [01^2]<5>; [049*]<4>; [TR]<8>; [69]<4>; Autograph;
157.2	5:10,2.2	[P025*%]<5>; [1241*]<8>; [Ex-137]<2>; [Ex-141]<5>; Ex-147#<1>;
158.1	5:10,3.1	[01^1]<5>; [01^2]<5>; [P025*%]<5>; [945]<8>; Autograph;
158.2	5:10,3.2	[81*]<5>; [322]<6>; [Ex-122]<4>; [Ex-131]<6>; [Ex-133]<3>; [Ex-143]<2>; Ex-156\$<1>;
158.3	5:10,3.3	[bo^a]<4>; [Ex-144]<4>; Ex-157\$<1>;
158.4	5:10,3.4	Spec%<6>;
158.5	5:10,3.5	vg^b<4>;
159.1	5:10,4.1	Autograph;
159.2	5:10,4.2	[1881*]<6>; [vg^b]<4>; [Aug^a%]<6>; [Aug^b%]<4>; Ex-155\$<1>;
159.3	5:10,4.3	048%<5>;
160.1	5:11,1.1	[01*]<4>; [01^1]<5>; [01^2]<5>; [P025*%]<5>; [945]<8>; [NA-27]<2>; [Ex-128]<6>; [Ex-148]<2>; Autograph;
160.2	5:11,1.2	[69]<4>; [Ex-140]<2>; Ex-153#<1>;
160.3	5:11,1.3	1241*<8>;
161.1	5:13,1.1	01*<4>; [1505*]<4>; [1852]<9>; [sy^h]<3>; [Ex-138]<3>; Ex-153#<1>;
161.2	5:13,1.2	[P025*%]<5>; [Ex-142]<5>; Autograph;
161.3	5:13,1.3	[01^2]<5>; [623*]<4>; [Ex-147#]<1>; [Ex-155\$]<1>; Ex-159\$<1>;
162.1	5:13,2.1	[01*]<4>; [1505*]<4>; [1852]<9>; [sy^h]<3>; Autograph;
162.2	5:13,2.2	[P025*%]<5>; [Ex-142]<5>; Ex-145#<1>;
163.1	5:14,1.1	Autograph;
163.2	5:14,1.2	[1243]<9>; [vg^b]<4>; [Ex-143]<2>; Ex-155\$<1>;
164.1	5:14,2.1	Autograph;
164.2	5:14,2.2	[81*]<5>; [Ex-139]<2>; [Ex-146]<3>; Ex-155\$<1>;
164.3	5:14,2.3	[049*]<4>; [69]<4>; [Ex-143]<2>; Ex-156\$<1>;
165.1	5:14,3.1	Autograph;
165.2	5:14,3.2	Ex-143<2>;
166.1	5:15,1.1	[945]<8>; Autograph;

166.2	5:15,1.2	[1846]<9>; [2298]<9>; [Ex-123]<5>; [Ex-131]<6>; Ex-155\$<1>;
167.1	5:15,2.1	[01*]<4>; [01^1]<5>; [01^2]<5>; [81*]<5>; [Ex-132]<4>; Autograph;
167.2	5:15,2.2	[P025*%]<5>; [Ex-142]<5>; [Ex-143]<2>; Ex-145#<1>;
167.3	5:15,2.3	2464*<5>;
168.1	5:16,1.1	[Ex-127]<6>; Autograph;
168.2	5:16,1.2	[945]<8>; [1852]<9>; [vg^cl]<5>; [vg^ww]<5>; [Ex-134]<5>; [Ex-140]<2>; Ex-155\$<1>;
168.3	5:16,1.3	Ex-143<2>;
169.1	5:17,1.1	[01^1]<5>; [01^2]<5>; [P025*%]<5>; [it-z*]<3>; [Ex-127]<6>; [Ex-138]<3>; Autograph;
169.2	5:17,1.2	[1243]<9>; [1852]<9>; [vg^cl]<5>; [vg^ww]<5>; [it-t]<5>; [sy^h]<3>; [bo^b]<4>; [Ex-133]<3>; [Ex-134]<5>; [Ex-139]<2>; [Ex-144]<4>; Ex-156\$<1>;
169.3	5:17,1.3	[2464^c]<5>; [Cl^a%]<4>; [Cl^b%]<5>; [Ex-155\$]<1>; [Ex-157\$]<1>; Ex-159\$<1>;
170.1	5:18,1.1	[01*]<4>; [ac*%]<4>; Autograph;
170.2	5:18,1.2	33*<3>;
170.3	5:18,1.3	[1505*]<4>; [1852]<9>; [2138]<7>; [sy^h]<3>; [Ex-139]<2>; [Ex-146]<3>; [Ex-149]<3>; Ex-156\$<1>;
170.4	5:18,1.4	[Or^a%]<5>; [Or^b%]<4>; Ex-157\$<1>;
171.1	5:18,2.1	[A*]<3>; [it-z*]<3>; [Ex-138]<3>; Autograph;
171.2	5:18,2.2	[01*]<4>; [01^1]<5>; [01^2]<5>; [P025*%]<5>; [630]<4>; [Or^a%]<5>; [Or^b%]<4>; [Ex-137]<2>; [Ex-142]<5>; Ex-147#<1>;
172.1	5:20,1.1	[01^1]<5>; [01^2]<5>; [NA-27]<2>; [Ex-126]<7>; [Ex-137]<2>; [Ex-141]<5>; [Ex-149]<3>; Ex-155\$<1>;
172.2	5:20,1.2	[81*]<5>; [323*]<8>; Autograph;
172.3	5:20,1.3	[L020*]<4>; [P025*%]<5>; [049*]<4>; [1243]<9>; [Ex-146]<3>; Ex-157\$<1>;
173.1	5:20,2.1	Autograph;
173.2	5:20,2.2	[vg^b]<4>; [it-t]<5>; [Hil^a%]<2>; [Spec%]<6>; Ex-155\$<1>;
174.1	5:20,3.1	[it-z*]<3>; [sy^h]<3>; [Ex-138]<3>; Autograph;
174.2	5:20,3.2	[049*]<4>; [Ex-128]<6>; [Ex-132]<4>; [Ex-140]<2>; [Ex-147#]<1>; [Ex-156\$]<1>; Ex-159\$<1>;
175.1	5:20,4.1	Autograph;
175.2	5:20,4.2	[01*]<4>; [01^1]<5>; [01^2]<5>; [B*]<6>; [L020*]<4>; [P025*%]<5>; [049*]<4>; [81*]<5>; [614*]<4>; [Ex-147#]<1>; [Ex-155\$]<1>; Ex-159\$<1>;
176.1	5:20,5.1	[1241*]<8>; [it-z*]<3>; [sy^h]<3>; [Ex-138]<3>; Autograph;
176.2	5:20,5.2	[629*]<8>; [it-t]<5>; [bo^b]<4>; [Ex-140]<2>; [Ex-142]<5>; [Ex-146]<3>; [Ex-147#]<1>; [Ex-156\$]<1>; Ex-159\$<1>;
177.1	5:20,6.1	[sy^h]<3>; [Ex-133]<3>; [Ex-135]<4>; Autograph;
177.2	5:20,6.2	[P025*%]<5>; [945]<8>; [1881*]<6>; [pm^b]<9>; [TR]<8>; [Ex-145#]<1>; [Ex-156\$]<1>; Ex-159\$<1>;
177.3	5:20,6.3	Ex-128<6>;
178.1	5:21,1.1	[it-z*]<3>; [sy^h]<3>; [Ex-138]<3>; Autograph;
178.2	5:21,1.2	[01^2]<5>; [P025*%]<5>; [049*]<4>; [945]<8>; [pm^b]<9>; [Did^a%]<4>; [Did^b%]<4>; [Ex-129]<4>; [Ex-140]<2>; Ex-147#<1>;
179.1	5:21,2.1	[323*]<8>; Autograph;
179.2	5:21,2.2	[P025*%]<5>; [614*]<4>; [vg^cl]<5>; [Ex-126]<7>; [Ex-137]<2>; Ex-155\$<1>;

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 $A = (\text{the number of places of variation } A \text{ has of the text}) \div (\text{the total number of places of variation in the text}), where A is a$ **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.
- ______, 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.
- _____. "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.
- _____. "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.
- _____. "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, 27th 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.
- _____. The Text of the New Testament: Its Transmission, Corruption, and Restoration, 3rd 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 Coherence-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*, 2nd 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.
- _____. "A Computer-Aided Textual Commentary on the Book of Philippians," *Grace Theological Journal* 8.2 (1987) 253-90.
- Rahlfs, Alfred. Septuaginta, II vols. 6th 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.

- _____. "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 ΔΙΑΘΗΚΗ: 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.
- . "Some Experiments in Automated Textual Criticism," paper presented at the International Conference on Computers in the Humanities, Minneapolis, 1973.
- _____. "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.