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A Classification of Manuscripts Based on A New Quantitative Method.

The Old Latin Witnesses of John’s Gospel as Text Case

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Abstract

A new method for grouping manuscripts in clusters is presented with the calculation of distances between readings, then between witnesses. A classification algorithm (“Hierarchical Ascendant Clustering”), achieved through computer-aided processing, enables the construction of trees illustrating the textual taxonomy obtained. This method is applied to the Old Latin witnesses of the Gospel of John, and, in order to provide a study of a reasonable size, to a chapter as a whole (chapter 14). The result basically confirms the text-types identified by Bonatius Fischer, founder of the Vetus Latina Institute, while it invalidates the classification adopted by the current edition of the Vetus Latina of the Gospel of John.

Keywords

Manuscripts, Gospel of John, latin witnesses

INTRODUCTION

Statistics are useful for textual criticism of the New Testament and computer-aided processing is now unavoidable. However, most of the quantitative studies made of the text of the New Testament are based on the number of agreements between manuscripts. For every variation-unit and for every pair of witnesses, one counts the agreements: 1 when they have the same reading, 0 otherwise. The processing of the data involves preparing a table of the agreements two by two in the form of a lower triangular matrix, to convert the results into percentages, then to proceed to their classification in lists where the percentages are sorted in decreasing order. The credit for this belongs to Ernest Colwell who created the impetus with the Multiple Readings Method in the late 50s. Two developments ensued with

1 On the question of the various quantitative methods for the textual classification or taxonomy, see the fundamental article, published in 1975, by Duplacy J. Classification des états d’un texte, mathématiques et informatique: repères historiques et recherches méthodologiques. Id. Études de critique textuelle du Nouveau Testament (Bibliotheca Ephemeridum Theologicarum Lovaniensium, 78). Leuven University Press (Louvain), 1987:193-257.

2 Colwell E.C. Method in Locating a Newly-Discovered Manuscript. Id. Studies in Methodology in Textual Criticism of the New Testament (New Testament Tools and Studies, 9). E.J. Brill (Leiden), 1969:26-44; Id.,Tune E.W. Method in Establishing Quantitative Relationships Between Text-Types of New Testament Manuscripts. Ibid. 56-62.
the Clarenmont Profile Method of F. Wisse and P.R. McReynolds in the 60s, and the Comprehensive Profile Method of B.D. Ehrman in the 80s.

The counting of agreements between manuscripts is not, however, the only statistical tool. Another method is Data Analysis, of which the aim is to highlight the multidimensional character of the sample. Data Analysis is divided into two complementary lines of approach. The first is Correspondence Analysis or Multidimensional Scaling, which for qualitative data brings out a limited number of synthetic components. Developed at the end of the 60s, this approach chiefly owes its success to the geometrical presentation it employs. The goal of Correspondence Analysis is to produce a visual display of groups of information that involve qualitative variables such as manuscript variants. Several analyses of this kind have been produced in the New Testament field since the end of the 70s. Mention may be made of the three articles by C.-B. Amphoux on the Epistle of James (1978-1981), the thesis of T.J. Finney on the Epistle to the Hebrews (1999), and the work of W. Willker on the first five chapters of John’s Gospel, published online (2008).

The clustering method is the second line of approach. It seeks to reduce individual elements to homogenous classes and for that reason is extremely useful for textual taxomony. To our knowledge, it has been little used to date for New Testament philology.

It is this latter statistical tool that we will present and apply to a sample text. With that in mind, it will first be useful and necessary to define mathematical distances. Our starting point is to establish a calculation of distances between readings, then between witnesses. The advantage of the method thus

3 Epp E.J. The Claremont Profile Method for Grouping New Testament Minuscule Manuscripts. Id. Perspectives on New Testament Textual Criticism: Collected Essays, 1962-2004 (Supplements to Novum Testamentum, 116). E.J. Brill (Leiden-Boston), 2005:41-57; Colwell E.C., Sparks I.A., Wisse F., McReynolds P.R. The International Greek New Testament Project: A Status Report. Journal of Biblical Literature. 1968;87:187-197; Wisse F., McReynolds P.R. Family E and the Profile Method. Biblicala. 1970;51:67-75; 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 (Studies and Documents, 44). W.B. Eerdmans (Grand Rapids), 1982.

4 Ehrman B.D. The Use of Group Profiles for the Classification of New Testament Documentary Evidence. Journal of Biblical Literature. 1987;106:465-486; Id. Didymus the Blind and the Text of the Gospels (Society of Biblical Literature. The New Testament in the Greek Fathers, 1). Scholars Press (Atlanta), 1986:223-228.

5 Amphoux C.-B. Les manuscrits grecs de l’Épître de Jacques d’après une collation de 25 lieux variants. Revue d’Histoire des Textes. 1978;8:247-276; Id. L’analyse factorielle au service de l’édition de textes anciens: application à un texte grec du Nouveau Testament, l’Épître de Jacques. Benzécri J.-P. (ed.) Pratique de l’analyse de données. Vol. 3: Linguistique et lexicologie. Dunod (Paris), 1981:285-295; Id. Quelques témoins grecs des formes textuelles les plus anciennes de l’Épître de Jacques: le groupe 2138 (ou 614). New Testament Studies. 1981-1982;28:91-115.

6 Finney T.J. The Ancient Witnesses of the Epistle to the Hebrews. A Computer-Assisted Analysis of the Papyrus and Uncial Manuscripts of Pros Ebraiour. Murdoch University (Ph.D. diss.), 1999 (online: https://www.academia.edu/2088754/TH_EWNCIENT_WITNESSES_OF_THE_EPSTLE_TO_THE_HEBREW).

7 Willker W. Principal Component Analysis of Manuscripts of the Gospel of John (online: http://www-user.unibremen.de/~wie/pub/Analysis-PCA.html)

8 We have applied this method twice: Pastorelli D. The Chester Beatty I Papyrus (P45) and the Main Greek Manuscripts of Mark 6 and 9: A Classification Based on a New Quantitative Method. Clivaz C., Zumstein J. (eds.) Reading New Testament Papyri in Context. Lire les papyri du Nouveau Testament dans leur contexte (Bibliotheeca Ephemeridum Theologicarum Lovaniensium, 242). Peeters (Leuven-Paris-Walpole), 2011:281-305; Id. Le texte de l’évangile de Jean dans la traduction latine du Commentaire sur Matthieu d’Origène. Classification des témoins vieux latins du texte Johanne. Loubet M., Pralon D. (eds.) Poikíloi kairopi. Poikíloí kárpoi. Récoltes diverses. Évègéres patiennes, juius et chrétienes. Etudes réunies en hommage à Gilles Dorival (Héritages Méditerranéens. Presses Universitaires de Provence (Aix-en-Provence), 2015:55-69. See also Carlson S.C. The Text of Galatians and Its History (Wissenschaftliche Untersuchungen zum Neuen Testament. 2. Reihe, 385). Mohr Siebeck (Tübingen) 2015.
construed is twofold. On the one hand, it is a question of characterizing quantitatively the relative weight of a variant. Unlike the binary counting of the agreements (1 or 0), the distance between readings allows it to be seen that the variations are not all equivalent. According to the kind of variation and the length of the variation-unit, the distance between two readings oscillates between 0 and 12. On the other hand, the calculation of the distance between manuscripts proves to be a robust tool: it avoids an excessive alienation of the atypical witnesses that present a large number of singular readings, and at the same time offers the necessary precision for a meaningful classification of witnesses.

This method will be applied to the Old Latin witnesses of the Gospel of John (37 to date) and, for a study of a reasonable size, to a chapter as a whole – we have selected chapter 14. The text of these manuscripts is available on the website www.iohannes.com, as part of the edition of the *Vetus Latina*, under the direction of D.C. Parker.10 10 manuscripts are entirely lacunose for this chapter. The four manuscripts that have at the most 10% of the text (Table 1: VL 40 to VL 46) are also excluded from the present study insofar as their low attestation does not yield reliable results11. The result is that 23 codices are used for classification: *Palatinus* (e, VL 2), *Vercellensis* (a, VL 3), *Veronensis* (b, VL 4), *Bezae* (d, VL 5), *Colbertinus* (c, VL 6), *Sangermanensis primus* (g1, VL 7), *Corbeiensis* (ff2, VL 8), *Fossatensis* (VL 9A), *Brixianus* (f, VL 10), *Rehdigeranus* (l, VL 11), Würzburg Univ. 67 (VL 11A), *Monacensis* (q, VL 13), *Usserianus primus* (r1, VL 14), *Aureus* (aur, VL 15), *Sangallensis* (n, VL 16), *Sangallensis 48* (δ, VL 27), *Sangermanensis secundus* (g2, VL 29), *Gatianus* (gat, VL 30), palimpsest of a Gallican lectionary (VL 32), *Carnotensis* (VL 33), Book of Mulling (μ, VL 35), *Sangallensis 60* (VL 47), *Sangallensis 51* (VL 48). The text of the Vulgate (vg) is added, counting as one witness (edition of Stuttgart). As soon as a variation occurs within this set of witnesses, a variation-unit is constituted. Thus we obtain a relatively large amount of text, as shown in Annex 1. There, it can be seen that there are 136 variation-units for 529 words if we take the Vulgate as a point of reference, which are listed according to the 31 verses of John 14.

| Manuscript | Number of lacunae in 136 variation-units | Percentage of preserved variation-units |
|------------|----------------------------------------|----------------------------------------|
| VL 40      | 127                                    | 6.6%                                   |
| VL 10A     | 124                                    | 8.8%                                   |
| VL 39      | 123                                    | 9.6%                                   |
| VL 46      | 122                                    | 10.3%                                  |
| VL 32      | 114                                    | 16.2%                                  |
| VL 16 (n)  | 105                                    | 22.8%                                  |
| VL 11 (l)  | 93                                     | 31.6%                                  |

9 Burton P.H., Houghton H.A.G., MacLachlan R.F., Parker D.C. (eds.) *Vetus Latina. Die Reste der altlateinischen Bibel*. Vol. 19: *Evangelium secundum Iohannem*. Fascicle 1: Jo 1,1-4,48. Fascicle 2: Jo 4,49-9,41. Herder (Fribourg), 2011-2013.

10 VL 18 (π), 20 (ρ), 22 (j), 22A, 23, 24 (ρ), 25 (v), 28 (r1), 34 et 49.

11 In the same way, the conclusions on manuscripts VL 16 (n, 22.8% of preserved variation-units [= Jn 14,23-30]), 32 (16.2% [= vv. 13-19]), and, to a lesser degree, 11 (l, 31.6% [= vv. 23-31]) need some qualification.
I. THE DISTANCE BETWEEN READINGS

A variation-unit can be subject to three kinds of variation: (1) presence / absence; (2) substitution; (3) displacement\(^\text{12}\). In an article of 1988, C.-B. Amphoux\(^\text{13}\) proposed a quantification of the difference between two readings for each kind of variation. We take this measurement system, slightly modified:

– displacement: 1 point per displaced group (the words are the same); examples: *cognovistis me / me cognovistis* (L9c) = 1; *parare vobis locum / locum parare vobis* (L2d) = 1;

– substitution: 1 point if the substitution is made with a similar word or form, 2 points otherwise (most of the words of the variation-unit are the same except the replaced words); examples: *dicit ei / dicit illi* (L5a) = 1; *quia / quoniam* (L28a) = 1, but *paracletum / advocatum* (L16b) = 2;

– presence / absence: 2 points for a verb, a noun, an adjective or an adverb formed from an adjective, 1 point for the others (pronoun, conjunction, preposition, adverb, particle, etc.) (most of the words vary and the calculation is identical whether we count from the reading where the words are present, or from the reading where they are absent); examples: *patrem / patrem meum* (L16a) = 1; *mihi dedit / mihi dedit Pater* (L31e) = 2.

The identification of a displacement or a presence / absence is relatively easy. A substitution is noted when one word changes inside a phrase; however, when the substitution concerns several words, it must always be calculated word for word. Finally, two out of the three, or all three, kinds of variation can be combined. Examples: *accipere saeculum non potest / hic mundus non potest accipere* (L17a) = 4 in sum (displacement of *accipere* = 1; substitution *saeculum / mundus* = 2; presence / absence of *hic* = 1). All the distances between readings are given in Annex 1.

II. THE DISTANCE BETWEEN MANUSCRIPTS

\(^\text{12}\) Thus Fee G.D. On the Types, Classification, and Presentation of Textual Variation. Epp E.J., Fee G.D. *Studies in the Theory and Method of New Testament Textual Criticism* (Studies and Documents, 45). W.B. Eerdmans (Grand Rapids), 1993:63: “The kinds of variation narrow to three: (1) add/omit ... (2) substitution ... and (3) word order ... any two or all three of these may occur in combination in any set of variants”.

\(^\text{13}\) Amphoux C.-B. Un indice de variation pour le classement des états d’un texte. *Revue d’Histoire des Textes*. 1988;18:282.
From the distance between readings, it is possible to define a distance between two manuscripts. The safest definition from a mathematical point of view is that of the Euclidean distance. Considered within this perspective, the distance between two witnesses is equal to the square root of the sum of the squares of the distances between their readings taken two by two. By way of illustration, we may consider the first five variation-units in verse 1 and calculate the Euclidean distance between codex Palatinus (e, VL 2) and the Vulgate (vg):

| Variation-units | L.1a | L.1b | L.1c | L.1d | L.1e |
|-----------------|------|------|------|------|------|
| Distances between the readings of VL 2 (e) and vg | 0    | 1    | 3    | 2    | 0    |

The distance between VL 2 (e) and vg is then equal to:

\[ \sqrt{(0^2 + 1^2 + 3^2 + 2^2 + 0^2)} = \sqrt{14} = 3.7. \]

This definition is now applied to the 136 variation-units for the Vulgate. We give in Table 2 the distances between vg and the 23 Old Latin manuscripts under consideration for John 14. The distances are sorted in increasing order, i.e. from the manuscript closest to vg to the farthest.

Table 2: Distances between vg and the Old Latin Witnesses in John 14

| vg     | Distances |
|--------|-----------|
| VL 33  | 2.65      |
| VL 32  | 3.32      |
| VL 7 (g')| 3.74     |
| VL 29 (g'')| 4.90    |
| VL 11A | 5.92      |
| VL 47  | 5.92      |
| VL 16 (n)| 6.16     |
| VL 9A  | 7.14      |
| VL 48  | 8.19      |
| VL 35 (μ)| 8.25     |
| VL 11 (l)| 8.66     |
| VL 30 (gat)| 9.22    |
Codex Palatinus (e, VL 2) is the farthest from the Vulgate. In addition to that manuscript, we find that the Old Latin manuscripts known to be the most representative of the early, pre-Vulgate text are the farthest from vg: VL 3 (a), 14 (r'), 5 (d), 13 (q), 6 (c), 8 (ff'), and 4 (b). Conversely, the Old Latin manuscripts more influenced by the Vulgate (mixed texts) are: VL 33, 7 (g'1), 29 (g'2), 11A, and 47. On the other hand, the manuscripts VL 32 and 16 (n) should for the moment be put to one side because of their lacunae. Indeed, if the same list of distances is drawn up for VL 32, vg is the fifth witness and four other manuscripts are closer to VL 32; likewise, for VL 16 (n), vg is in 10th place. The distance between two manuscripts only makes sense within the context of all the 24 witnesses. Only in this network of interrelationships is a comparison possible. It is thus necessary to calculate the distances of all the witnesses two by two. For John 14, one obtains 276 values presented in a lower triangular matrix (Table 3, see end of article). The majority of the quantitative studies would then show for each witness a column where the distances from the other manuscripts would be sorted in increasing order. The search for a classification on this model would prove difficult, if not impossible, because of the number of columns to be treated (23) and their identical length. In the face of this mass of data, a systematic method using the computer is preferable. The most appropriate statistical tool in our view is the clustering method.

\begin{tabular}{|l|c|}
\hline
VL 15 (\textit{aur}) & 10.25 \\
VL 10 (\textit{f}) & 12.21 \\
VL 27 (\textit{d}) & 12.49 \\
VL 4 (\textit{b}) & 17.41 \\
VL 8 (\textit{ff'}) & 17.58 \\
VL 6 (\textit{c}) & 17.80 \\
VL 13 (\textit{q}) & 17.80 \\
VL 5 (\textit{d}) & 19.70 \\
VL 14 (\textit{r'}) & 20.22 \\
VL 3 (\textit{a}) & 24.43 \\
VL 2 (\textit{e}) & 26.50 \\
\hline
\end{tabular}

\footnote{The upper triangle is left empty in so far as it would be identical by symmetry to the diagonal.}
III. CLASSIFICATION

After first presenting this method, we shall then go on to interpret the processing of the data of John 14.

3.1. The Clustering Method

The purpose of the clustering method is to distribute the individual elements of the sample in clusters where they are as similar as possible. At the same time, the clusters should be as dissimilar as possible. The construction of a hierarchical clustering entails, first, the formation of small clusters with very similar individual elements, then from these clusters to build others less and less homogeneous, until the sample is exhausted. This algorithm is called the “Hierarchical Ascendant Clustering” (HAC). It is based on the calculation of the distance between two distinct clusters. The rule for calculating this distance is called an “aggregation criterion”. The aggregation criteria are as varied as the many possibilities of classification. Let us mention three of the most common:

– The minimum step or the criterion of the nearest neighbours (single linkage): the distance between two clusters is the smallest distance between elements of the two clusters.

– The maximum step or the criterion of the most remote neighbours (complete linkage): the distance between two clusters is the greatest distance between elements of the two clusters.

– The criterion of the average (average linkage): the distance between two clusters is the average of all the distances between elements of the two clusters.

The distance between clusters having been defined, the algorithm of the HAC then proceeds to the next stages. At the initial stage, each witness forms a cluster. Thus, there are 24 clusters. In the first stage, the table of distances between witnesses makes it possible to bring together the two closest witnesses, which will be aggregated into a new cluster. We then obtain 23 clusters. In the second stage, a new table of distances between the 23 clusters is established. The two closest clusters are gathered together and we obtain 22 clusters. The process is repeated until we obtain only one cluster. The result of the HAC is represented by a clustering tree or “dendrogram”. This encompasses all stages of aggregation. The interpreter must therefore locate a natural break in the tree, enabling him or her to identify the number of homogeneous clusters and to give them a meaning. The tree schematizes distances between witnesses, or conversely a close relationship. In no way does it reflect any filiation and it looks nothing like a *stemma codicum*.

For statistical processing, we used the free software R and chose as the criterion of aggregation of clusters the method of Ward, which is the standard method used for Euclidean data. The manuscript

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15 For recent discussions about stemmatology, see the contributions collected in the two following volumes: van Reenen P., van Mulken M. (eds.) *Studies in Stemmatology*. J. Benjamins (Amsterdam-Philadelphia), 1996; van Reenen P., den Hollander A., van Mulken M. (eds.) *Studies in Stemmatology II*. J. Benjamins (Amsterdam-Philadelphia), 2004. As regards the New Testament, one should note in the second volume the contributions of Gerd Mink, Klaus Wachtel, Ulrich Schmid, and Dina Mironova.

16 The software PHYLIP (Phylogeny Inference Package), created by Joseph Felsenstein of the University of Washington, free of charge, also offers several algorithms developed for phylogeneticists or biologists. The phylogenetic methods have been used in a collaboration between philologists and biologists at the Catholic University of Louvain-la-Neuve, producing several stimulating studies in the patristic field: Macé C., Schmidt T., Weiler J.-F. Le classement des manuscrits par la statistique et la phylogénétique: le cas de Grégoire de Nazianze et de Basile le Minime. *Revue d’Histoire des Textes*. 2001;31:243-273; Macé C., Baret P.V., Lantin A.-C. Philologie et phylogénétique: Regards croisés en vue d’une édition critique d’une homélie de Grégoire de Nazianze. Bozzi A., Cignoni L., Lebrave J.-L. (eds.) *Digital Technology and Philological Disciplines* (Linguistica
3.2. Interpretation of the Classification

The classification identifies two groups: in the lower part of the tree are the Old Latin manuscripts most representative of the pre-Vulgate text (12 witnesses), and in the upper part, the manuscripts whose text is more influenced by the Vulgate (11 witnesses). We suggest an interpretation of this classification into two groups, made in the light of the text-types masterfully synthesized by Bonatius Fischer\textsuperscript{17}.

3.2.1. Group 1: the Old Latin manuscripts

It is generally agreed that the Old Latin manuscripts can be divided into two text-types. The African type is the text from around 230 and is represented primarily by codex Bobiensis (k, VL 1), then by Cyprian and e (VL 2). It gradually gives way to the European type of which b (VL 4), ff\textsuperscript{5} (VL 8) and i (VL 17) are the leaders (the Italian text of the years 350-380). Unfortunately, k (likewise i) is lacunose for John. VL 3 (a) and 16 (n) represent a first form of the European type, close to Novatian. Also belonging to the European Old Latin manuscripts group whose African stratum is still present are codex Colbertinus (c, VL 6) and the problematic codex Bezae (d, VL 5), and codex Usserianus primus (r\textsuperscript{1}, VL 14), which is the main representative of a subgroup of the Italian type (Gallo-Irish group).

These Old Latin manuscripts are found in the group of witnesses located in the lower part of the tree (Group 1). The only notable exception is the presence of codex Sangallensis 48 (δ, VL 27). In our study of the text of the Gospel of John in the Latin translation of Origen’s Commentary on Matthew, we noticed that VL 27 formed in itself a cluster in the tree because of the large number of conflated

\textsuperscript{17} Fischer B. Das Neue Testament in lateinischer Sprache. Der gegenwärtige Stand seiner Erforschung und seine Bedeutung für die griechische Textgeschichte. Kurt A. (ed.) Die alten Übersetzungen des Neuen Testaments, die Kirchenväterzitate und Lektionare. Der gegenwärtige Stand ihrer Erforschung und ihre Bedeutung für die griechische Textgeschichte (Arbeiten zur neutestamentlichen Textforschung, 5). W. de Gruyter (Berlin-New York), 1972:30-39. See also Gryson R. Altlateinische Handschriften. Manuscrits vieux latins. Répertoire descriptif. Première partie: Mss 1-275 d’après un manuscrit inachevé de Hermann Josef Frede † (Vetus Latina. Die Reste der altlateinischen Bibel, 1/2A). Verlag Herder (Fribourg-en-Brisgau), 1999; Haelewynck J.-C. Les versions anciennes. Amphoux C.-B., Dorival G., Elliott J.K., Haelewynck J.-C., Pastorelli D., Reynard J. Manuel de critique textuelle du Nouveau Testament. Vol. 1: Introduction générale (Langues et cultures anciennes, 22). Éditions Safran (Bruxelles), 2014:87-88.
readings\textsuperscript{18}. The copyist seemingly has before his eyes two distinct texts, one of which preserves Old Latin readings. A classification of group 1 without this manuscript provides better results (Figure 2).

The algorithm provides a tree which enables us to follow the construction of each node with a graduated scale (Figure 1: 0-50; Figure 2: 0-35). In reading the tree, the interpreter has to determine where to make a break that enables a number of homogeneous clusters to be identified. The first clusters formed, and thus the more homogeneous ones, are in the group of manuscripts influenced by the Vulgate (Group 2). As regards the Old Latin manuscripts group (Group 1), we have four clusters in the following order of appearance: (1) VL 6 (c), 11 (l), 8 (ff\textsuperscript{2}), 16 (n), and 4 (b); (2) VL 10 (f), 13 (q), 14 (r\textsuperscript{1}), and 5 (d); (3) VL 3 (a); (4) VL 2 (e). Six comments may be made:

1. The first cluster formed clearly corresponds to the European type, of which codex Veronensis (b, VL 4) and Corbeiensis (ff\textsuperscript{2}, VL 8) are the best representatives. Moreover, VL 6 (c) is known to be close to VL 8 (ff\textsuperscript{2})\textsuperscript{19}.

2. VL 14 (r\textsuperscript{1}), which is an excellent witness of the European text and belongs to the Gallo-Irish group, shares more than one reading with codex Monacensis (q, VL 13). The philologist will not fail to be surprised by the place of codex Rehdigeranus (l, VL 11). It is generally agreed that q and l form a subgroup of the European text type\textsuperscript{20}. However l, which contains only the verses 23-31 of John 14, opposes this view here.

3. Codex Brixianus (f, VL 10) contains a “mixed” text\textsuperscript{21}: as regards the gospel of John, it is classified with the Old Latin manuscripts, the Vulgate influence being secondary.

4. In the construction of the clustering tree, codex Bezae (d, VL 5) precedes VL 3 (a) and 2 (e). At the philological level, the text of d for the gospels of Luke and John is between e and a. It has an African stratum while under the influence of the European text\textsuperscript{22}.

5. Codex Vercellensis (a, VL 3), which represents the oldest form of the European text, usually in the company of fragments of St. Gallen, VL 16 (n), constitutes a cluster by itself.

6. Codex Palatinus (e, VL 2) is the most difficult to classify following the formation of clusters. It is its African stratum that no doubt accounts for this fact.

3.2.2. Group 2: the Old Latin manuscripts more greatly influenced by the Vulgate (mixed text)

We find three clusters in the following order of appearance: (1) vg, VL 33, 7, 29, 11A, 47; (2) VL 48, 9A, 35, 30; (3) VL 15. Let us examine them.

1. VL 33, which contains only the gospel of John, here is the closest to the Vulgate text: account must be taken of the fact that it has an Old Latin text for chapters 1-6 and Vulgate for the rest. Codex

\textsuperscript{18} Pastorelli D. Commentaire sur Matthieu d’Origène. 2015:64.

\textsuperscript{19} The closest manuscript to VL 6 (c) is 8 (ff\textsuperscript{2}) at a distance of 13.27, followed by 4 (b) at a distance of 15.46.

\textsuperscript{20} Gryson R. Altlateinische Handschriften, 1999:34.

\textsuperscript{21} A “mixed” text is a text that either simultaneously contains Old Latin and Vulgate readings in variable proportions or alternates between Old Latin sections and Vulgate sections.

\textsuperscript{22} Auwers J.-M. Le texte latin des Évangiles dans le Codex de Bèze. Parker D.C., Amphoux C.-B. (eds.) Codex Bezae. Studies from the Lunel Colloquium June 1994 (New Testament Tools and Studies, 22). E.J. Brill (Leyde-New York-Cologne), 1996:196-209.
Sangermanensis primus (g', VL 7) also has without doubt an Old Latin stratum but, in this case, the influence of Vulgate is predominant. VL 29 contains a mixed text which derives from a regional group of Vulgate manuscripts, Celtic family DELQR. VL 47 has an Irish mixed text (Old Latin in Jn 1,29-3,26). Finally, VL 11A was recently included in the list of the Vetus Latina Institut and Hugh Houghton\textsuperscript{23} has shown that the text of Jn 1,1-5,40 and 12,34-13,10 is Old Latin.

2. Manuscripts VL 35, 30 and 48 have in common that they display an Irish mixed text for John (Celtic family DELQR). VL 9A must be added to these witnesses. The recent study of Houghton\textsuperscript{24} prompted the inclusion of this manuscript in the list of Old Latin manuscripts. The author concludes from a survey of synonymous terms that this manuscript has an Old Latin source – the parallels with VL 2, 3, 13, 14 show the antiquity of the source text – but at the same time that there is no closeness to a particular manuscript. But according to our previous study\textsuperscript{25}, 9A forms a cluster with codex Aureus (aur, VL 15) which contains a mixed text with Vulgate readings and Old Latin readings of the European type. This cluster VL 9A-15 was formed immediately after the cluster VL 35, 30, 48. In the present case, the classification is similar: 9A is inserted into the Celtic family, just before the inclusion of aur, which forms a cluster apart.

3.3. Classification into Text-Types

The classification into two groups that has been achieved deserves to be compared with that proposed by Philip Burton\textsuperscript{26}, insofar as discrepancies with our conclusions are apparent. Burton identifies the existence of two European text-types (not one), the second containing the Vulgate and mixed texts; the two groups are \textit{a d q r} and \textit{aur c ff}\textsuperscript{2} \textit{l vg}. His classification is based on a review of the translation of nine Greek terms. His main result is the non-existence of a European kernel formed by \textit{b} and \textit{ff}\textsuperscript{2}. On the one hand, \textit{b} would belong to the first group for John 1-9 and to the second for 10-21. On the other hand, \textit{ff}\textsuperscript{2} should be classified with a mixed text and the Vulgate. In our view, the sample used by Burton is too small, in terms of not only the number of variants but also the number of manuscripts. The sample of 136 variation-units of John 14 represents more than 520 words and involves 23 witnesses. The classification thereby obtained confirms the European kernel \textit{b-ff}\textsuperscript{2} in the Old Latin witnesses (Group 1) and also refutes any exclusion of manuscripts \textit{c, l and f} from this group. Furthermore, it demonstrates conclusively the separation between the group of Old Latin manuscripts (Group 1) and the group influenced by the Vulgate (Group 2).

P.H. Burton, H.A.G. Houghton, R.F. MacLachlan, and D.C. Parker are now editing the \textit{Vetus Latina} of the Gospel of John, of which the first nine chapters have already been published\textsuperscript{27}. The second Old Latin Gospel being published is that of Mark edited by Jean-Claude Haelewyck\textsuperscript{28}. A comparison between the two projects is illuminating in this regard. The latter endeavours to reconstruct the text-types along the lines proposed by B. Fischer: \textbf{K}, the ancient African text VL 1 [\textit{k}], \textbf{C}, the recent African

\textsuperscript{23} Houghton H.A.G. A Newly Identified Old Latin Gospel Manuscript: Würzburg Universitätsbibliothek M.p.th.f.67. \textit{Journal of Theological Studies}. 2009;60:1-21.
\textsuperscript{24} Houghton H.A.G. The St Petersburg Insular Gospels: Another Old Latin Witness. \textit{Journal of Theological Studies}. 2010;61:110-127.
\textsuperscript{25} Pastorelli D. \textit{Commentaire sur Matthieu d’Origène}, 2015:64.
\textsuperscript{26} Burton P., \textit{The Old Latin Gospels. A Study of their Texts and Language} (Oxford Early Christian Studies). Oxford University Press (Oxford), 2000:62-74.
\textsuperscript{27} Burton P.H., Houghton H.A.G., MacLachlan R.F., Parker D.C. (eds.), \textit{Iohannem}. Fascicle 1-2, 2011-2013.
\textsuperscript{28} Haelewyck J.-C. (ed.) \textit{Vetus Latina. Die Reste der alllateinischen Bibel}. Vol. 17: \textit{Evangelium secundum Marcum}. Fascicle 1-5. Herder (Fribourg), 2013-2016 (introduction and edition of Mark 1,1-8,11).
text (VL 2 [c]), D, the European text (VL 3 [a] : VL 16 [n+α]), I, the European text (VL 4 [b]; 8 [ff²]; 17 [i]; 5 [d]; 13 [q]; 14 [r’]; 6 [c]), V, the Vulgate text. In his review of the third instalment of the edition of Mark, Houghton draws a parallel between the two projects and condemns the text-type approach: “The alternative, adopted in the Vetus Latina edition of John, is to jettison text-types altogether and leave users to draw their own conclusions from an unmediated presentation of the manuscripts”. Indeed, the editors of John, who will deliver their introduction at the end of their work, abandon text-types to adopt three groups:

Group 1: VL 2 3 4 (in the first nine chapters) 5 13 14 20 22 24 and 47 (John 2)

Group 2A: VL 6 8 11 11A 16 18 25 and 4 (from John 10 onwards)

Group 2B: vg VL 7 9A 10 15 28 29 30 32 35 47 48.

Considering the manuscripts used for John 14, our classification results in a total of six clusters, four for the Old Latin manuscripts (Group 1) and two for manuscripts more influenced by the Vulgate (Group 2):

Group 1A: VL 2

Group 1B: VL 3

Group 1C: VL 5 10 13 14

Group 1D: VL 4 6 8 11 16

Group 2A: VL 9A 30 35 48 (15)

Group 2B: vg VL 7 11A 29 33 47.

Let us examine the three groups of the Vetus Latina edition of John. Its Group 1 gathers our groups 1A, 1B, and 1C, except that VL 10 is missing. Group 2A corresponds to our group 1D. Group 2B brings together our groups 2A and 2B, except VL 11A is missing. Abandoning the writing of the history of the text no longer enables the distances existing between clusters VL 2 / VL 3 / VL 5, 10, 13, 14 (our groups 1A, 1B, and 1C) to be taken into account, nor the gap between the two subgroups of the Vulgate sphere (our groups 2A and 2B). The Clustering Method allows the construction of each node to be followed. So gradually as nodes are formed, the distances between manuscripts increase. Thus the Clustering Method shows that it is impossible that Group 1 of the Vetus Latina of John constitutes one single homogeneous cluster. Internal distances are too important and the existence of three clusters must be recognized, which are also the last to be formed in the tree (see Figure 2: Group 1A, 1B, 1C). Conversely, the first cluster formed, the one that is the most homogeneous (Group 1D), is the European kernel of which VL 4 (b) and 8 (ff²) are the best representatives. In sum, our classification of Old Latin witnesses

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29 Ibid.:24-111.
30 Journal of Theological Studies. 2015:66:396. Houghton H.A.G. Patristic Evidence in the New Edition of the Vetus Latina Iohannes. Vinzent M., Mellerin L., Houghton H.A.G. (eds.) Studia Patristica. Vol. LIV. Papers presented at the Sixteenth International Conference on Patristic Studies held in Oxford 2011. Volume 2: Biblical Quotations in Patristic Texts. Peeters (Leuven-Paris-Walpole), 2013:71: “The variety of readings preserved in the manuscripts meant that it was not necessary to use the patristic citations as the basis for text-types. In fact, no hypothetical text-types are reconstructed in the edition: the schema instead gives the text of the manuscripts in three broad groups at the top of the page”.
31 Burton P.H., Houghton H.A.G., MacLachlan R.F., Parker D.C. (eds.) Iohannem. Fascicle 1, 2011:11, also excluded is Sangallensis 48 (δ, VL 27).
essentially confirms the text-types previously generated for the gospels, especially those of Mark. Patristic quotations are then used to locate in time and space these different text-types.

CONCLUSION

Following this path, we can draw conclusions both on the method and on the results obtained. From a methodological point of view, the calculation of distances between readings, then between witnesses, is mainly characterized by stability and robustness of results. In terms of readings, the method allows us to take into account quantitatively the various kinds of variation on a scale ranging from 0 to 12, while the counting of the agreements standardizes the difference between readings (0 or 1). In terms of manuscripts, it makes a continuous reading of the text of John 14 possible. It thus avoids an arbitrary selection of variation-units that possibly would lead textual material to be overlooked that could be useful for the classification and especially to increase unduly a particular textual affinity. We have to apply a proportionality principle that results in a reliable classification of witnesses. The selection, for example, of the non-Vulgate readings of a manuscript alters the results; the same methodological error was made for Greek manuscripts of the New Testament when the percentages of agreements between two manuscripts were calculated by excluding the readings of the “Textus Receptus”. In sum, attention must be paid to the network of interrelationships within which a comparison is alone possible. This is the goal of the method of “classification” (“Hierarchical Ascendant Clustering”), which analyzes hundreds of distances. In John 14, the clusters revealed by the algorithm show clearly that the text-types synthesized by Bonifatius Fischer are not to be doubted. On the contrary, textual taxonomy finds in the clustering method a solid foundation.
| Distantces | V8 | VL2(e) | VL3(a) | VL4(b) | VL5(d) | VL6(c) | VL7(g) | VL8(ff) | VL9A | VL10(f) | VL11(l) | VL11A | VL13(q) | VL14(r) | VL15(aar) | VL16(n) | VL17(n) | VL18(g) | VL19(μ) | VL20(μ) | VL21(μ) | VL22(μ) | VL23(μ) | VL24(μ) | VL25(μ) | VL26(μ) | VL27(μ) | VL28(μ) | VL29(μ) | VL30(μ) | VL31(μ) | VL32(μ) | VL33(μ) | VL34(μ) | VL35(μ) | VL36(μ) | VL37(μ) | VL38(μ) | VL39(μ) | VL40(μ) | VL41(μ) | VL42(μ) | VL43(μ) | VL44(μ) | VL45(μ) | VL46(μ) | VL47(μ) |
|-----------|----|--------|--------|--------|--------|--------|--------|--------|------|--------|--------|-------|--------|--------|----------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
|           |    | 26.50  | 24.43  | 17.74  | 25.87  | 26.94  | 23.65  | 17.56  | 24.71 | 30.68 | 23.65  | 8.60  | 14.94  | 14.76  | 14.56    | 8.40   | 8.40   | 8.80   | 10.60  | 8.60   | 12.65  | 12.65  | 12.65  | 12.65  | 11.65  | 11.65  | 11.65  | 11.65  | 11.65  | 11.65  | 11.65  | 11.65  | 11.65  | 11.65  | 11.65  |
|           |    |        |        |        |        |        |        |        |      |        |        |       |        |        |           |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |

http://jdmdh.episciences.org
Table 3: Distances between Manuscripts in the 136 Variation-Units of John 14

| VL35(μ) | 8.2 | 5   | 26. | 49  | 16. | 79  | 20. | 47  | 16. | 61  | 8.6 | 6   | 16. | 88  | 9.5 | 4   | 12. | 85  | 9.7 | 5   | 9.6 | 4   | 18. | 19  | 18. | 63  | 12.2 | 9  | 7.4 | 8   | 13. | 53  | 8.6 | 6   | 10.9 | 1  | 4.12 | 7. | 28  |
|---------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| VL47    | 5.9 | 2   | 26. | 65  | 24. | 39  | 17. | 83  | 20. | 15  | 18. | 41  | 6.8 | 6   | 18. | 25  | 8.7 | 2   | 12. | 57  | 8.6 | 3   | 18. | 00  | 20. | 42  | 11.2 | 2  | 6.3 | 2   | 13. | 49  | 6.8 | 6   | 10.0 | 5  | 3.   | 61  | 5.  | 83  | 3   |
| VL48    | 8.1 | 9   | 25. | 85  | 24. | 02  | 17. | 00  | 20. | 66  | 18. | 33  | 8.6 | 6   | 17. | 94  | 8.4 | 9   | 12. | 88  | 10. | 39  | 9.1 | 1   | 17. | 52  | 19. | 57  | 12.3 | 3  | 6.0 | 8   | 13. | 38  | 8.9 | 4   | 11.0 | 0  | 2.   | 65  | 8.  | 00  | 9.5 | 9   | 11  |
Figure 1. Classification of 23 Latin Witnesses in John 14

```r
as.dist(t)
hclust(*, "ward")
```
Figure 2. Classification of 11 Old Latin Witnesses in John 14
Annex 1: Variation-Units and Distances between Readings in John 14

**L1a**

|   |   | vg 2 4 7 8 9A 10 11A 13 14 27 29 30 33 35 39 40 47 48 |
|---|---|---|
| et ait discipulis suis | 6 | 0 | 3 5 6 15 |

**L1b**

| non turbetur cor vestrum | 0 | vg 4 6 7 8 9A 10 11A 15 29 30 33 35 39 40 47 48 |
|---|---|---|
| non conturbetur cor vestrum | 1 | 0 | 2 13 14 |
| ne conturbetur cor vestrum | 2 | 1 | 0 | 3 |
| non conturbetur vestrum cor | 2 | 1 | 2 | 0 | 5 27 |

**L1c**

|   |   | vg 3 4 5 6 7 8 9A 10 11A 13 14 15 27 29 30 33 35 39 40 47 |
|---|---|---|
| neque trepidet | 3 | 0 | 2 |
| neque formidet | 3 | 2 | 0 | 48 |

**L1d**

| creditis in Deum | 0 | vg 7 9A 10 11A 29 33 35 39 |
|---|---|---|
| credite in Deum | 1 | 0 | 3 4 5 6 8 13 14 15 27 30 47 48 |
| credite in Deo | 2 | 1 | 0 | 2 |
| credite | 4 | 3 | 3 | 0 | 40 |

**L1e**

| in me credite | 0 | vg 2 4 5 6 7 8 9A 10 11A 13 14 15 27 29 30 33 35 47 48 |
|---|---|---|
| in me creditis | 1 | 0 | 3 |
| - | 4 | 4 | 0 | 39 40 |

**L2a**
| Mansiones multae sunt | 0 | vg 3 4 5 6 8 10 10A 11A 15 27 29 33 35 46 47 48 |
|----------------------|---|----------------------------------|
| Multae mansiones sunt| 1 0 | 9A 13 14 30 |
| Multae sunt mansiones| 1 1 0 2 7 |

**L.2b**

| Si quominus | 0 | vg 2 4 5 6 7 8 9A 11A 15 27 30 33 35 47 48 |
|-------------|---|----------------------------------|
| Alioquin    | 2 0 3 10 13 14 29 |

**L.2c**

| Quia vado | 0 | vg 4 6 7 8 9A 11A 15 29 30 33 35 47 48 |
|-----------|---|----------------------------------|
| Eo        | 3 0 2 3 |
| Quoniam eo| 3 1 0 5 |
| Vado      | 1 2 3 0 10 13 |
| Vado vel abeo | 4 4 5 3 0 27 |

**L.2d**

| Parare vobis locum | 0 | vg 2 4 6 7 8 9A 10 11A 30 33 35 47 48 |
|--------------------|---|----------------------------------|
| Parare locum vobis| 1 0 | 5 15 27 |
| Ut praeparem vobis locum | 2 3 0 | 3 |
| Prepare locum vobis | 2 1 3 0 | 13 |
| Locum parare vobis | 1 1 3 2 0 | 29 |

**L.3a**

| Et si abiero | 0 | vg 2 4 5 6 7 8 10 11A 15 27 29 30 33 35 47 48 |
|-------------|---|----------------------------------|
| Si abiero   | 1 0 3 |
| Et si iero  | 1 2 0 13 |
### L.3b

|         | 0 | vg 3 4 7 8 13 29 33 35 47 48 |
|---------|---|-------------------------------|
| et praeparavero | 0 |                               |
| et paravero   | 1 | 2 6 11A 15 30                  |
| parare        | 2 | 2 0                          |
| praeparare    | 2 | 2 0 10                        |
| praeparavero  | 1 | 2 0 10 27                      |

### L.3c

|          | 0 | vg 4 6 7 8 10 11A 13 15 27 29 30 33 35 47 |
|----------|---|---------------------------------------------|
| vobis locum | 0 |                                |
| -        | 3 | 2                                    |
| locum vobis | 1 | 1 3 0                                |
| vobis    | 2 | 2 1 2 0                              |
| locum    | 1 | 1 2 1 3 0                           |

### L.3d

|         | 0 | vg 4 6 8 9A 10 11A 15 29 30 33 35 47 |
|---------|---|--------------------------------------|
| iterum venio | 0 |                                |
| iterum veniam | 1 | 1 0 2 7 13 27 48                   |
| rursum veniam | 2 | 1 0 3                               |
| venio iterum | 1 | 1 2 3 0                             |

### L.3e

|         | 0 | vg 7 9A 10 11A 27 29 30 33 35 47 48 |
|---------|---|-------------------------------------|
| accipiam | 0 |                                |
| sumam   | 2 | 2                                  |
| adsumam | 2 | 1 0 3 5                            |
| accersio | 2 | 2 0 4 6 8 15                       |
| acersiam / arcessam | 2 | 2 2 1 0 13 14                     |

### L.3f
|                |                |
|----------------|----------------|
| **L3g**        |                |
| ut ubi sum ego | 0              |
|                | vg 7 11A 27 33 35 47 48 |
| ut sicubi sum ego | 1 0         |
|                | 2              |
| ut ubi ego sum | 1 2 0          |
|                | 4 5 6 8 9A 10 13 15 29 |
| et ego ubi sum | 2 3 2 0        |
|                | 3              |
| et ubi sum ego | 1 2 2 1 0      |
|                | 30             |

|                |                |
|----------------|----------------|
| **L3h**        |                |
| sitis          | 0              |
|                | vg 2 3 4 6 8 9A 10 11A 13 14 15 27 29 33 35 47 48 |
| eritis         | 1 0            |
|                | 5              |
| scitis         | 2 2            |
|                | 7 30           |

|                |                |
|----------------|----------------|
| **L4a**        |                |
| quo ego vado   | 0              |
|                | vg 6 7 9A 10 27 29 30 33 35 47 48 |
| quo eam        | 3 0            |
|                | 2              |
| quo vado       | 1 2 0          |
|                | 3 4 8 13 15 35 |
| ubi vado       | 2 3 1 0        |
|                | 5 14           |
| quo ego        | 2 3 3 4 0      |
|                | 11A            |

|                |                |
|----------------|----------------|
| **L4b**        |                |
| scitis         | 0              |
|                | vg 2 4 5 6 7 8 9A 11A 14 15 27 29 30 33 35 47 48 |
| nostis         | 2 0            |
|                | 10 13          |
| -              | 2 2 0          |
|                | 3              |
|   |   | vg |   |   |   |
|---|---|----|---|---|---|
| L4c | et viam scitis | 0 | 4 5 7 9A 10 11A 13 15 29 30 33 35 47 |
|   | et viam nostis | 2 | 0 | 2 6 8 27 48 |
|   | nostis viam | 4 | 2 | 0 | 3 |
| L5a | dicit ei | 0 | 4 6 7 8 9A 11A 15 27 29 30 33 35 47 48 |
|   | dicit illi | 1 | 0 | 3 5 13 |
|   | ait | 3 | 3 | 0 | 2 |
|   | ait illi | 3 | 2 | 1 | 0 | 10 |
| L5b | - | 0 | 2 3 4 6 7 8 9A 10 11A 13 14 15 27 29 30 33 35 47 48 |
|   | qui dicitur Didymus | 5 | 0 | 5 |
| L5c | domine nescimus | 0 | 3 4 5 6 8 9A 10 11A 13 14 15 27 29 30 33 35 47 48 |
|   | domine domine non scimus | 4 | 0 | 2 |
|   | nescimus | 2 | 6 | 0 | 7 |
| L5d | quo vadis | 0 | 3 4 6 7 8 9A 10 11A 13 15 27 29 30 33 35 47 48 |
|   | quo eas | 2 | 0 | 2 |
|   | ubi vadis | 1 | 3 | 0 | 5 14 |
| L5e | et quomodo possumus | 0 | 6 7 8 9A 10 11A 15 27 29 30 33 35 47 48 |
|   | et quomodo | 2 | 0 | 2 5 |
|   | quomodo | 3 | 1 | 0 | 3 4 |
| L5f            |               |
|----------------|---------------|
| et unde possumus | 1 3 4 0 13    |
| quomodo possumus | 1 3 2 2 0 14  |

| L6a            |               |
|----------------|---------------|
| viam scire     | vg 6 7 8 9A 10 11A 13 15 27 29 33 35 47 48 |
| viam nosse     | 2 0 14 30     |
| viam scimus    | 1 2 0 4       |
| viam novimus   | 2 1 2 0 2 5   |
| novimus viam   | 3 2 3 1 0 3   |

| L7a            |               |
|----------------|---------------|
| si cognovissetis me | vg 7 9A 15 27 29 30 33 35 48 |
| si cognovistis me   | 1 0 2 4 5 6 8 11A 47    |
| si me cognovistis   | 2 1 0 3       |
| si cognosceretis me | 1 1 2 0 10     |
| et si me nostis     | 4 4 3 4 0 13    |
| si sciretis me      | 2 2 3 2 4 0 14   |

| L7b            |               |
|----------------|---------------|
| et patrem meum utique | vg 7 9A 11A 15 27 29 33 35 47 48 |
| et patrem meum    | 1 0 2 3 4 5 6 8 13 14 30 |
| utique et patrem meum | 1 1 0 10     |

| L7c            |               |
|----------------|---------------|

22
|                | vg 7 9A 15 27 29 30 33 35 48 |
|----------------|-------------------------------|
| cognovissetis | 0                             |
| cognoscitis    | 1 0                           |
| cognovistis    | 1 1 0                         |
| scietis        | 2 2 2 0                      |
| cognosceretis  | 1 1 1 2 0                    |
| sciretis       | 2 2 2 1 2 0                  |
| cognoscretis   | 1 1 1 2 1 2 0                |

**L7d**

|                | vg 2 4 5 6 7 8 9A 10 11A 14 15 27 29 30 33 35 47 48 |
|----------------|-----------------------------------------------------|
| et amodo       | 0                                                   |
| iam ex hoc     | 4 0                                                 |
| et ex nunc     | 2 3 0                                               |

**L7e**

|                | vg 7 9A 11A 33 |
|----------------|---------------|
| cognoscitis eum| 0             |
| nostis illum   | 3 0           |
| nostis eum     | 2 1 0         |
| cognoscite eum | 1 3 2 0      |
| cognoscretis eum| 1 3 2 1 0 |
| scietis eum    | 2 3 2 2 2 0  |

**L7f**

|                | vg 4 5 6 7 8 9A 13 15 27 29 30 33 35 47 48 |
|----------------|------------------------------------------------|
| vidistis eum   | 0                                              |
| videtis eum    | 1 0                                            |
| vidistis illum | 1 2 0                                         |
| vidistis       | 1 2 1 0                                       |
|      |   |                  |                    |
|-----|---|------------------|--------------------|
| L8b |   |                  |                    |
|     | 0 | vg 2 3 4 6 7 8 9A 10 10A 11A 13 14 15 27 29 30 33 35 47 48 |
|     | 2 |                  |                    |
|     | 3 |                  |                    |
|     | 4 |                  |                    |
|     | 5 |                  |                    |
|     | 6 |                  |                    |
|     | 7 |                  |                    |
|     | 8 |                  |                    |
|     | 9 |                  |                    |
|     | A |                  |                    |
|     | 10|                  |                    |
|     | 11|                  |                    |
|     | 12|                  |                    |
|     | 13|                  |                    |
|     | 14|                  |                    |
|     | 15|                  |                    |
|     | 27|                  |                    |
|     | 29|                  |                    |
|     | 30|                  |                    |
|     | 33|                  |                    |
|     | 35|                  |                    |
|     | 46|                  |                    |
|     | 47|                  |                    |
|     | 48|                  |                    |
| L9a |   |                  |                    |
|     | 0 | vg 4 6 7 8 9A 11A 14 15 27 29 30 33 35 47 48 |
|     | 2 |                  |                    |
|     | 3 |                  |                    |
|     | 4 |                  |                    |
|     | 5 |                  |                    |
|     | 6 |                  |                    |
|     | 7 |                  |                    |
|     | 8 |                  |                    |
|     | 9 |                  |                    |
|     | A |                  |                    |
|     | 10|                  |                    |
|     | 11|                  |                    |
|     | 12|                  |                    |
|     | 13|                  |                    |
|     | 14|                  |                    |
|     | 15|                  |                    |
|     | 27|                  |                    |
|     | 29|                  |                    |
|     | 30|                  |                    |
|     | 33|                  |                    |
|     | 35|                  |                    |
|     | 47|                  |                    |
|     | 48|                  |                    |
| L9b |   |                  |                    |
|     | 0 | vg 2 3 5 6 7 9A 10 11A 13 14 15 27 29 30 33 35 47 48 |
|     | 2 |                  |                    |
|     | 3 |                  |                    |
|     | 4 |                  |                    |
|     | 5 |                  |                    |
|     | 6 |                  |                    |
|     | 7 |                  |                    |
|     | 8 |                  |                    |
|     | 9 |                  |                    |
|     | A |                  |                    |
|     | 10|                  |                    |
|     | 11|                  |                    |
|     | 12|                  |                    |
|     | 13|                  |                    |
|     | 14|                  |                    |
|     | 15|                  |                    |
|     | 27|                  |                    |
|     | 29|                  |                    |
|     | 30|                  |                    |
|     | 33|                  |                    |
|     | 35|                  |                    |
|     | 47|                  |                    |
|     | 48|                  |                    |
| L9c |   |                  |                    |
|     | 0 | vg 4 5 6 7 8 9A 10 11A 27 29 30 33 35 47 48 |
|     | 2 |                  |                    |
|     | 3 |                  |                    |
|     | 4 |                  |                    |
|     | 5 |                  |                    |
|     | 6 |                  |                    |
|     | 7 |                  |                    |
|     | 8 |                  |                    |
|     | 9 |                  |                    |
|     | A |                  |                    |
|     | 10|                  |                    |
|     | 11|                  |                    |
|     | 12|                  |                    |
|     | 13|                  |                    |
|     | 14|                  |                    |
|     | 15|                  |                    |
|     | 27|                  |                    |
|     | 29|                  |                    |
|     | 30|                  |                    |
|     | 33|                  |                    |
|     | 35|                  |                    |
|     | 47|                  |                    |
|     | 48|                  |                    |
| L9d |   |                  |                    |
|     | 0 | vg 4 7 8 9A 11A 15 29 33 35 47 48 |

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| qui me vidit patrem vidit | 3 | 0 | 2 |
| qui me vidit vidit et patrem | 1 | 2 | 0 | 3 10 14 30 |
| qui vidit me vidit patrem et | 1 | 3 | 2 | 0 | 5 27 |
| qui vidit me vidit et patrem meum | 1 | 4 | 2 | 2 | 0 | 6 |
| qui me vidit vidit et patrem meum | 2 | 3 | 1 | 3 | 1 | 0 | 13 |

**L.9e**

| ostende | 0 | vg 2 3 4 6 7 8 9A 10 11A 13 14 15 27 29 30 33 35 47 48 |
| monstra | 2 | 0 | 5 |

**L.10a**

| credis quia | 0 | vg 3 4 7 8 9A 10 11A 13 15 27 29 30 33 47 48 |
| creditis quia | 1 | 0 | 6 |
| credis quoniam | 1 | 2 | 0 | 2 5 |
| credis mihi quoniam | 2 | 3 | 1 | 0 | 14 |

**L.10b**

| ego loquor vobis | 0 | vg 4 6 7 8 9A 10 11A 14 15 27 29 30 33 |
| ego dico vobis | 2 | 0 | 2 13 |
| vobiscum loquor | 3 | 5 | 0 | 3 |
| ego locutus sum vobis | 1 | 2 | 4 | 0 | 5 |
| loquor vobis | 1 | 3 | 2 | 2 | 0 | 47 |
| ego loquor | 1 | 3 | 2 | 2 | 0 | 48 |

**L.10c**

| a me ipso non loquor | 0 | vg 4 6 7 8 9A 10 11A 13 14 15 27 29 30 33 47 48 |
| a me non loquor | 1 | 0 | 2 5 |
| non a me loquor | 2 | 1 | 0 | 3 |

**L.10d**
| Script          | Variants | Reference | Score |
|-----------------|----------|-----------|-------|
| Pater autem in me manens | 0        | vg 2 4 7 9A 11A 29 33 |
| sed Pater qui in me manet    | 4 0      | 3 10 13 14 |
| Pater autem qui in me manet  | 2 2 0    | 5 6 8 |
| Pater enim in me manens      | 1 4 3 0  | 15 30 |
| autem Pater qui in me manet  | 3 1 1 4 0| 27   |
| Pater in me manens           | 1 3 3 1 3 0| 47 |
| Pater qui in me manens       | 2 2 2 2 2 1 0| 48 |

**L10e**

| Script          | Variants | Reference | Score |
|-----------------|----------|-----------|-------|
| ipse facit opera | 0        | vg 7 9A 11A 13 15 27 30 33 47 48 |
| facit facta     | 3 0      | 2         |
| facit opera sua | 2 3 0    | 5         |
| ipse facit haec opera | 1 4 3 0   | 10     |
| ipse autem facit opera | 1 4 3 2 0 | 29     |
| ipse loquitur et opera quae ego facio ipse facit | 9 12 11 10 10 0 | 3 4 6 |
| ipse loquitur et opera quae facio ipse facit | 8 11 10 9 9 1 0 | 8 14 |

**L11a**

| Script          | Variants | Reference | Score |
|-----------------|----------|-----------|-------|
| non creditis quia | 0        | vg 7 11A 29 30 33 35 47 48 |
| credite mihi quia | 3 0      | 2 3 4 6 8 9A 10 13 27 |
| credis mihi quoniam | 4 2 0 | 5 |
| non credis quia | 1 3 3 0  | 15 |
| credite mihi quoniam | 4 1 1 4 0 | 14 |

**L11b**

| Script          | Variants | Reference | Score |
|-----------------|----------|-----------|-------|
| Pater in me est | 0        | vg 2 6 7 9A 11A 14 15 29 30 33 35 47 48 |
| Pater in me     | 2 0      | 3 4 5 8 10 13 27 |
### L11c

| Phrase                                      | Value | vg... |
|---------------------------------------------|-------|-------|
| alioquin propter opera ipsa                 | 0     | 2     |
| si quominus propter facta ipsa              | 4 0   | 2     |
| alioquin vel propter opera ipsa             | 1 5 0 | 3 10  |
| sin autem vel propter opera ipsa            | 3 5 2 0| 5     |
| alioquin propter vel propter opera ipsa     | 2 6 2 3 0| 8     |
| vel propter opera                           | 3 6 2 3 3 0| 13    |
| sin autem vel propter opera                 | 4 6 3 1 4 2 0| 14    |

### L11d

| Phrase | Value | vg... |
|--------|-------|-------|
| credite| 0     | 2 5 6 7 9A 10 11A 14 15 29 30 33 35 47 48 |
| credite mihi | 1 0 | 3 4 8 13 |
| mihi | 3 2 0| 27    |

### L12a

| Phrase                                      | Value | vg... |
|---------------------------------------------|-------|-------|
| amen amen dico vobis                       | 0     | 2 3 5 7 9A 10 11A 13 14 27 29 30 33 35 47 48 |
| amen amen dico vobis quia                   | 1 0   | 4 6 8 |
| amen dico vobis quia                       | 2 1 0| 15    |

### L12b

| Phrase | Value | vg... |
|--------|-------|-------|
| credit in me | 0 | 2 3 4 5 6 7 8 9A 10 11A 13 14 15 27 29 30 33 35 47 48 |
| in me credit | 1 0 | 2     |

### L12c

| Phrase | Value | vg... |
|--------|-------|-------|
| opera | 0     | 2 3 4 5 6 7 8 9A 10 11A 13 14 15 27 29 30 33 35 47 48 |
| facta | 2 0   | 2     |

### L12d

| Phrase | Value | vg... |
|--------|-------|-------|
| et ipse faciet | 0 | 2 3 4 7 10 11A 14 15 27 29 30 33 |
et ipse facit | 1 | 0 | 2 6
et ille faciet | 1 | 2 | 0 | 5 13
etiam ipse faciet | 1 | 2 | 2 | 0 | 8
ipse faciet | 1 | 2 | 2 | 1 | 0 | 35 48
et ipse fecit | 1 | 1 | 2 | 2 | 0 | 47

**L12e**

et maiora horum faciet | 0 | | vg 3 4 5 6 7 9A 10 11A 14 15 27 29 30 33 35 48
et maiora eorum faciet | 1 | 0 | 8
et maiora his faciet | 1 | 1 | 0 | 13
et maiora eorum faciet | 2 | 1 | 2 | 0 | 47
- | 6 | 6 | 6 | 6 | 0 | 2

**L12f**

quia ego ad patrem vado | 0 | | vg 3 4 6 7 8 9A 10 11A 13 15 29 30 33 35 47 48
quia vado ad patrem meum | 3 | 0 | 2
quoniam ego ad patrem vado | 1 | 4 | 0 | 5
quia ego ad patrem meum vado | 1 | 2 | 2 | 0 | 27

**L13a**

quodcumque | 0 | | vg 5 7 8 9A 11A 15 27 29 30 32 33 35 39 40 47 48
quidquid | 1 | 0 | 2 3 10 13
quodcumque ab eo | 2 | 3 | 0 | 4
quodcumque ab illo | 2 | 3 | 1 | 0 | 6
quodcumque ab | 1 | 2 | 1 | 1 | 0 | 14

**L13b**

hoc faciam | 0 | | vg 2 3 5 7 9A 11A 13 15 27 29 30 32 33 35 39 47 48
ego faciam | 2 | 0 | 4 6 8  
haec faciam | 1 | 2 | 0 | 10  
Lac : 10A 14 40 46  

**L13c**

| glorificetur pater in filio | 0 | vg 5 7 9A 11A 15 27 30 32 33 35 47 48  
magnificetur pater in filio | 2 0 | 2  
honorificetur pater in filio | 2 2 0 | 3 4 10  
clarificetur pater in filio | 2 2 2 0 | 6 8 29  
honorificetur pater in filium | 3 3 3 0 | 13  

**L14a**

| si quid petieritis me | 0 | vg 6 7 9A 10 11A 27 33 35 47  
si quid petieritis | 1 0 | 2 3 5 13 14 15 29 30 32 48  
et si quid petieritis a patre meo | 6 5 0 | 8  
- | 5 4 9 0 | 4  

**L14b**

| hoc | 0 | vg 6 7 9A 11A 14 29 30 33 35 47 48  
ego | 2 0 | 2 3 5 8 10 13 15 27 32  
- | 1 1 0 | 4  

**L15a**

| mandata mea servate | 0 | vg 2 3 5 7 9A 10 11A 13 15 27 29 30 32 33 35 47 48  
precepta mea servate | 2 0 | 4  
precepta mea custodite | 4 2 0 | 6 8  
mandata mea custodite | 2 4 2 0 | 14  

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### L16a

| Latin Phrase        | Value | VG Index |
|---------------------|-------|----------|
| patrem              | 0     | 2 3 4 5 6 7 8 9A 10 11A 14 15 27 29 30 32 33 35 47 |
| patrem meum         | 1     | 0 10A 13 46 48 |

### L16b

| Latin Phrase        | Value | VG Index |
|---------------------|-------|----------|
| paracletum          | 0     | 4 5 7 8 9A 10 10A 11A 15 27 29 30 32 33 35 46 47 48 |
| advocatum           | 2     | 2 3 6 13 |
| consolatorem        | 2     | 2 0 14 |

### L16c

| Latin Phrase                      | Value | VG Index |
|------------------------------------|-------|----------|
| ut maneat vobiscum in aeternum     | 0     | 7 9A 27 29 30 32 33 35 47 48 |
| ut sit vobiscum in aeternum        | 2     | 0 2 2 |
| ut vobiscum sit in aeternum        | 3     | 1 0 3 6 8 10 14 15 |
| et vobiscum in aeternum sit        | 4     | 2 2 0 4 |
| ut maneat in aeternum vobiscum     | 1     | 3 3 5 0 5 |
| vobiscum in aeternum               | 3     | 3 3 3 4 0 11A |
| qui vobiscum sit in aeternum       | 4     | 2 1 2 4 3 0 13 |

### L17a

| Latin Phrase                       | Value | VG Index |
|------------------------------------|-------|----------|
| mundus non potest accipere         | 0     | 5 7 8 9A 11A 14 15 27 29 32 33 35 47 48 |
| accipere saeculum non potest       | 3     | 0 2 2 |
| hic mundus non potest accipere     | 1     | 4 0 3 4 6 10 30 |
| hic mundus accipere non potest     | 2     | 4 1 0 13 |

### L17b

| Latin Phrase                  | Value | VG Index |
|-------------------------------|-------|----------|
| quia non videt eum            | 0     | 4 5 6 7 10 11A 15 27 30 32 33 35 47 48 |
| quoniam non videt illum       | 2     | 2 3 3 |
| quia non vidit eum            | 1     | 3 0 8 9A 29 |
### L17c

|                  | 2 | 2 | 1 | 0 | 13 |
|------------------|---|---|---|---|----|
| quoniam non vidit eum |   |   |   |   |    |
| quoniam non videt eum  | 1 | 1 | 2 | 1 | 14 |

### 17d

|                                      | 0 |     |     |     |     |
|--------------------------------------|---|-----|-----|-----|-----|
| vos autem cognoscitis eum           |   |     |     |     |     |
| vos autem nostis illum             | 3 | 0   |     |     | 2 6 |
| vos agnoscit eum                   | 2 | 4   | 0   |     | 3   |
| vos videtis eum et cognoscitis      | 5 | 8   | 5   | 0   | 4   |
| vos autem scitis eum               | 2 | 3   | 3   | 7   | 5   |
| vos autem nostis eum               | 2 | 1   | 3   | 7   | 2   |
| vos autem videtis eum et scitis eum| 6 | 7   | 7   | 4   | 4   |

### L17e

|                  | 0 |     |     |     |     |
|------------------|---|-----|-----|-----|-----|
| quia apud vos manebit | 0 |     |     |     |     |
| quia apud vos manet  | 1 | 0   | 2   | 4   | 8   |
| quia vobiscum manet | 3 | 2   | 0   | 3   | 6   |
| quoniam apud vos manet| 2 | 1   | 3   | 0   | 5   |

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### L.17f

|          |        | vg 7 9A 14 27 29 30 32 33 35 47 48 |
|----------|--------|-----------------------------------|
| et in vobis erit | 0      |                                   |
| et in vobis est in aeternum | 4 0    | 2                                 |
| et in vobis est | 1 3 0  | 3 5 10 13                         |
| et vobiscum est | 3 5 2 0 | 4 6 8                             |
| in vobis erit   | 1 5 2 4 | 0 11A                             |

### L.18a

|             |        | vg 2 3 4 6 7 9A 10 11A 13 14 15 27 29 30 32 33 35 47 48 |
|-------------|--------|--------------------------------------------------------|
| relinquam vos | 0      |                                                        |
| dismittam vos | 2 0    | 5                                                      |
| vos relinquam | 1 3 0  | 8                                                      |

### L.18b

|           |        | vg 3 4 7 8 9A 10 11A 13 15 27 29 32 33 35 47 48 |
|-----------|--------|-------------------------------------------------|
| veniam    | 0      |                                                  |
| venio     | 1 0    | 2 5 6 14                                       |
| sed veniam | 1 2 0  | 30                                              |

### L.19a

|           |        | vg 4 6 7 8 9A 10 11A 15 27 29 30 32 33 35 47 48 |
|-----------|--------|-------------------------------------------------|
| modicum   | 0      |                                                  |
| pusillum  | 2 0    | 2 3 5 13 14                                    |

### L.19b

|           |        | vg 7 8 9A 11A 15 27 29 30 32 33 47 48 |
|-----------|--------|--------------------------------------|
| et mundus | 0      |                                      |
| et saeculum | 2 0  | 2                                    |
| et hic mundus | 1 3 0 | 3 4 5 6 10 13 14                      |
| mundus     | 1 3 2 0 | 35                              |

### L.19c

|             |        | vg 5 6 7 8 9A 11A 15 29 32 33 |
|-------------|--------|--------------------------------|
| me iam non videt | 0    |                                  |
|                  |       |       |          |
|------------------|-------|-------|----------|
| me non videbit   | 2 0   | 2 27 35 |
| amplius me non  | 3 2 0 | 3       |
| iam me non videt | 1 2 2 0 | 4 14   |
| me iam non videbit | 1 1 2 2 0 | 10 13 30 48 |
| iam non videt    | 1 3 3 1 2 0 | 47      |

**L19d**

|                  |       |       |          |
|------------------|-------|-------|----------|
| vos autem videtis me | 0     | vg 5 8 29 30 33 47 |
| vos autem videbitis | 2 0   | 2       |
| vos videbitis me    | 2 2 0 | 3       |
| vos autem videbitis me | 1 1 1 0 | 4 6 7 9A 10 11A 13 15 27 32 48 |
| vos autem videtis   | 1 1 3 2 0 | 14      |
| vos autem me videbitis | 2 1 2 1 2 0 | 35      |

**L19e**

|                  |       |       |          |
|------------------|-------|-------|----------|
| quia ego vivo et vos vivetis | 0     | vg 4 6 7 8 9A 10 11A 13 15 27 29 30 32 33 35 47 48 |
| quia ego vivo et vos vivitis | 1 0   | 3       |
| quoniam ego vivo et vos vivetis | 1 2 0 | 5 14    |
| -                 | 8 8 8 0 2 |

**L20a**

|                  |       |       |          |
|------------------|-------|-------|----------|
| in illo die      | 0     | vg 4 5 7 15 29 30 48 |
| in illa die      | 1 0   | 2 6 8 9A 10 13 14 27 33 |
| illa die         | 2 1 0 | 3       |
| illo die         | 1 2 1 0 | 11A 47 |
| sed in illa      | 4 3 4 5 0 35 |

**L20b**
| vos cognoscetis | 0 | vg 7 10 15 33 35 47 48 |
| scietis vos     | 3 0 | 2 |
| scitis vos      | 3 1 0 | 3 |
| cognoscetis     | 1 3 3 0 | 4 14 30 |
| cognoscetis vos | 1 2 2 1 0 | 5 6 8 9A 13 27 29 |
| vos cognoscitis | 1 3 3 2 2 0 | 11A |

**L.20c**

| quia ego sum in patre meo | 0 | vg 4 7 |
| quoniam ego in patre meo  | 3 0 | 2 5 14 |
| quia ego in patre meo     | 2 1 0 | 3 6 8 9A 10 15 27 29 30 33 47 48 |
| quia in patre meo          | 3 2 1 0 | 11A |
| quoniam ego in patrem meum | 4 1 2 3 0 | 13 |
| quia ego in patre          | 3 2 1 2 3 0 | 35 |

**L.20d**

| vos in me   | 0 | vg 2 3 4 5 6 7 8 9A 10 11A 13 15 27 29 30 33 35 47 48 |
| vos me      | 1 0 | 14 |

**L.21a**

| qui habet mandata mea et servat ea | 0 | vg 5 7 10 11A 14 27 29 30 33 35 47 48 |
| qui habet mandata mea et servat illa | 1 0 | 2 |
| qui habet praeecepta mea et custodit illa | 5 4 0 | 3 |
| qui audit praeecepta mea et servat ea | 4 5 5 0 | 4 6 15 |
| qui habet precepta mea et servat ea | 2 3 3 2 0 | 8 |
| qui audit mandata mea et servet ea | 2 3 7 2 4 0 | 9A |
| qui habet mandata mea et custodit illa | 3 2 2 7 5 5 0 | 13 |
| L21b       |                  |                  |
|------------|-----------------|-----------------|
| ille est qui diligit me | 0 | vg 4 5 6 7 8 11A 15 27 29 33 35 47 48 |
| ille est qui me diligit | 1 0 | 2 3 13 |
| ille est quia diligit me | 1 2 0 | 9A |
| ipse est qui diligit me | 1 2 2 0 | 10 14 30 |

| L21c       |                  |                  |
|------------|-----------------|-----------------|
| qui autem diligit me diligetur a patre meo | 0 | vg 4 5 6 7 9A 11A 13 29 30 33 35 47 48 |
| diligetur a patre meo | 5 0 | 2 8 27 |
| qui autem me diligit diligetur a patre meo | 2 6 0 | 3 |
| qui autem diligit me diligetur a patre meo | 1 6 1 0 | 10 14 |
| qui diligit me diligetur a patre meo | 2 5 2 1 0 | 15 |

| L21d       |                  |                  |
|------------|-----------------|-----------------|
| diligam eum | 0 | vg 4 5 6 7 8 9A 10 11A 14 15 27 29 30 33 35 48 |
| diligam illum | 1 0 | 2 3 13 |
| diligam | 1 1 0 | 47 |

| L21e       |                  |                  |
|------------|-----------------|-----------------|
| manifestabo ei me ipsum | 0 | vg 4 6 7 9A 10 11A 15 27 29 30 33 35 47 |
| ostendam me ipsum illi | 4 0 | 2 |
| ostendam illi me ipsum | 3 1 0 | 3 5 13 |
| manifestabo eum ei meipsum | 1 5 4 0 | 8 |
| manifestabo me illi | 3 3 4 4 0 | 14 |
| manifestabo me ipsum ei | 1 3 4 2 2 0 | 48 |

| L22a       |                  |                  |
|------------|-----------------|-----------------|
| dicit ei Iudas | 0 | vg 7 9A 10 11A 14 15 27 29 30 33 35 39 48 |
|---------------|---|----------------------------------|
| dicit Iudas   | 1 0 | 2 4 10A 46 47 |
| ait illi Iudas| 3 3 0 | 3 6 |
| dicit illi Iudas | 1 1 2 0 | 5 13 |
| ait ei Iudas  | 2 3 1 3 0 8 |

**L.22b**

| non ille Scariot() | 0 | vg 2 3 7 9A 10 10A 11A 15 27 29 30 33 35 39 46 47 48 |
|-------------------|---|----------------------------------|
| non ille Scariot() sed alius | 3 0 | 4 6 8 14 |
| non qui a Scariot() | 3 6 0 | 5 |
| non Scariot()      | 1 4 2 0 13 |

**L.22c**

| quid factum est   | 0 | vg 3 4 6 7 8 10 11A 14 15 29 30 33 48 |
|-------------------|---|----------------------------------|
| quid est factum   | 1 0 | 2 |
| quid est          | 2 2 0 | 5 |
| quid facturus es   | 1 2 2 0 | 9A 10A 46 |
| et quid factum est | 1 2 3 2 0 | 13 27 |
| quid factum        | 2 2 3 2 3 0 35 47 |

**L.22d**

| quia              | 0 | vg 4 6 7 8 9A 10 11A 15 27 29 33 35 47 48 |
|-------------------|---|----------------------------------|
| quoniam           | 1 0 | 2 5 |
| quod              | 1 1 0 | 3 13 14 30 |

**L.22e**

| nobis manifestaturus es te | 0 | vg 7 9A 10 11A 15 29 30 33 35 47 48 |
| incipis nobis manifestare te | 3 | 0 | 2 |
| manifestas te nobis | 2 | 4 | 0 | 3 |
| nobis incipis manifestare te | 3 | 1 | 4 | 0 | 4 | 6 | 8 | 14 |
| incipies nobis ostendere te | 4 | 3 | 5 | 4 | 0 | 5 |
| nobis ostensurus es te | 2 | 4 | 3 | 4 | 3 | 0 | 13 |
| nobis futurus es manifestare te | 3 | 3 | 4 | 2 | 5 | 4 | 0 | 27 |

**L.22f**

| ipsum | 0 | vg 2 4 5 6 7 8 9A 10 11A 13 15 27 29 30 33 35 47 48 |
| - | 1 | 0 | 3 14 |

**L.22g**

| mundo | 0 | vg 7 11A 27 29 33 35 47 48 |
| saeculo | 2 | 0 | 2 |
| huic mundo | 1 | 3 | 0 | 3 4 5 6 8 9A 10 13 14 15 30 |

**L.23a**

| respondit Iesus et dixit ei | 0 | vg 4 7 9A 10 11 14 27 33 35 47 48 |
| dicit Iesus | 6 | 0 | 2 |
| respondit Iesus et dixit illi | 1 | 6 | 0 | 3 5 13 29 |
| respondit Iesus et dicit ei | 1 | 5 | 2 | 0 | 6 8 |
| respondit Iesus et dixit eis | 1 | 6 | 1 | 2 | 0 | 11A 15 |
| respondit ei Iesus et dixit | 1 | 6 | 2 | 2 | 2 | 0 | 30 |

**L.23b**

| si quis diligit me | 0 | vg 4 5 6 7 8 9A 11 11A 13 14 15 27 29 30 33 35 47 48 |
| si quis me diligit | 1 | 0 | 2 3 10 |
### L.23c

| sermonem meum servabit | 0 | vg 7 8 10 15 27 29 30 33 35 47 48 |
|------------------------|---|----------------------------------|
| verbum meum servavit    | 3 0 | 2 |
| sermonem meum custodiet | 2 4 0 | 3 |
| sermonem meum servavit  | 1 2 2 0 | 4 6 9A 11 11A |
| verbum meum servabit    | 2 1 4 3 0 | 5 |
| verbum meum custodiet   | 4 2 2 4 2 0 | 13 |
| et verbum meum servabit | 3 2 5 4 1 3 0 14 |

### L.23d

| diliget eum | 0 | vg 7 29 30 33 |
|-------------|---|----------------|
| diligebit illum | 2 0 | 2 |
| diligit illum | 2 1 0 | 3 |
| diligit eum | 1 2 1 0 | 4 5 6 8 9A 10 11 11A 13 14 15 16 27 35 47 48 |

### L.23e

| ad eum veniemus | 0 | vg 4 6 7 8 9A 10 11 11A 15 16 27 29 30 33 47 48 |
|-----------------|---|----------------------------------|
| apud illum veniam | 3 0 | 2 |
| ad illum veniemus | 1 2 0 | 3 |
| ad eum veniam | 1 2 2 0 | 5 |
| apud eum veniemus | 1 2 2 2 0 | 13 |
| | 4 4 4 4 0 | 35 |

### L.23f

| mansiones apud eum faciemus | 0 | vg 15 30 35 47 48 |
|-----------------------------|---|----------------------------------|
| mansionem apud eum faciam | 2 0 | 2 |
| apud eum manebimus | 3 3 0 | 3 |
| mansionem apud eum faciemus | 1 1 3 0 | 4 7 10 11 11A 27 29 33 |
|                  | 5 | 4 | 4 | 5 | 0 | 5 |
|------------------|---|---|---|---|---|---|
| **ad eum habitaculum faciam** | 5 | 4 | 4 | 5 | 0 | 5 |
| **apud eum manemus**             | 3 | 3 | 1 | 3 | 4 | 0 | 6 |
| **apud eum mansionem faciemus**  | 2 | 2 | 3 | 1 | 4 | 3 | 8 | 9A | 16 |
| **mansionem apud illum faciemus**| 2 | 2 | 4 | 1 | 5 | 4 | 2 | 0 | 13 |

**L.24a**

|                                  | 0 | 1 | 2 | 0 | 9A | 10 |
|----------------------------------|---|---|---|---|----|----|
| **qui non diligit me**           | 0 |   |   |   |    |    |
| **qui non me diligit**           | 1 | 0 |   |   | 3  |    |
| **qui autem non diligit me**     | 1 | 2 | 0 |   | 9A |    |
| **qui autem me non diligit**     | 2 | 2 | 1 | 0 | 10 |    |
| **qui me non diligit**           | 1 | 1 | 2 | 1 | 0  | 13 |

**L.24b**

|                          | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9A | 10 | 11 | 11A | 15 | 16 | 27 | 29 | 30 | 33 | 35 | 47 | 48 |
|--------------------------|---|---|---|---|---|---|---|---|---|----|----|----|-----|----|----|----|----|----|----|----|----|----|----|----|
| **sermones meos non servat** | 0 | 5 | 0 | 2 |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| **verbum meum non facit**   | 5 | 0 |   | 2 |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| **sermones meos non custodit**| 2 | 5 | 0 | 3 |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| **verba mea non servabit**   | 4 | 4 | 5 | 0 | 5  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| **verba mea non observat**   | 4 | 4 | 5 | 2 | 0  | 13 | 14 |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| **sermonem meum non servat**  | 2 | 4 | 4 | 4 | 0  | 47 |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |

**L.24c**

|                          | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9A | 10 | 11 | 11A | 15 | 16 | 27 | 29 | 30 | 33 | 35 | 39 | 40 | 47 | 48 |
|--------------------------|---|---|---|---|---|---|---|---|---|----|----|----|-----|----|----|----|----|----|----|----|----|----|----|----|
| **et sermonem quem auditis** | 0 | 5 | 4 | 0 | 3  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| **verbum meum**           | 7 | 0 |   | 2 |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| **et sermo meus**         | 5 | 4 | 0 | 3 |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| **sermonem quem auditis** | 1 | 6 | 6 | 0 | 4  | 8  | 15 | 16 |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| **et verbum meum quod auditis** | 5 | 4 | 6 | 6 | 0  | 5  | 14 |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| **et verbum quod auditis** | 3 | 5 | 6 | 4 | 2  | 0  | 13 |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
### L.24d

|       |       | vg 2 5 7 9A 10 11A 13 14 15 27 29 33 35 39 40 47 48 |
|-------|-------|---------------------------------------------------|
| non est meus | 0 |                                                   |
| meus non est  | 1 | 3 4 6 8 11 16                                     |

### L.24e

|                         |       | vg 4 7 10 11 11A 15 29 33 35 47                     |
|-------------------------|-------|---------------------------------------------------|
| sed eius qui misit me patris | 0 |                                                   |
| sed eius qui me misit patris | 1 | 2 3 5 6 8 9A 16 48                                 |
| sed qui me misit patris    | 2 | 1 0                                               |
| sed patris mei qui me misit| 4 | 3 2 0                                             |
| sed mittentis me patris   | 3 | 4 3 5 0 27                                       |

### L.25a

|       |       | vg 2 3 4 5 6 7 8 9A 10 11 11A 13 14 15 16 27 29 33 39 40 47 48 |
|-------|-------|---------------------------------------------------------------|
| apud vos manens  | 0   |                                                               |
| vobiscum manens   | 2 0 | 35                                                           |
| -                 | 4 3 | 0 30                                                          |

### L.26a

|                              |       | vg 4 5 7 9A 10 10A 11 11A 15 29 30 33 35 46 47 48 |
|-----------------------------|-------|---------------------------------------------------|
| paracletus autem Spiritus Sanctus | 0 |                                                   |
| Spiritus autem paracletus Sanctus | 1 | 0                                               |
| advocatus est autem paracletus ille Spiritus Sanctus | 6 | 6 0                                             |
| paracletus autem ille Spiritus Sanctus | 1 | 2 5 0                                           |
| advocatus autem Spiritus Sanctus | 2 | 3 5 3 0                                         |
| consolator autem ille Spiritus Sanctus | 3 | 4 6 2 3 0                                     |
| autem paracletus Spiritus Sanctus | 1 | 1 5 2 3 4 0                                    |

### L.26b
mittet Pater 0 vg 4 6 7 8 9A 10A 11 16 27 30 33 35 46 47
Pater mittit 2 0 2
missurus est Pater 1 2 0 3 10 13
mittet Pater meus 1 3 2 0 5 29
mittit Pater 1 1 1 2 0 11A 15 48
misit Pater 1 2 1 2 1 0 14

**L26c**

| in nomine meo | 0 | vg 2 3 4 5 6 7 8 9A 10 11 11A 13 14 16 27 29 30 33 35 47 48 |
|---------------|---|-----------------------------------------------------------|
| in nomine     | 1 0 | 15                                                        |
| -             | 4 3 0 | 10A 46                                                    |

**L26d**

| ille vos docebit omnia | 0 | vg 4 5 6 7 8 9A 10 11 11A 13 15 16 27 29 30 33 35 47 48 |
|-----------------------|---|-----------------------------------------------------------|
| ille vos docet omnia  | 1 0 | 2                                                         |
| ille vos docebit      | 2 3 0 | 3                                                         |
| ipse vos docebit      | 3 4 1 0 | 10A 46                                                    |
| ille vos docebit universa | 2 3 2 3 0 | 14                                                        |

**L26e**

| suggeret vobis | 0 | vg 6 7 8 11 11A 16 27 29 30 33 35 47 48 |
|----------------|---|-------------------------------------------------|
| admonebit vos  | 3 0 | 2 13                                            |
| commemorabit vos | 3 2 0 | 3 14                                           |
| commovebit vos  | 3 2 2 0 | 5                                              |
| suggerit vobis  | 1 3 3 3 0 | 9A 15                                         |
| commonefaciet vos | 3 2 2 2 3 0 | 10                                             |
| -               | 3 3 3 3 3 0 4 | 4                                             |
### L.26f

| omnia | 0 | vg 2 3 4 5 7 8 9A 10 11A 13 14 15 27 29 30 33 35 47 48 |
|--------|----|------------------------------------------------------|
| universa | 2 0 | 11 |
| - | 2 2 | 0 6 16 |

### L.26g

| quaecumque dixero vobis | 0 | vg 5 7 9A 11A 13 29 30 33 35 47 48 |
|-------------------------|----|-----------------------------------|
| quaecumque dixerto      | 2 0 | 2 |
| quaecumque dixero       | 1 1 0 | 3 4 6 8 11 14 15 16 |
| quaecumque dixi vobis   | 1 3 2 0 | 10 |
| quaecumque dixi vobis   | 1 1 2 2 0 | 27 |

### L.27a

| pacem relinquo     | 0 | vg 6 7 10 11 11A 14 15 27 29 33 35 47 |
|--------------------|----|-------------------------------------|
| pacem meam remitto | 3 0 | 2 |
| pacem meam relinquo| 1 2 0 | 3 8 |
| pacem do           | 2 3 3 0 | 4 13 |
| pacem dismitto     | 2 2 3 2 0 | 5 |
| pacem meam do      | 3 2 2 1 3 0 | 9A 16 46 48 |
| -                  | 4 5 5 4 4 5 0 | 30 |

### L.27b

| pacem meam do      | 0 | vg 2 3 5 6 7 8 10 11 11A 14 15 27 29 33 35 47 |
|--------------------|----|-----------------------------------------------|
| pacem meam relinquo| 2 0 | 4 9A 13 30 46 |
| pacem relinquo     | 3 1 0 | 48 |

### L.27c

| quomodo mundus     | 0 | vg 7 9A 11A 15 29 30 33 35 47 48 |
|--------------------|----|---------------------------------|
| quomodo hic mundus | 1 0 | 3 4 6 8 10 13 |
|-------------------|-----|---------------|
| sicut mundus      | 1 2 0 | 5 |
| quemadmodum hic mundus | 2 1 2 0 | 11 14 |
| sicut vel quomodo mundus | 2 3 2 4 0 | 27 |
| -                 | 3 4 3 4 5 0 2 |

L.27d

| turbetur cor vestrum | 0 | vg 4 7 9A 10 11 11A 14 15 29 30 33 35 47 48 |
|---------------------|---|---------------------------------------------|
| conturbetur cor vestrum | 1 0 | 2 3 6 8 13 |
| conturbetur vestrum cor | 2 1 0 | 5 27 |

L.27e

| neque formidet | 0 | vg 3 4 6 7 8 9A 10 11A 15 16 (formidet) 27 29 30 33 35 47 48 |
|---------------|---|-------------------------------------------------------------|
| neque trepidet | 2 0 | 2 |
| neque trepidetur | 2 1 0 | 5 |
| nec paveat     | 3 3 3 0 | 11 14 |
| neque pertimescat | 2 2 2 3 0 | 13 |

L.28a

| quia ego | 0 | vg 7 10 11A 13 27 29 30 33 35 47 48 |
|----------|---|-------------------------------------|
| quoniam ego | 1 0 | 2 5 |
| quia     | 1 2 0 | 3 4 6 8 9A 11 15 16 |
| quoniam  | 2 1 1 0 | 14 |

L.28b

| vado   | 0 | vg 2 4 5 6 7 8 9A 10 11 11A 13 14 15 16 27 29 30 33 35 47 48 |
|--------|---|-------------------------------------------------------------|
| eo     | 2 0 | 3 |
**L.28c**

| Latin Expression                  | Letter(s) |
|-----------------------------------|-----------|
| si diligeretis me gauderetis      | 0         |
| si me dilixissetis gauderetis     | 2 0       |
| si me amaretis gauderetis         | 3 2 0     |
| si diligatis me gaudebatis        | 2 3 4 0   |
| gauderetis                        | 4 4 4 5 0 |
| si me diligeretis gauderetis      | 1 1 2 3 4 0 |

**L.28d**

| Latin Expression                  | Letter(s) |
|-----------------------------------|-----------|
| utique quia                       | 0         |
| quia                              | 1 0       |
| utique quoniam                    | 1 2 0     |
| quoniam                           | 2 1 1 0   |

**L.28e**

| Latin Expression                  | Letter(s) |
|-----------------------------------|-----------|
| vado ad Patrem                    | 0         |
| ego ad Patrem vado                | 2 0       |
| ego ad Patrem                     | 3 2 0     |
| ego vado ad Patrem                | 1 1 2 0   |
| dixi vado ad Patrem               | 2 4 5 3 0 |
| ad Patrem vado                    | 1 1 3 2 3 0 |

**L.28f**

| Latin Expression                  | Letter(s) |
|-----------------------------------|-----------|
| quia Pater maior me est           | 0         |
| quia Pater meus maior est         | 2 0       |
| quoniam Pater maior me est        | 1 3 0     |
| quoniam Pater meus maior me est   | 2 2 1 0   |
| quia Pater maior est              | 1 2 2 3 0 15 |
quia Pater meus maior me est | 1 | 1 | 2 | 1 | 2 | 0 | 27

### L.29a

| et nunc dixi vobis priusquam | 0 | vg 2 7 11A 15 27 29 30 33 35 47 48 |
|-------------------------------|---|----------------------------------|
| et nunc dixi vobis antequam   | 1 0 | 3 5 10 13 14 |
| nunc dixi vobis priusquam     | 1 2 0 | 4 9A |
| nunc dixi vobis antequam      | 2 1 1 0 | 6 16 |
| nunc dixi quoniam antequam    | 4 3 3 2 0 | 8 |
| nunc dicho vobis priusquam    | 2 3 1 2 4 0 11 |

### L.29b

| credatis | 0 | vg 2 3 4 6 7 8 9A 10 11A 13 14 15 16 27 29 33 35 47 48 |
|-----------|---|----------------------------------|
| credatis mihi | 1 0 | 5 |
| credatis quoniam ego sum | 4 5 0 | 11 |
| credatis quia ego sum | 4 5 1 0 30 |

### L.30a

| iam non | 0 | vg 2 3 4 5 6 7 8 9A 10 11 11A 13 14 15 16 29 30 33 35 47 |
|---------|---|----------------------------------|
| non iam | 1 0 | 27 |
| non     | 1 1 0 | 48 |

### L.30b

| multa loquar vobiscum | 0 | vg 5 6 7 9A 11A 15 29 33 35 |
|-----------------------|---|----------------------------------|
| loquar multa vobiscum | 1 0 | 2 14 |
| multa loquor vobiscum | 1 2 0 | 3 13 27 48 |
| multa loquor vobis    | 2 3 1 0 | 4 10 47 |
| vobis multa loquar    | 2 3 3 2 0 | 8 |
| multa loquar vobis    | 1 2 2 1 1 0 11 16 30 |
### L.30c

| venit enim     | 0 | vg 2 3 4 5 6 7 8 9A 11 11A 14 15 16 27 29 30 33 47 |
|---------------|---|---------------------------------------------------|
| veniet enim   | 1 | 10 13                                             |
| venerit       | 2 | 2 0                                               |
| -             | 3 | 3 2 0 48                                          |

### L.30d

| princeps mundi huius | 0 | vg 9A 11A 15 29                                   |
|----------------------|---|--------------------------------------------------|
| princeps saeculi huius | 2 0 | 2                                               |
| huius mundi princeps | 2 4 0 | 3 4 5 6 10 11 13 27                            |
| princeps huius mundi | 1 3 1 0 | 7 8 16 30 33 35 47 48                        |
| mundi huius princeps | 1 3 1 2 0 | 14                                            |

### L.30e

| in me non habet quicquam | 0 | vg 4 6 8 9A 11 11A 15 27 29 30 33 47 48 |
|--------------------------|---|------------------------------------------|
| non habet in me quicquam | 1 | 2                                         |
| in me nihil habet invenire | 4 5 0 | 3                                           |
| in me non habet nihil invenire | 3 4 2 0 | 5                                      |
| in me non habet nihil   | 1 2 4 2 0 | 7 14                                       |
| in me non inveniet quicquam | 2 3 6 5 3 0 | 10                                       |
| in me non habet quicquam invenire | 2 3 2 1 3 4 0 | 16                                     |
| in me habet nihil      | 2 3 3 3 1 4 4 0 | 13                                      |

### L.31a

| cognoscat mundus | 0 | vg 6 7 9A 11A 15 27 29 30 33 35 47 48 |
|------------------|---|---------------------------------------|
| sciat saeculum   | 4 | 2                                      |
| cognoscat hic mundus | 1 5 0 | 3 4 8 10 11 13                       |
| L31b               | 0              | vg 4 6 7 8 9A 11 11A 15 27 29 30 33 35 47 |
|-------------------|----------------|------------------------------------------|
| quia diligo patrem| 2              | 0                                        |
| quoniam ego diligo patrem | 1 1 0       | 2 14                                     |
| quia ego diligo patrem | 1 1 2 0      | 3 48                                     |
| quoniam diligo patrem | 1 1 2 0      | 5                                         |
| quia ego diligo patrem meum | 2 2 1 3 0 | 10                                        |
| quod diligo patrem  | 1 2 2 1 3 0  | 13                                        |

| L31c               | 0              | vg 3 5 6 7 9A 10 11 11A 14 15 27 29 30 33 35 47 |
|-------------------|----------------|------------------------------------------|
| et sicut          | 0              | 2                                        |
| et quomodo        | 1              | 2                                        |
| sicut             | 1              | 3                                        |

| L31d               | 0              | vg 2 3 7 9A 10 11A 13 14 15 27 29 30 33 35 47 |
|-------------------|----------------|------------------------------------------|
| mandatum          | 2              | 0                                        |
| praeceptum        | 2              | 4 6 8 11                                 |
| -                 | 2              | 5 27                                     |

| L31e               | 0              | vg 6 7 8 9A 10 11A 14 15 29 33 35 47 |
|-------------------|----------------|------------------------------------------|
| dedit mihi Pater  | 0              | 2                                        |
| mihi dedit        | 3              | 0                                        |
| Pater (...) dedit mihi | 1 3 0     | 3                                         |
| mihi dedit Pater  | 1              | 2                                        |
| mandavit mihi     | 4              | 3 4 5 0                                  |
| dedit mihi        | 2              | 1 2 3 2 0                                |
mandavit mihi Pater 2 5 3 3 2 4 0 27

L3If

| sic | 0 | vg 2 3 4 5 6 7 8 9A 10 11A 13 14 15 27 29 30 33 35 47 48 |
|-----|---|----------------------------------------------------------|
|    -| 1 | 0 11                                                      |