

<< Do you have any information on the following mss cited in the quote below? I'm interested in the dates of these mss. I suspect they are all post-16th century.

BEGIN QUOTE: Dr. Floyd Nolen Jones, in his book *Which Version is the Bible?*, tells us: "As of 1997, the following cursive manuscripts are known to include the passage [I John 5:7-8 "Johannine Comma"]: 34, 88 (margin) 99, 105, 110, 162, 173, 181, 190, 193, 219, 220, 221, 298, 429, 629 (margin) 635, 636, and 918. >>

First of all, the Mss. 88, 429 and 636 above have it only in the margin. Some of the other numbers I believe are Scrivener or Tischendorf numbers. Here are their dates and contents, if they are Gregory numbers, according to the *Kurzgefaßte Liste* (Aland, Kurt, Editor; *Kurzgefaßte Liste, Der Griechischen Handschriften des Neuen Testaments*; (Berlin & New York, de Gruyter, 1994). Then I resolve them to what the Gregory number would be if they are Tischendorf numbers.

- 34 – X century, contains only gospels; Paris, Bibl. Nat., Coislin Gr. 199; is Tisch. #34, so is Greg #61 below
- 88 – XII - contains the passage **only in margin**; Neapel, Bibl. Naz., Ms. II. A. 7; is Greg #88, Scriv # 173
- 99 – XV-XVI century – contains only parts of the gospels; Leipzig, Univ. Bibl., Cod. Gr. 8; if Tisch # is Greg 102 for Catholic epistles; date 1444, Moscow, and 102 contains 1 John but **OMITS** the comma.
- 105 – XII - contains only gospels, Acts, and Paulines; Oxford, Bodl. Libr., Auct. T. inf. 1. 10; if Tisch # is Greg 242 for Catholic epistles; XII, Moscow; Scrivener #48; von Soden δ206; and I have no definite information whether it contains 1 John at all. Try Matthaei (as I); Treu pp. 258-60; von Soden 138, 401, 450, 524.
- 110 – XII –What is now called #110 contains 1 John, but **OMITS** the comma; KJV advocates when they refer to MS 110, are referring to a Codex Ravianus, also called Codex Berolinensis, which has been proven to be a forgery, a copy made in the 1500's, many parts from the Greek text of the Stunica printed Edition, reproducing every typographical error thereof, and other parts from the TR editions. See discussion re Georgius Gottlieb Pappelbaum's examination of it in "The Monthly Review" Volume 22, January to April 1797, Pages 493-497; downloadable from my website at <http://www.bibletranslation.ws/trans/MonthlyReview.pdf>. (PDF, 37 MB) Georgius Pappelbaum collated Codex Berolinensis, and published his collation in 1785. F.H.A. Scrivener, in "A Plain Introduction to the Criticism of the New Testament," Vol 2, 4th Ed., Wipf & Stock Publishers, on Page 401, calls Evan 110 (Codex Ravianus), "a mere worthless copy from printed books."
- 162 – 1153 – contains only the gospels; Vatican City, Bibl. Vat., Barb. Gr. 449; **BUT**, is Tisch. #, is Greg 629 below
- 173 - XII – contains only the gospels; Vatican City, Bibl. Vat., Barb. Gr. 1983; if Tisch. #, is Greg 635, XI, Naples; and 635 contains 1 John, but **OMITS** the comma.
- 181 – X –contains 1 John, but **OMITS** the comma; Vatican City, Bibl. Vat., Reg. gr. 179; if Tisch. #, is Greg 400, XV, Berlin, and 400 contains 1 John but **OMITS** the comma.
- 190 – XIII – contains only gospels; Florenz, Bibl. Medicea Laura, Plutei VI. 28; if Tisch. #, Greg 517, XI/XII, Oxford, and 517 contains 1 John but **OMITS** the comma.
- 193 – XII - contains only gospels; Florenz, Bibl. Medicea Laura, Plutei VI. 32; if Tisch. #, Greg 479, XIII, Birmingham, and 479 contains 1 John but **OMITS** the comma.
- 219 – XIII – contains only gospels; Wien, Österr. Nat. Bibl., Theol. gr. 321; if Tisch. #, Greg 643, XIV, Brit Libr; and 643 contains 1 John but **OMITS** the comma.
- 220 - XIII – contains only gospels; Wien, Österr. Nat. Bibl., Theol. gr. 337; if Tisch. #, Greg 644, XIV, Brit Libr; and 644 contains 1 John, but has a **lacuna** here.

- 221 – X – contains 1 John but **OMITS** the comma; Oxford, Bodl. Libr., Canon. Gr. 110; this is Greg #221, X, Oxford, and 221 **OMITS** the comma as stated previously.
- 298 – XII – contains only gospels; Paris, Bibl. Nat., Suppl. Gr. 175; if Tich. #, Greg formerly 1249 which contains 1 John but **OMITS** the comma; now *Lectionary* 1436, XV, St. Catherine's Monastery, Sinai
- 429 – XIV – contains the passage **only in margin**; Wolfenbüttel, Herzog August Bibliothek 16.7 A⁰; is Greg #
- 635 – XI – contains 1 John but **OMITS** the comma; Neapel, Bibl. Naz., Ms. II. A. 8; ; is Greg #635, but see **173** above
- 636 – XV – contains the passage **only in margin by a corrector**; Neapel, Bibl. Naz., Ms. II. A. 9; is Greg #636
- 918** – XVI – does contain 1 John and the disputed passage; Escorial, Σ. I. 5; is Greg #918 below

Beware of people who still use the old Ms. numbers; I have seen people cite both the old number and the new number in a list together, making the one manuscript look like two in support of a reading.

According to the footnotes of the UBS4 Greek New Testament, and *Text und Textwert* Vol. 3, there are only **5 Greek mss that contain the passage in the text itself:**

- 61 – XVI Century - Dublin, Trinity College, Ms. 30 (see 34 above)
- 629 – XIV Century – Vatican Library, Ottob. Gr. 298 (see 162 above)
- 918 – XVI Century – Escorial, Σ. I. 5
- 2318 – XVIII Century – Bucharest, Romania. Akad., 318 (234).
- 2473 – XVII Century – Athens, National Library, Taphu 545

Greek mss that contain the comma in the margin:

- 88 – XII Century, but written in the margin by a modern hand; Naples, National Library, Ms. II. A. 7
- 177 – XVII – XVIII hand; Bayerische Staatsbibliothek (Bavarian State Library); Cod. graec. 211
- 221 – X Century; Oxford, Bodleian Library, Canon. Gr. 110. I suspect the margin writing is a modern hand.
- 429 – XIV Century; Wolfenbüttel, Herzog August Bibliothek 16.7 A⁰
- 636 – XV Century; Naples, National Library, Ms. II. A. 9

NOTE: Some KJV-only writers claim that there is a Greek manuscript named "Codex Wizanburgensis" that contains the Comma. But that is an 8th century Latin Vulgate manuscript, not Greek. Thanks to Jan Krans, who located it, we know that it is "nr. 99 of the Weissenburg collection in the Herzog August library in Wolfenbüttel ('Codex Guelferbytanus 99 Weissenburgensis'). It is the so-called 'Weissenburg Augustine', containing homilies by Augustine, in which also the Catholic Epistles, the Letters to Timothy, Titus and Philemon, and some other works are found (see Hans Butzmann, *Die Weissenburger Handschriften ...*, 1964, pp. 283-287)." Krans concludes: "It provides no more than an interesting part of the rather wild Latin-only transmission of the gloss." The Herzog August Library provides an image of part of the manuscript at this link: <http://www.hab.de/ausstellung/weissenburg/expo-15.htm>

Here is **the I John 5:7-8 passage** in Greek and English, from the NA27 and the Stephanus' 1550 edition, ignoring the issue of moveable NUs:

7 ὅτι τρεῖς εἰσὶν οἱ μαρτυροῦντες [[ἐν τῷ οὐρανῷ, ὁ πατήρ, ὁ λόγος, καὶ τὸ ἅγιον πνεῦμα· καὶ οὗτοι οἱ τρεῖς ἓν εἰσιν.

7 For there are three that bear witness: [[in heaven: the Father, the Word, and the Holy Spirit: and these three are one.

8 καὶ τρεῖς εἰσὶν οἱ μαρτυροῦντες ἐν τῇ γῆ]], τὸ πνεῦμα, καὶ τὸ ὕδωρ, καὶ τὸ αἷμα, καὶ οἱ τρεῖς εἰς τὸ ἓν εἰσιν.

8 And there are three that bear witness on earth:]] the Spirit and the water and the blood; and these three are as one.¹

Following is a critical apparatus, gathered from *Text und Textwert* vol. 3; and the UBS4 Greek New Testament:

omit ἐν τῷ οὐρανῷ, ὁ πατήρ, ὁ λόγος, καὶ τὸ ἅγιον πνεῦμα· καὶ οὗτοι οἱ τρεῖς ἓν εἰσιν. καὶ τρεῖς εἰσὶν οἱ μαρτυροῦντες ἐν τῇ γῆ **Ⲙ A B K L P Ψ 048 049 056 0142 0296 1 2 3 4 5 6 18 35 36 38 42 43 51 57 62 69 76 81 82 88* 90 93 94 97 102 103 104 105 110 131 133 141 142 149 172 175 177^{txt} 180 181 189 201 203 204 205 206 209 216 218 221* 223 226 234 250 254 256 263 296 302 307 308 309 312 314 319 321 322 323 325 326 327 328 330 337 363 365 367 368 378 383 384 385 386 390 393 394 398 400 404 421 424 425 429* 431 432 436 440 442 444 450 451 452 453 454 456 457 458 459 460 462 464 465 466 467 468 469 479 483 489 491 496 498 506 517 522 547 582 592 601 602 603 604 605 606 607 608 614 615 616 617 618 619 620 621 622 623 624 625 627 628 630 631 632 633 634 635 636* 637 638 639 641 643 656 664 665 680 699 720 743 757 794 796 801 808 824 832 876 901 910 912 913 914 915 917 919 920 921 922 927 928 935 941 945 959 986 996 999 1003 1022 1040 1058 1066 1067 1069 1070 1072 1075 1094 1099 1100 1101 1102 1103 1104 1105 1106 1107 1115 1127 1149 1161 1162 1175 1241 1242 1243 1244 1245 1247 1248 1249 1250 1251 1270 1292 1297 1311 1315 1319 1352 1354 1359 1360 1367 1384 1390 1398 1400 1404 1405 1409 1424 1448 1456 1482 1490 1495 1501 1503 1505 1508 1509 1521 1523 1524 1548 1563 1573 1594 1595 1597 1598 1599 1609 1610 1611 1618 1619 1622 1626 1628 1636 1637 1642 1643 1646 1649 1656 1661 1668 1673 1678 1702 1704 1717 1718 1719 1720 1721 1722 1723 1724 1725 1726 1727 1728 1729 1730 1731 1732 1733 1735 1736 1737 1738 1739 1740 1741 1742 1743 1744 1745 1746 1747 1748 1749 1750 1751 1752 1753 1754 1757 1758 1761 1762 1763 1765 1767 1768 1769 1780 1827 1828 1829 1830 1831 1832 1835 1836 1837 1838 1839 1840 1841 1842 1843 1844 1845 1846 1847 1849 1850 1851 1852 1853 1854 1855 1856 1857 1858 1860 1861 1862 1863 1864 1865 1867 1868 1869 1870 1871 1872 1873 1874 1875 1876 1877 1880 1881 1882 1885 1886 1888 1889 1890 1891 1892 1893 1894 1895 1896 1897 1899 1902 1903 2080 2085 2086 2125 2127 2130 2131 2138 2143 2147 2180 2186 2191 2194 2197 2200 2218 2221 2242 2243 2255 2261 2279 2288 2289 2298 2344 2352 2356 2374 2378 2400 2401 2404 2412 2423 2431 2464 2466 2475 2483 2484 2492 2494 2495 2501 2502 2508 2511 2516 2523 2527 2541 2544 2554 2558 2587 2625 2626 2627 2652 2653 2674 2675 2691 2696 2704 2705 2712 2716 2718 2723 2736 2746 2774 2776 2777 2805** *Lect itar vgst,ww syr^{p,h} copsa,bo arm^{mss} eth geo slav Clement^{lat} (Origen^{lat}) Cyril Dam Ps-Oec Ps-Dionysius^{vid} (John-Damascus); Rebaptism Ambrose Augustine Quodvultdeus Facundus Erasmus Eds. 1,2 HF RP NA27 {A}*

lacuna ⲡ⁹ ⲡ⁷⁴ C 0245 122 *et al.* (If a MS does not contain 1 John, it will not be on this lacuna list.)

¹ that is, “these three agree.”

I see 5 general groupings of the Comma: (Erasmus' first two editions OMITTED the Comma.)

Group One:

[[έν τῷ οὐρανῷ, ὁ πατήρ, ὁ λόγος, καὶ τὸ ἅγιον πνεῦμα· καὶ οὗτοι οἱ τρεῖς ἓν εἰσι. καὶ τρεῖς εἰσιν οἱ μαρτυροῦντες ἐν τῇ γῆ]], τὸ πνεῦμα καὶ τὸ ὕδωρ καὶ τὸ αἷμα, καὶ οἱ τρεῖς εἰς τὸ ἓν εἰσιν. 221^{mg} 2318 2473 vgc^l
Stephens (88^{mg} matches this group except for moveable NUs, acc. to Scrivener. 221^{mg} and Stephens may differ in that regard as well; Stephens 1550 dropping the last NU.)

[[έν τῷ οὐρανῷ, ὁ πατήρ, ὁ λόγος, καὶ τὸ ἅγιον πνεῦμα· καὶ οὗτοι οἱ τρεῖς ἓν εἰσι. καὶ τρεῖς εἰσιν οἱ μαρτυροῦντες ἐν τῇ γῆ]], τὸ πνεῦμα, καὶ τὸ ὕδωρ, καὶ τὸ αἷμα, καὶ οἱ τρεῖς εἰς τὸ ἓν εἰσι. - 88^{mg}. (acc. to Scrivener) arm

[[έν τῷ οὐρανῷ, ὁ πατήρ, καὶ ὁ λόγος, καὶ τὸ ἅγιον πνεῦμα· καὶ οὗτοι οἱ τρεῖς ἓν εἰσι. καὶ τρεῖς εἰσιν οἱ μαρτυροῦντες ἐν τῇ γῆ]], τὸ πνεῦμα, καὶ τὸ ὕδωρ, καὶ τὸ αἷμα, καὶ οἱ τρεῖς εἰς τὸ ἓν εἰσι. - 88^{mg}. (acc. to Text und Texwert) arm

[[έν τῷ οὐρανῷ, πατήρ, λόγος, καὶ πνεῦμα ἅγιον· καὶ οὗτοι οἱ τρεῖς ἓν εἰσι. καὶ τρεῖς εἰσιν οἱ μαρτυροῦντες ἐν τῇ γῆ]], τὸ πνεῦμα καὶ ὕδωρ καὶ τὸ αἷμα, καὶ οἱ τρεῖς εἰς τὸ ἓν εἰσι. Erasmus 3

[[έν τῷ οὐρανῷ, πατήρ, λόγος, καὶ πνεῦμα ἅγιον· καὶ οὗτοι οἱ τρεῖς ἓν εἰσι. καὶ τρεῖς εἰσιν οἱ μαρτυροῦντες ἐν τῇ γῆ]], πνεῦμα, καὶ ὕδωρ, καὶ αἷμα, καὶ οἱ τρεῖς εἰς τὸ ἓν εἰσιν. 918

[[έν τῷ οὐρανῷ, ὁ πατήρ, ὁ λόγος, καὶ τὸ πνεῦμα ἅγιον· καὶ οὗτοι οἱ τρεῖς ἓν εἰσι. καὶ τρεῖς εἰσιν οἱ μαρτυροῦντες ἐν τῇ γῆ]], τὸ πνεῦμα καὶ ὕδωρ καὶ τὸ αἷμα, καὶ οἱ τρεῖς εἰς τὸ ἓν εἰσι. Erasmus 4, 5

Group Two:

[[έν τῷ οὐρανῷ, πατήρ, λόγος, καὶ πνεῦμα ἅγιον. καὶ τρεῖς εἰσιν οἱ μαρτυροῦντες ἐν τῇ γῆ]], πνεῦμα, ὕδωρ, καὶ αἷμα. 61 429^{mg}

Group Three:

[[έν τῷ οὐρανῷ, πατήρ, λόγος, καὶ πνεῦμα ἅγιον· καὶ οἱ τρεῖς ἓν εἰσι. καὶ τρεῖς εἰσιν οἱ μαρτυροῦντες ἐν τῇ γῆ]], τὸ πνεῦμα, καὶ τὸ ὕδωρ, καὶ τὸ αἷμα, καὶ οἱ τρεῖς εἰς τὸ ἓν εἰσιν. 636^{mg}

Group Four:

[[έν οὐρανῷ: πατήρ, λόγος, καὶ πνεῦμα ἅγιον, καὶ οἱ τρεῖς εἰς τὸ ἓν εἰσιν καὶ τρεῖς εἰσιν οἱ μαρτυροῦντες ἐν τῇ γῆ]] 177^{mg}

Group Five:

[[έν τῷ οὐρανῷ, ὁ πατήρ, καὶ ὁ λόγος, καὶ τὸ ἅγιον πνεῦμα· καὶ οἱ τρεῖς εἰς τὸ ἓν εἰσίν. καὶ τρεῖς εἰσιν οἱ μαρτυροῦντες ἐπὶ τῆς γῆς]], τὸ πνεῦμα καὶ τὸ ὕδωρ καὶ τὸ αἷμα. Complutensian Polyglot (Yes, it is accented and breathed differently)

[[ἀπὸ τοῦ οὐρανοῦ, πατήρ, λόγος, καὶ πνεῦμα ἅγιον. καὶ τρεῖς εἰσιν οἱ μαρτυροῦντες ἐπὶ τῆς γῆς]], τὸ πνεῦμα, τὸ ὕδωρ, καὶ τὸ αἷμα. 629

Now the Latins:

add in terra, spiritus et aqua et sanguis (+ et hi tres unum sunt in Christo Iesu vg^{mss}; Spec). 8 et tres sunt, qui testimonium dicunt in caelo, pater, verbum (filius it^l vg^{mss}) et spiritus, et hi tres unum sunt (+ in Christo Iesu it^l vg^{mss}) it^{l,r} vg^{mss}; Speculum Varimadum Ps-Vigilius (Fulgentius) (Priscillian) (Cyprian)

Lat-K reads: (7) *quia tres testimonium perhibent* (8) *spiritus et aqua et sanguis et isti tres in unum sunt [...]* *pater et filius et spiritus sanctus et tres unum sunt* "because three bear witness, spirit and water and blood, and these three are one [...] Father and Son and Holy Spirit, and the three are one" (This is a reconstruction based on an allusion by Cyprian.)

Lat-C reads: (7) *tres sunt qui testimonium dicunt in terra* (8) *spiritus aqua et sanguis et hi(i) tres unum sunt in Christo Iesu et tres sunt qui testimonium dicunt in caelo pater verbum et spiritus et hi(i) tres unum sunt* "There are three who bear witness on earth: spirit, water and blood, and these three are one in Christ Jesus. And there are three who bear witness in heaven: the Father, the Word and the Spirit, and these three are one."

Lat-T reads: (7) *quoniam tres sunt qui testificantur in terra* (8) *spiritus et aqua et sanguis et tres sunt qui testificantur in caelo pater et filius et spiritus sanctus et hi(i) tres unum sunt* "because there are three who bear witness on earth: spirit and water and blood, and three who bear witness in heaven: Father and Son and Holy Spirit, and these three are one."

Following is from the UBS textual commentary (Metzger, Bruce M., *A Textual Commentary on the Greek New Testament*, on behalf of and in cooperation with the Editorial Committee of the United Bible Societies' Greek New Testament: Kurt Aland, Matthew Black, Carlo M. Martini, Bruce M. Metzger, and Allen Wikgren (Stuttgart, United Bible Societies, Corrected Edition, ©1975):

(A) EXTERNAL EVIDENCE.

(1) The passage is absent from every known Greek manuscript except four, and these contain the passage in what appears to be a translation from a late recension of the Latin Vulgate. These four manuscripts are ms. 61, a sixteenth century manuscript formerly at Oxford, now at Dublin; ms. 88, a twelfth century manuscript at Naples, which has the passage written in the margin by a modern hand; ms. 629, a fourteenth or fifteenth century manuscript in the Vatican; and ms. 635, an eleventh century manuscript which has the passage written in the margin by a seventeenth century hand.

(2) The passage is quoted by none of the Greek Fathers, who, had they known it, would most certainly have employed it in the Trinitarian controversies (Sabellian and Arian). Its first appearance in Greek is in a Greek version of the (Latin) Acts of the Lateran Council in 1215.

(3) The passage is absent from the manuscripts of all ancient versions (Syriac, Coptic, Armenian, Ethiopic, Arabic, Slavonic), except Latin; and it is not found (a) in the Old Latin in its early form (Tertullian, Cyprian, Augustine), or in the Vulgate (b) as issued by Jerome (codex Fulgensis [copied A.D. 541-46] and codex Amiatinus [copied before A.D. 716]) or (c) as revised by Alcuin (first hand of codex Vercellensis [ninth century]).

The earliest instance of the passage being quoted as a part of the actual text of the Epistle is in a fourth century Latin treatise entitled *Liber Apologeticus* (chap. 4), attributed either to the Spanish heretic Priscillian (died about 385) or to his follower Bishop Instantius. Apparently the gloss arose when the original passage was understood to symbolize the Trinity (through the mention of three witnesses; the Spirit, the water, and the blood), an interpretation which may have been written first as a marginal note that afterwards found its way into the text. In the fifth century the gloss was quoted by Latin Fathers in North Africa and Italy as part of the text of the Epistle, and from the sixth century onwards it is found more and more frequently in manuscripts of the Old Latin and of the Vulgate. In these various witnesses the wording of the passage differs in several particulars. (For examples of other intrusions into the Latin text of 1 John, see 2:17; 4:3; 5:6,20.)

(B) INTERNAL PROBABILITIES.

(1) As regards transcriptional probability, if the passage were original, no good reason can be found to account for its omission, either accidentally or intentionally, by copyists of hundreds of Greek manuscripts, and by translators of ancient versions.

(2) As regards intrinsic probability, the passage makes an awkward break in the sense.

For the story of how the spurious words came to be included in the Textus Receptus, see any critical commentary on 1 John, or Metzger, *The Text of the New Testament*, pp. 101 f.; cf. also Ezra Abbot, "1. John v.7 and Luther's German Bible," in *The Authorship of the Fourth Gospel and Other Critical Essays* (Boston, 1888), pp. 458-463. [End of quotation of the UBS commentary]

F. H. A. Scrivener (whom KJV advocates respect) speaks on the "Johannine Comma," in these excerpts from "A Plain Introduction to the Criticism of the New Testament," Volume Two, 4th Ed., Edited by Edward Miller, Wipf & Stock Publishers, Eugene, Oregon.

On Page 401 he says, "The authenticity of the words within brackets, will, perhaps, no longer be maintained by any one whose judgment ought to have weight"

In footnote 2 on p. 402, he says, "It is really surprising how loosely persons who cannot help being scholars, at least in some degree, will talk about codices containing this clause." He goes on to mention a Dr. Tatham, Rector of Lincoln College, Oxford, claiming the existence of a codex in the college library that contained it, but upon further investigation by fellow scholars, it had disappeared. Scrivener thinks Dr. Tatham had in mind Act 33, and had only assumed it contained it, because of this MS' connection to Codex Montfortianus.

On p. 403, about the text of the Comma, Scrivener repeats a maxim of Textual Criticism: "In general there is very considerable variety of reading (always a suspicious circumstance, as has already been explained)..."

I used this work by Scrivener to help collate above, what the various Erasmus editions read as far as variants within the Comma. As for the minuscules containing the comma, Scrivener only knew of 61 (he calls 34), 88mg (he calls 173), and 629 (he calls 162). He dismisses Codex Ravianus (gospels 110) as worthless.

Scrivener on p. 403 says he knew of 193 cursives which were witnesses to the omission of the Comma, plus "the extant uncials 01 A B K L P."

Scrivener says, "No printed edition, therefore, is found to agree with either 34 or 162 (173, whose margin is so very recent, only differs from the common text by dropping N EPHELKUSTIKON [moveable NU]), though on the whole 162 best suits the Complutensian: but the omission of the article in ver. 7, while it stands in ver. 8, proves that the disputed clause was interpolated (probably from its parallel Latin) by one who was very ill acquainted with Greek."

CONCERNING the story that Erasmus included the Comma into his 3rd through 5th editions based on a promise to do so if anyone could produce one Greek manuscript that contain it, here is an article by H. J. De Jonge, who has done the most research into it. It is a 623 KB PDF document:

https://openaccess.leidenuniv.nl/retrieve/1699/279_050.pdf downloadable from Leiden University.