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**The Pastoral Letters: Best Proportions
with 16-Syllable *Stichos***

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There is quite a bit of ancient evidence on ancient stichometry, systematically presented in the 1999 paper¹. Yet some essential findings have emerged inductively from the stichometric analysis of the New Testament writings, including the exact determination of the length of the *stichos*. In a document that probably dates from the 4th c. AD, the *versus Virgilianus* (the Latin equivalent) is explicitly set at 16 syllables – at least for Latin Bible manuscripts. For Greek texts, this is implied by two passages in Galen from the second half of the 2nd c. AD. However, already in 1882, i.e. in the early *stichos* research, Hermann Diels calculated a *stichos* of 15 syllables from the traditional *stichos* specifications for the Greek classical period².

This Greek *stichos* measure has been confirmed almost throughout the New Testament. Only the presumably relatively late Pastoral Epistles seem to be disposed with the 16-syllable *stichos*. This, too, is an inductively obtained result. The three letters are not addressed to churches or (like Philemon) to a church member, as the other Pauline letters are, but to two associates of Paul known from his letters and from Acts. The letters are probably by the same author and are closely related in vocabulary. Thematically they seem to be coordinated with each other. First Timothy deals with the task of the church leader to ensure right doctrine and order (1Tim 3:15), the second letter with Paul's situation of suffering and his imminent martyrdom (2Tim 1:8), and the letter to Titus with the right conduct of Christians, especially in the world (Tit 2:12; 3:2).

In the following, the composition of each of the letters will be presented in detail in light of the question of whether the content structure in each case fits better to a *stichos* with 16 syllables or to the 15-syllable measure. However, the structure is not quite simple, because for some transitional pieces it is not clear to which main part they are to be assigned. At the end the result is summarized

¹ F.G. Lang, "Schreiben nach Maß: Zur Stichometrie in der antiken Literatur", *NovT* 41 (1999), 40–57.

² Cf. Lang, "Schreiben nach Maß", 42–43.

for all three. As an appendix, three tables are added with the content and stichometric outline of the three letters.

1. Composition of 1 Timothy

Two topics in particular seem to alternate in the structure of the letter: the teachers of false doctrine and the order of the church – in a ring composition. The first, middle and last main parts refer explicitly to these false teachers, the second and fourth main parts in between to the order of the church. Each main part contains five paragraphs.³

After the beginning, which – rounded up – measures 5* / 5# *stichoi* according to both lines of measure,⁴ by exact count 4:13 and 4:09 respectively, the first main section (1:3-20) follows, containing the occasion of the letter, the conflict between “wholesome” and false teaching (v. 10). In the first paragraph (vv. 3-7), Pseudo-Paul reminds the reader of the task of rejecting the false interpretation of Scripture. Then (vv. 8-11) he declares that “the law is good if one uses it rightly” (v. 8). Thirdly (vv. 12-16) he thanks his Lord for the mercy he has shown him, his persecutor. The short doxology (v. 17) also serves this purpose. The fifth paragraph (vv. 18-20) repeats the charge to continue fighting “the good fight of faith”.⁵ The five paragraphs count 12 + 10 + 14 + 3 + 8 = 47* *stichoi* (exactly: 11:13 + 9:04 + 14:00 + 2:06 + 7:04 = 44:12) or 12 + 9 + 14 + 3 + 7 = 45# *stichoi* (exactly 11:02 + 8:11 + 13:01 + 2:04 + 6:13 = 41:15). While 47 can-

³ Cf. F. Koehler, *Die Pastoralbriefe*, in SNT 2 (3rd ed.; Göttingen 1917) 402–459, here 417: exactly the same main caesurae, only 3:1-13 as an additional (6th) main part. Others also distinguish five main parts, although with slightly varied delimitation, cf. M. Dibelius, *Die Pastoralbriefe* (HNT 13, 2nd ed.; Tübingen 1931) 7: caesura before 5:3; 6:3; J. Jeremias, *Die Briefe an Timotheus und Titus*, in NTD 9 (7th ed.; Göttingen 1954) 28. 37: caesura before 4:12; 6:3; likewise L. Oberlinner, *Die Pastoralbriefe I. Kommentar zum ersten Timotheusbrief* (HThK 11/2-1; Freiburg 1994) v–vi; similarly N. Brox, *Die Pastoralbriefe* (RNT; Regensburg 1989): 355f: 4:12-5:2 as extra main part.

Not so, for example, J. Roloff, *Der erste Timotheusbrief* (EKK 15; Zürich / Neukirchen-Vluyn 1988) 50: 4,1–6,2 as the third of four main sections; H. Merkel, *Die Pastoralbriefe* (NTD 9/2, 13th ed.; Göttingen 1991) 37. 52: total of 14 sections (including entrance and conclusion), of which 4:12–6:2 (“instructions for church leadership”) with five subsections; L.T. Johnson, *The First and Second Letters to Timothy* (AB 35A; New York 2001) VIII–IX: 14 units; H.-W. Neudorfer, *Der erste Brief des Paulus an Timotheus* (HTA; Wuppertal 2004) 3: 17 sections in two parts (caesura before 4:1); B. Fiore, *The Pastoral Epistles* (SP 12; Colledgeville, MI, 2007) VIII: 13 units; S. Ngewa, *1 & 2 Timothy and Titus* (Africa Bible Commentary (Grand Rapids, MI, 2009) vii–x: 19 units.

⁴ The 15-syllable *stichoi* will be denoted by *, the 16-syllable by #.

⁵ Departing from UBS v. 17 is taken by itself as a paragraph to give the doxology its own weight.

not be resolved as a product with a Fibonacci number (at best as $4 \times 8 + 5 \times 5$), 45 corresponds to the product 9×5 or 15×3 .

The second main section (2:1–3:16) is about “how one should behave in the house of God”, that is, in the church, which is called the “pillar and foundation of truth” (3:15). The main section consists first of two paragraphs about the order of worship, first on prayer (2:1-7), then on the conduct of women in particular (2:8–3:1a). This is followed by two paragraphs on rules for the office of bishops (3:1b-7) and of deacons (v.8-13). The conclusion (vv. 14-16) is a solemn confession of Christ. – These paragraphs have respectively $14 + 16 + 13 + 11 + 9 = 63^*$ *stichoi* (exactly: $13:11 + 15:10 + 13:01 + 10:14 + 8:07 = 61:13$) and $13 + 15 + 13 + 11 + 8 = 60^\#$ *stichoi* (exactly: $12:14 + 14:11 + 12:04 + 10:04 + 7:15 = 58:00$). The sum of the 15-syllable *stichoi* can also be resolved very nicely: $63 = 3 \times 21$. But that of the 16-syllable *stichoi* can also be represented as a product with a Fibonacci number: $60 = 12 \times 5$ or 20×3 .

The theme of the third main section (4:1-16) is right doctrine, explicitly named in the first, middle and last paragraphs. First (vv. 1-3) the false teachers are characterized as ascetic because they want to forbid marriage and certain foods. In the center (vv. 6-8) Timothy is addressed about his ministry of the Word, that he have nothing to do with heretical “old wives’ tales” and be committed to proper “godliness”. At the end (vv. 12-16) he is reminded of the “laying on of hands by the elders”, that is, his ordination, and of his responsibility for doctrine. The two small paragraphs in between contain the substantive reasons, a reference to God’s good creation, which may be enjoyed with thanksgiving (vv. 4-5), and the core statement that God is the “savior of all people” (vv. 9-11).⁶ Understanding the structure in this way, the last paragraph certainly belongs in the context of this main section, whereas the paragraph about the men and women in the church (5:1-2) begins the next main section.⁷ – The scope of the main section is $8 + 3 + 9 + 5 + 11 = 36^*$ *stichoi* (exactly: $7:11 + 3:00 + 8:11 + 4:07 + 10:13 = 34:12$) or $8 + 3 + 9 + 5 + 11 = 36^\#$ *stichoi* (exactly: $7:04 + 2:13 + 8:03 + 4:03 + 10:03 = 32:10$). In this case, the rounded up result is the same for both lines of measure: $36 = 12 \times 3$ or $4 \times 9 = 2 \times 2 \times 3 \times 3$.

The fourth main section (5:1-25) again contains instructions for order in the church, specifically for caring for members and personnel management (as we would say today). The first paragraph (vv. 1-2) concerns a recommendation to address men and women of all generations as family members. This is followed

⁶ Departing from UBS, a new paragraph begins with 4:4 and with 4:9, also with 4:11 instead of 4:12.

⁷ Against divergent outlines, such as those listed in note 3

by two paragraphs on widows, first (vv. 3-8) distinguishing “proper widows” with a congregational function (αἱ ὄντως χήραι) from those who still have to care for their family, delineating (vv. 9-16) the criteria for recognizing the function of widows in the congregation.⁸ The fourth paragraph (vv. 17-23) deals with the office of presbyter, regulating their compensation as well as the procedure for conflicts and warning against too rapid ordination. Somewhat abruptly follows the advice to Timothy to stop drinking only water and rather, for the sake of his sick stomach, to drink some wine as well (v. 23). Perhaps by the episcopal task of ordaining (v. 22) the episcopal rule that the minister should be “sober” and “not a drunkard” (3:2-3) comes to mind. In any case, the preceding injunction to keep oneself pure is thereby set apart from an ascetic misunderstanding. The last paragraph (vv. 24-25) formulates aphoristically experience advising caution in judging other people, which is also to be taken into account, for example, in the selection of widows and presbyters: “sins”, and equally “good works”, of some are not conspicuous, but will in the end be revealed, at the latest at the final judgment.⁹ This seems to relate back to the positive criteria mentioned in the case of widows (v. 10) and to possible accusations brought against a presbyter (vv. 19-22) – in this respect a fitting conclusion to the whole main section.¹⁰ – The five paragraphs have $4 + 11 + 18 + 16 + 4 = 53^*$ *stichoi* (exactly: $3:04 + 11:00 + 17:10 + 15:07 + 3:14 = 51:05$) and $4 + 11 + 17 + 15 + 4 = 51^\#$ *stichoi* (exactly: $3:01 + 10:05 + 16:09 + 14:08 + 3:11 = 48:02$), respectively. While the sum of the 15-syllable *stichoi* can only be resolved as the sum of two products of Fibonacci numbers ($53 = 6 \times 8 + 1 \times 5$), the number $51 = 17 \times 3$, and 17 is half of the Fibonacci number 34.

The fifth and last main section (6:1-19) combines two themes. First and last paragraphs concern the social differences in the church, at the beginning (vv. 1-2a) the behavior of slaves toward their – also Christian – masters, at the end (vv. 17-19) the right attitude of the rich toward their property. In between are three paragraphs concerning Timothy’s ministerial tasks.¹¹ First (vv. 2b-5) he is to commit to sound teaching against the heretics with their wars of words and their pursuit of gain. Then (vv. 6-10) – and this seems to bridge to the paragraphs with social topics – the dangers of profit-seeking and greed for money are point-

⁸ Deviating from USB, a new paragraph begins with 5:9.

⁹ Dibelius, *Pastoralbriefe*, 51; Roloff, *1Tim*, 317, interpret the verse as pointedly aiming at the final judgment, thus dispensing with a contextual exegesis.

¹⁰ Cf. Jeremias, *1-2Tim*, 26: on the “Auswahl der Amtsträger”. Differing, for example, is Roloff, 305: only in a very loose connection to the foregoing.

¹¹ So is ἐντολή (v.14) to be understood; cf. Roloff, *1Tim*, 352; according to E. Käsemann, “Das Formular einer neutestamentlichen Ordinationsparänese” (1954), in idem, *Exegetische Versuche und Besinnungen I* (Göttingen 1960) 101–108, here 106.

ed out.¹² Finally (vv. 11-16) he is reminded of the “good confession” he made at his ordination. The brief conclusion of the letter (6:20-21) recapitulates the theme of false teachers in an affect-laden manner, a typical *peroratio*.¹³ – The scope of the five paragraphs is $8 + 10 + 12 + 18 + 8 = 56^*$ *stichoi* (exact: $7:02 + 9:09 + 11:06 + 17:04 + 7:07 = 52:13$) or $7 + 9 + 11 + 17 + 7 = 51\#$ *stichoi* (exact: $6:11 + 9:00 + 10:11 + 16:03 + 7:00 = 49:09$). Both numbers can be resolved as a product with a Fibonacci number: $56 = 7 \times 8$, $51 = 17 \times 3$. The 16-syllable *stichoi* sum is identical to the corresponding sum of the 4th main section. Finally, the letter conclusion counts 5^* (4:04) and $4\#$ (4:00) *stichoi*, respectively.

After this pass through 1 Timothy, the sum can be figured, first for the measure of 15 syllables: $5 + 47 + 63 + 36 + 53 + 56 + 5 = 265^*$ *stichoi* (exactly: $4:13 + 44:12 + 61:13 + 34:12 + 51:05 + 52:13 + 4:04 = 254^*12$). That is 53×5 , so the 4th main part is exactly one-fifth of the whole letter. Otherwise, no special proportions can be derived from this number. This is different with the 16-syllable measure, which is therefore more likely to be the basis of the composition: $5 + 45 + 60 + 36 + 51 + 51 + 4 = 252\#$ (exactly: $4:09 + 41:15 + 58:00 + 32:10 + 48:02 + 49:09 + 4:00 = 238\#13$). If we take the letter’s beginning and closure together as $9\#$ *stichoi*, all these numbers are divisible by 3, so $3 \times 3 + 15 \times 3 + 20 \times 3 + 12 \times 3 + 17 \times 3 + 17 \times 3 = 84 \times 3$. Expressed another way, this gives us $4 \times 21 \times 3 = 12 \times 21\#$. So with this line of measure we arrive here, too, at the modulus of 21 *stichoi*, well known from other NT writings, which can be resolved as $8 + 13$, that is, as the sum of numbers of the Fibonacci series. Apparently the main parts of 1Tim are disposed accordingly, which results in the following proportions:

- 3rd main part = 36 = $12 \times 3\#$ *stichoi*,
- 2nd main part = 60 = $12 \times 5\#$ *stichoi*.
- 1st + 4th main parts = $45 + 51 = 96 = 12 \times 8\#$ *stichoi*,
- 5th main part + preface + ending = $51 + 5 + 4 = 60 = 12 \times 5\#$ *stichoi*.

In addition, other products of Fibonacci numbers stand out:

- 1st + 2nd main parts = $45 + 60 = 105 = 5 \times 21\#$ *stichoi*,
- 4th + 5th main parts = $51 + 51 = 102 = 3 \times 34\#$ *stichoi*.

¹² Deviating from UBS, new paragraph in 6:6.

¹³ Cf. H. Lausberg, *Handbuch der literarischen Rhetorik* (2nd ed.; Munich 1973) § 431. – Deviating from UBS, no new paragraph in 6:21b.

2. Composition of 2 Timothy

Exegetes bundle the many smaller units very differently into main parts, when they do not simply count the sections.¹⁴ After the first main section beginning with the thanksgiving in 1:3, the address “my child” (τέκνον μου) in 2:1, the only one in 2Tim, combined with “you then” (σὺ οὖν) form a clear caesura.¹⁵ Equally caesura-forming is “but you” in 3:10, which is repeated verbatim in the following main section in 3:14; 4:5. Corresponding to this is the stressed “as for me” (ἐγὼ γάρ) in 4:6, with which according to our analysis the last main part begins, dealing with Paul’s trial and concluding with “Amen” in 4:18.¹⁶ Another main part concerns false teachers, whose “profane chatter” is explicitly addressed in 2:16. To be sure, 2:14 already warns against “wrangling over words” (μὴ λογομαχεῖν), which is why the caesura is often placed here.¹⁷ But the paragraph 2:14-15, declaring the apostle’s disciple a “worker who has no need to be ashamed”, seems to belong to the same main section as v.3, where he is called a “good soldier of Christ Jesus”. With the main section 2:16-3:9 there are a total of five main sections, as in 1Tim.

The letter’s opening (1:1-2) is quite short, again with 5* / 5# stichoi (exactly: 4:08 and 4:04, respectively). In the first main section (1:3-18), Pseudo-Paul reminds his co-worker Timothy of the tradition of faith entrusted to him (καλὴ παραθήκη). It seems to be a ring composition in five paragraphs. The middle paragraph (vv. 8-12a) contains in the center the gospel (vv. 9-10) of which Timothy is not to be ashamed because Paul is not ashamed of his imprisonment either (vv. 8/12a). The paragraphs before (vv. 6-7) and after (vv. 12b-14) refer to the charism conferred by the laying on of hands and the tradition of faith, which are respectively to be awakened and preserved by the Spirit. In the first (vv. 3-5) and last paragraphs (vv. 15-18), faithful church members are named: first Timothy’s grandmother and mother, at the end a church member in Ephesus who, un-

¹⁴ Cf. Merkel, *Pastoralbriefe*, 82: 10 sections; L. Oberlinner, *Die Pastoralbriefe II. Kommentar zum zweiten Timotheusbrief* (HThK 11/2-2; Freiburg 1995) VII: 13 sections; Johnson, *1&2Tim*, IX: 11 units; Fiore, *Pastoral Epistles*, VIII: 8 units; Ngewa, *Tim&Tit*, XI–XIII: 15 units.

¹⁵ Likewise, already J.A. Bengel, *Gnomon Novi Testamenti* (3rd ed.; Tübingen 1855) 837: other main caesurae before 1:3; 4:9; 4:19; cf. Dibelius, *Pastoralbriefe*, 58: other main caesurae before 3:10; 4:9; R.W. Yarbrough, *The Letters to Timothy and Titus* (PillarNTC; Grand Rapids, MI, 2018) IX: 2:1–3:9 as the middle one of 3 main parts.

¹⁶ Cf. Koehler, *Pastoralbriefe*, 440: 2:14–4,5 as second main part; T. Holtz, *Die Pastoralbriefe* (ThHK 13, 2nd ed.; Berlin 1972) 193: caesura before 4:6, however attributed to an editor. Usually the caesura is set before 4:9.

¹⁷ Cf. Jeremias, *1-2Tim*, 41. 48. 56: 3 main parts, caesurae before 1:3; 2:14; 4:9.

like two others, has always stood by Paul.¹⁸ – With this subdivision, the main section has $9 + 5 + 14 + 7 + 9 = 44^*$ *stichoi* (exact: 8:04 + 4:10 + 13:01 + 6:07 + 8:14 = 41:06) or $8 + 5 + 13 + 7 + 9 = 42^\#$ *stichoi* (exact: 7:12 + 4:06 + 12:04 + 6:01 + 8:06 = 38:13). While the number 44 offers little for the calculation of proportions (at best as $3 \times 13 + 5$), 42 is to be resolved as 2×21 , so to be derived very nicely from the often attested modulus 21.

The second main section (2:1-15) contains the charge to Timothy to pass on the “word of truth” (v. 15). The first (vv. 1-7) and last (vv. 14-15) of the three paragraphs state this explicitly, combining the call for readiness to suffer (v. 3) and the warning against wrangling over words (v. 14). The middle paragraph (vv. 8-13) recapitulates the gospel of Jesus Christ, the Risen One (v. 8), the cause of the apostle’s suffering and hope for eternal blessedness for himself and the “elect” (vv. 9-10), which is carried out in a coined formula (vv. 11-13). – The scope of the paragraphs is $12 + 12 + 6 = 30^*$ *stichoi* (exactly: 11:05 + 11:06 + 5:05 = 28:01) or $11 + 11 + 5 = 27^\#$ *stichoi* (exactly: 10:10 + 10:11 + 5:00 = 26:05). Both *stichoi* numbers can be represented as products of Fibonacci numbers: $30 = 2 \times 3 \times 5$, $27 = 3 \times 3 \times 3$. A comparison with the other main parts must show whether this results in remarkable proportions.

The third or middle main part (2:16–3:9) warns against false doctrine. After the first paragraph (2:16-19) it is about the thesis that “the resurrection has already taken place” (v. 18). With this, two men are named who have “swerved from the truth”. Corresponding to this last paragraph (3:6-9) deals with some who “oppose the truth”. The three intervening paragraphs give instructions for dealing with dissenters: first (2:20-21) the call to cleanse yourselves of such people; then (2:22-26) the admonition to be “kindly to everyone” and to “correct opponents with gentleness”; finally (3:1-5) the call to shun the unrighteous, godless people who are to be expected in the last days.¹⁹ This main section also seems concentric. – The five paragraphs have $10 + 7 + 12 + 10 + 11 = 50^*$ *stichoi* (exactly: 10:00 + 6:01 + 11:13 + 9:02 + 10:09 = 47:10) and $10 + 6 + 12 + 9 + 11 = 48^\#$ *stichoi* (exactly: 9:06 + 5:11 + 11:02 + 8:09 + 10:01 = 44:13), respectively. Again the two *stichoi* numbers can be understood as products of Fibonacci numbers: $50 = 2 \times 5 \times 5$, $48 = 2 \times 3 \times 8$.

The fourth main section (3:10–4:5), like the second, contains Timothy’s commission. The first paragraph (3:10-13) recalls Paul’s common experiences with him, especially the persecutions that believers must endure. The second

¹⁸ To emphasize the ring composition, new paragraphs begin with 1:6, 8, 12b, differing from UBS.

¹⁹ Deviating from UBS, new paragraphs begin with 2:16, 20, 22; 3:6.

paragraph (3:14-17) commits him to “what you have learned” and to the “sacred writings”, and the third paragraph (4:1-5) virtually implores him to fully fulfill his “ministry” (v. 5: διακονία), including fending off unsound doctrine and being ready to suffer.²⁰ – The *stichoi* sums are $10 + 9 + 14 = 33^*$ *stichoi* (exactly: $9:09 + 8:10 + 13:13 = 32:02$) or $9 + 9 + 13 = 31^\#$ *stichoi* (exactly: $9:00 + 8:02 + 13:00 = 30:02$). While the number 33 can be resolved as 11×3 , 31 can only be represented as the sum of two products with Fibonacci numbers: for example as $2 \times 13 + 1 \times 5$ or $1 \times 21 + 2 \times 5$.

The theme of the fifth and final main section (4:6-18) is Paul’s personal situation before his martyrdom. In the first paragraph (vv. 6-8) he looks back on the “good fight” he fought and confidently looks ahead to the favorable judgment of the “righteous judge”. The second paragraph (vv. 9-15) reports on a number of named associates and opponents. In the third paragraph (vv. 16-18), Paul reports on his first interrogation, in which he was able to fully develop the “kerygma” before the Gentiles, and he reiterates his confidence in salvation. The letter’s conclusion (4:19-22), unlike 1Tim, contains the usual greetings back and forth, plus two benediction formulas that can be taken as paragraphs in themselves.²¹ – The main body has $8 + 13 + 10 = 31^*$ *stichoi* (exactly: $7:08 + 12:08 + 9:01 = 29:02$) or $8 + 12 + 9 = 29^\#$ *stichoi* (exactly: $7:01 + 11:12 + 8:08 = 27:05$), the conclusion $6 + 2 = 8^*$ *stichoi* (exactly: $5:03 + 1:02 = 6:05$) or $5 + 2 = 7^\#$ *stichoi* (exactly: $4:14 + 1:01 = 5:15$). As far as the proportions are concerned, the numbers 31 or 29 cannot be directly traced back to Fibonacci numbers but can only be represented as sums of two numbers or their products: for example as $2 \times 8 + 3 \times 5$ or $21 + 8$. The same applies to the number $7 = 2 + 5$. Only 8 is already as such a number from the Fibonacci sequence.

Thus the line sum of 2Tim is either $5 + 43 + 30 + 50 + 33 + 31 + 8 = 200^*$ *stichoi* (exactly: $4:08 + 41:06 + 28:01 + 47:10 + 32:02 + 29:02 + 6:05 = 189^*04$) or $5 + 42 + 27 + 48 + 31 + 29 + 7 = 189^\#$ *stichoi* (exactly: $4:04 + 38:13 + 26:05 + 44:13 + 30:02 + 27:05 + 5:15 = 177^\#09$). The number 200 can be resolved as $5 \times 5 \times 8$. In this case, the number 8, the length of the letter closure, is the modulus, and the remaining six numbers can be traced back to it in pairs: $5 + 43 = 48 = 6 \times 8$, $30 + 50 = 80 = 10 \times 8$, $33 + 31 = 64 = 8 \times 8$. This gives the following proportions:

²⁰ Deviating from UBS new paragraph starting at 3:14.

²¹ Deviating from UBS new paragraph starting at 4:22.

- 4th + 5th main parts = 33 + 31 = 64 = 8 × 8* *stichoi*;
- 1st main part + beginning = 43 + 5 = 48 = 3 × 16* *stichoi*;
- 2nd + 3rd main parts = 30 + 50 = 80 = 5 × 16* *stichoi*,
- so ratio of 3rd main part to the whole letter = 1 / 4.

The sum 189# on the other hand is due to the modulus 21, as 9 × 21. This also results in very nice proportions so that in 2Tim it is difficult to decide which *stichos* measure to give preference to:

- 1st main part = 42 = 2 × 21# *stichoi*,
- 2nd + 4th main parts + beginning = 27 + 31 + 5 = 63 = 3 × 21# *stichoi*,
- so Timothy's commission I + II makes up one-third of the whole letter.
- 3rd + 5th main parts + ending = 48 + 29 + 7 = 84 = 4 × 21# *stichoi*,
- 1st + 3rd + 5th main parts + ending = 42 + 84 = 126 = 6 × 21# *stichoi*,
- that is two-thirds of the whole letter.

If you take the 1st main part by itself, the ratio is 8/13:

- 2nd + 5th main parts = 27 + 29 = 56 = 7 × 8# *stichoi*,
- 3rd + 4th main parts + begin. + end. = 48 + 31 + 12 = 91 = 7 × 13# *stichoi*.

3. Composition of Titus

Also the smallest of the Pastoral Epistles is structured variously in the commentaries. Some again number the individual sections without grouping them into main parts.²² Others distinguish a smaller main part consisting of 1:5-16 (or 1:5-9²³), and a larger second main part 2:1-3:11, followed only by the letter's conclusion 3:12-15.²⁴ This suggests a division into three parts, with 3:1-11 as a further main part.²⁵ The content can be differentiated so: the church order with the defense against false teachers, then rules of conduct within the church and finally towards all people. The theological focus in all three main parts concerns the keyword "pure": as a principle in 1:15, the cleansing by Christ in 2:14 and the "bath of regeneration" in 3:5.

²² Cf. Merkel, *Pastoralbriefe*, 106: 8 sections; L. Oberlinner, *Die Pastoralbriefe III. Kommentar zum Titusbrief* (HThK 11/2-3; Freiburg 1996) v: 8 sections; Ngewa, *Tim&Tit*, xv: 7 units; Yarbrough, *Tim&Tit*, x: 7 units.

²³ Cf. Holtz, *Pastoralbriefe*, 206. 211: "äußerer" and "innerer Gemeindeaufbau".

²⁴ Cf. Koehler, *Pastoralbriefe*, 450. 453: "gegen die Irrlehrer" and "gesunde Lehre"; Jeremias, *Tim&Tit*, 60. 62: "Gemeindeamt und Sektierertum" and "christliche Lebensführung"; Brox, *Pastoralbriefe*, 356 (but letter conclusion from 3:8).

²⁵ Cf. Dibelius, *Pastoralbriefe*, 82; Fiore, *Pastoral Epistles*, ix (but letter introduction 1:1-9); N. Baumert, M.-I. Seewann, *Hirte der Hirten* (Würzburg 2019) 7.

In Titus, the opening of the letter (1:1-4) is much more extensive than in the other two letters. It contains a detailed self-introduction of the fictitious apostle. This is followed by the first main part (1:5-16). The apostle's disciple is to finish the church order on Crete that Paul has begun. The first paragraph (vv. 5-9) concerns the appointment of elders and bishops, for whose appointment criteria are listed. The second paragraph (vv. 10-14) is directed against false teachers, who are reviled in the middle verse with a classic hexameter as typical Cretan liars; they are to "become sound in the faith". The last paragraph (vv. 15-16) argues using the principle "To the pure all things are pure" and from there sharply distinguishes between believers and unbelievers²⁶ – The preface counts 10* / 10# *stichoi* by both measures (exactly: 9:12 / 9:03). The main body counts 14 + 11 + 6 = 31* *stichoi* (exact: 13:01 + 10:10 + 5:05 = 29:01) or 13 + 10 + 5 = 28# *stichoi* (exact: 12:04 + 10:00 + 5:00 = 27:04). While the number 10 can be resolved as 2×5, the number 31 is a prime number, and 28 = 4×7 cannot be derived directly from Fibonacci numbers.

The second main section (2:1-15) formulates rules of conduct for various groups in the church. First and last verses (vv. 1, 15) admonish Titus to speak appropriately; they form the framework in concentric arrangement. We understand them as small paragraphs in themselves. Between them are three paragraphs, first (vv. 2-8) referring to men and women, old and young respectively, then (vv. 9-10) to the slaves; each is about living "self-controlled" and being "an ornament to the doctrine of God our Savior" also in their surroundings. The following paragraph (vv. 11-14) contains the rationale for this: "for the grace God has appeared, bringing salvation to all", which is why Christians are "in the present age to live lives that are self-controlled, upright, and godly".²⁷ – The five paragraphs together have 2 + 14 + 5 + 11 + 2 = 34* *stichoi* (exact: 1:03 + 13:12 + 4:11 + 10:06 + 1:14 = 32:01) or 2 + 13 + 5 + 10 + 2 = 32# *stichoi* (exact: 1:02 + 12:15 + 4:07 + 9:12 + 1:13 = 30:01). The number 34 comes directly from the Fibonacci sequence, the number 32 is to be derived as 2×2×8 from it.

The third main section (3:1-11) is also about behavior in the world. The first paragraph (vv. 1-2) exhorts to obedience to the authorities and "to be gentle, and to show every courtesy to everyone".²⁸ The second paragraph (vv. 3-7) justifies this soteriologically, the turning point being God's "mercy" and the "water of rebirth and renewal by the Holy Spirit". The third paragraph (vv. 8-11) recapitulates, both concerning "good works" that are "profitable to everyone" and con-

²⁶ Compared to UBS new paragraph from 1:15.

²⁷ Notwithstanding UBS, new paragraphs begin with 2:2, 9, 15.

²⁸ New paragraph from 3:3.

cerning false teachers, again a *peroratio* (cf. 1Tim 6:20). The conclusion of the letter (3:12-15) contains assignments and greetings in two paragraphs (vv. 12-14 and v. 15). – The main body counts $5 + 13 + 10 = 28^*$ *stichoi* (exact: 4:05 + 12:14 + 9:06 = 26:10) or $5 + 13 + 9 = 27^\#$ *stichoi* (exact: 4:01 + 12:02 + 8:13 = 25:00). The letter conclusion has $7 + 3 = 10^*$ *stichoi* (exact: 6:06 + 2:02 = 8:08) or $6 + 2 = 8^\#$ *stichoi* (exact: 6:00 + 2:00 = 8:00). The numbers 28 and 27 are to be resolved as $2 \times 2 \times 7$ and $3 \times 3 \times 3$, the number 10 as 2×5 , and the number 8 comes from the Fibonacci sequence.

The whole letter has $10 + 31 + 34 + 28 + 10 = 113^*$ *stichoi* according to the 15-syllable measure (exactly: 9:12 + 29:01 + 32:01 + 26:10 + 8:08 = 106*02). Between these numbers there is a remarkable proportion: the three main parts, i.e. the letter corpus, count together 93^* *stichoi*, the first main part is one-third of it. According to the 16-syllable measure, the letter has $10 + 28 + 32 + 27 + 8 = 105^\#$ *stichoi* (exactly: 9:03 + 27:04 + 30:01 + 25:00 + 8:00 = 99#08). That is $5 \times 21^\#$ *stichoi*, so we have the *modulus of 21# stichoi* here as well. The following proportions are remarkable and clearly indicate that in Titus the basis is the 16-syllable *stichos*:

- 2nd main part + ending = 32 + 8 = 40 = $5 \times 8^\#$ *stichoi*,
- 1st + 3rd main parts + preface = 28 + 27 + 10 = 65 = $5 \times 13^\#$ *stichoi*.
- 2nd main part + preface = 32 + 10 = 42 = $2 \times 21^\#$ *stichoi*,
- 1st + 3rd main parts + ending = 28 + 27 + 8 = 63 = $3 \times 21^\#$ *stichoi*.
- 3rd main part + conclusion = 27 + 8 = 35 = $1 \times 35^\#$ *stichoi*,
- 1st + 2nd main parts + preface = 28 + 32 + 10 = 70 = $2 \times 35^\#$ *stichoi*.

4. Stichometry of the three pastoral letters

According to our content analysis, the three Pastoral Epistles are concentric compositions, both with respect to their main parts and often within them. On this basis, which builds on the delimitation of the individual paragraphs, the proportions between the main parts are calculated stichometrically. Now it is possible to show also the proportions between the three letters.

The line sum of the three letters is $265 + 200 + 113 = 578^*$ *stichoi* according to the 15-syllable measure, and $252 + 189 + 105 = 546^\#$ *stichoi* according to the 16-syllable measure. The number 578 can only be resolved as $2 \times 17 \times 17 = 17 \times 34$, so it can still be traced to the Fibonacci number 34, but the partial sums for the individual letters cannot. However, the partial sums are relatively close to numbers corresponding to multiples of 22: $12 \times 22 = 264$, $9 \times 22 = 198$, $5 \times 22 = 110$. The total sum is somewhat further away: $26 \times 22 = 572$; the difference here

is 6* *stichoi*. Now 22* *stichoi* of 15 syllables correspond exactly to 20:10 *stichoi* of 16 syllables, or 21# *stichoi* rounded up. This calculation has led us to assume the 16-syllable *stichos* for the Pastoral Epistles. The *stichoi* sums of the individual letters and the total sum are each divisible by 21, as we have seen: $252 = 12 \times 21$, $189 = 9 \times 21$, $105 = 5 \times 21$ as well as $546 = 26 \times 21$. The sum of 1-2 Timothy is even a square number: $252 + 189 = 441 = 21 \times 21$. Such correspondences, in connection with the observations we have made on the letters individually, are hardly by coincidence. The author has apparently intentionally and artfully arranged the three letters together on the basis of the 16-syllable *stichos*.

This means for the authorship of the Pastoral Epistles three things. (1) They have a common author. (2) He is not identical with an author of the other deutero-pauline letters nor with another author of the New Testament, because according to our analyses they all use the 15-syllable *stichos*. (3) He writes relatively late, probably only at the beginning of the 2nd century. However, we do not know exactly when the original Latin 16-syllable *stichos* was officially adopted for Greek texts. We have to rely here on inductively gained knowledge. The rest of the New Testament and probably also Plutarch (around 100 AD) still use the 15-syllable *stichos*.²⁹ In Galen (late 2nd cent.) the 16-syllable *stichos* is attested.

Both *stichos* measures continue to be in use side-by-side, as can be seen from the *stichoi* sums noted in quite a few manuscripts at the end of a book, the so-called total stichometry. For 1 Tim, two numbers in particular have survived: 250 in Codex Sinaiticus and 230 in younger uncials and in minuscules.³⁰ They can be derived very nicely from the result of our counting if one considers that for the copies of the finished book the *scriptio continua* was used – different from the process of writing, where according to our reconstruction in each case the single paragraph with its mostly incomplete final line forms the starting point for the *stichoi* counting.

For 1 Tim the exact *stichoi* sum is either 254*12 or 238#13. These numbers are somewhat higher than the two numbers handed down, because from the *stichoi* counted the syllables are to be deducted which are saved by the abbreviation of the 15 co-called *nomina sacra*.³¹ In 1 Tim they add up to a maximum of 5*02 or 4#13 *stichoi*³² (if one calculates the abbreviation as 1 syllable each³³).

²⁹ Cf. F.G. Lang, Plutarch, “*De E apud Delphos*”, see below p. •••.

³⁰ Cf. T. Zahn, *Geschichte des Neutestamentlichen Kanons* II/1 (Erlangen 1890) 394.

³¹ Cf. L. Taube, *Nomina sacra. Versuch einer Geschichte der christlichen Kürzung* (Munich 1907).

³² Not all 15 *nomina sacra* are abbreviated in all manuscripts. In our calculation, all those that can be abbreviated are included.

³³ This seems a plausible assumption and here has served well, as with other NT writings.

Subtracting them from the exact numbers results in 249*10 or 234#01 *stichoi*, thus the same as the 250 *stichoi* of Sinaiticus and very close to the 230 *stichoi* of the other manuscripts. Even closer are the surviving *stichoi* sums 233 and 236.³⁴ Other differences, for example due to text variants, can be left out of consideration here.

The same can be seen with the other two letters. The exact *stichoi* sums of 2 Tim number 189*04 or 177#09. If one takes into account the *nomina sacra* with 5*09 or 5#04 *stichoi*, one arrives at 184*10 or 172#05. Again this is very close to the handed down numbers: 180 in Sinaiticus and otherwise 172.³⁵ In Tit we have as exact sums 106*02 or 99#08 *stichoi*. If one subtracts the 2*04 or 2#02 *stichoi* saved by *nomina sacra*, there are still 103*13 or 97#06. In the manuscripts the number 97 is mainly handed down, in Sinaiticus 96; the latter's number is thus this time also due to the 16-syllable *stichos*, not to the 15-syllable *stichos* as in 1 Tim and 2 Tim. But among other variants the number 107 is also attested.³⁶ One clearly sees from these examples how exact the *stichoi* numbers of the subscriptions are. However, many other numbers have survived, especially in canon lists, which can only be explained as spelling or reading errors or as from a differing textual tradition.

To summarize: If the Pastoral Epistles are written with the 16-syllable *stichos*, they belong to the youngest writings of the New Testament. However, this does not necessarily make them the latest writings. It is quite possible that other NT authors worked at the same time and later still with the 15-syllable *stichos*. Apparently both *stichos* measures were used side by side for centuries, at least in the subscriptions of the manuscripts. Our reconstruction is based on the presumption that the authors of the New Testament, when composing their writings, took care to structure their material according to good aesthetic criteria, that is, they were committed to literary principles. So did the author of the Pastoral Epistles. In our analyses we have often tried to prove this in detail. In the case of the letters to Timothy and Titus, this has only be possible under the assumption that the author used the *stichos* with 16 syllables.

³⁴ Cf. Zahn, *Geschichte* II/1, 396 n. 15 (without citing the manuscripts in question).

³⁵ Cf. Zahn, *Geschichte* II/1, 394; according to 399 n. 2 to Col. 5 (with addendum in II/2, 1015), 189 is also indirectly attested. This would be exactly the sum of the 15-syllable *stichoi*, without shortening by *nomina sacra*.

³⁶ Cf. Zahn, *Geschichte* II/1, 394. 398 n. 5 on Col. 3 (Euthalius).

Appendix: Tabular outline of the three pastoral letters

| 1 Timothy Chapter | Parts | Contents | 16-Syll. <i>Stichoi</i> |
|-----------------------------|--------------|--|----------------------------|
| 1:1-2 | 0. | Beginning: Sender, addressee, salutation | 5# |
| 1:3-20 | 1. | Occasion: Conflict between gospel and false teaching | 45# |
| 1:3-7 | 1.1 | Reminder: Defense against false interpretation of the law | 12# |
| 1:8-11 | 1.2 | Teaching: Understanding of the law according to the Gospel | 9# |
| 1:12-16 | 1.3 | Thanksgiving: For God's mercy to the persecutor Paul | 14# |
| 1:17 | 1.4 | Prayer: Solemn Praise to God | 3# |
| 1:18-20 | 1.5 | Commission: Fight for true faith against apostates | 7# |
| 2:1-3:16 | 2. | Church order I: Worship, bishops and deacons | 60# |
| 2:1-7 | 2.1 | Instructions concerning prayer: Universal for all people | 13# |
| 2:8-3:1a | 2.2 | Worship: Rules for men and especially for women | 15# |
| 3:1b-7 | 2.3 | Bishops: Selection criteria | 13# |
| 3:8-13 | 2.4 | Deacons: Selection criteria, also for their wives | 11# |
| 3:14-16 | 2.5 | Conclusion: Church as the house of God, confession of Christ | 8# |
| 4:1-16 | 3. | Timothy's task: Ministry of the word against false teachers | 36# |
| 4:1-3 | 3.1 | Prediction: Appearance of ascetic false teachers | 8# |
| 4:4-5 | 3.2 | Counterargument: Goodness of the gifts of creation | 3# |
| 4:6-8 | 3.3 | Encouragement: Be servant of sound doctrine | 9# |
| 4:9-11 | 3.4 | Main argument: God as savior of all people | 5# |
| 4:12-16 | 3.5 | Admonition: Heed ordination mandate | 11# |
| 5:1-25 | 4. | Church order II: Rules of Conduct, Widows, Elders | 51# |
| 5:1-2 | 4.1 | General rule: Church members as family members | 4# |
| 5:3-8 | 4.2 | Widow function I: Definition of the congregational function | 11# |
| 5:9-16 | 4.3 | Widow function II: Selection criteria | 17# |
| 5:17-23 | 4.4 | Elders: Compensation, procedure for conflicts, ordination | 15# |
| 5:24-25 | 4.5 | General principle: Caution in judging others | 4# |
| 6:1-19 | 5. | Teaching duty: Proper attitude to money | 51# |
| 6:1-2a | 5.1 | Social behavior: Rules of conduct for slaves | 7# |
| 6:2b-5 | 5.2 | Polemics: Against the profit-seeking of false teachers | 9# |
| 6:6-10 | 5.3 | Teaching: On the danger of pursuit of profit | 11# |
| 6:11-16 | 5.4 | Reminder: Holding fast to the mission once undertaken | 17# |
| 6:17-19 | 5.5 | Social behavior: Rules of conduct for the rich | 7# |
| 6:20-21 | 6. | Conclusion: Urgent admonition, greeting | 4# |
| 1:1-6:21 | 0.-6. | Timothy as church leader: Good order and teaching | 252# |

| 2 Timothy Chapter | Parts | Content | 16-Syll. <i>Stichoi</i> |
|-----------------------------|-----------|---|----------------------------|
| 1:1-2 | 0. | Beginning: Sender, addressee, salutation | 5# |
| 1:3-18 | 1. | Basis of faith: For Timothy to guard | 42# |
| 1:3-5 | 1.1 | Thanksgiving: For the faith of Timothy | 8# |
| 1:6-7 | 1.2 | Reminder: Investiture by laying on of hands | 5# |
| 1:8-12a | 1.3 | Exhortation: Join in suffering with witness to the gospel | 13# |
| 1:12b-14 | 1.4 | Admonition: Preserve entrusted foundation of faith | 7# |
| 1:15-18 | 1.5 | Report: Apostate and faithful church members | 9# |

| | | |
|--|--|---|
| 2:1-15 2:1-7 2:8-13 2:14-15 | 2. Timothy's task I: Transmission of the gospel 2.1 Exhortation: Hand on doctrine through struggle and suffering 2.2 Reminder: Of the gospel and of Paul's sufferings 2.3 Warning: Against useless quarrels over words | 27# 11# 11# 5# |
| 2:16-3:9 2:16-19 2:20-21 2:22-26 3:1-5 3:6-9 | 3. Doctrinal Conflicts: Dealing with false teachers 3.1 Warning: Thesis that resurrection of dead already took place 3.2 Exhortation: Dissociation from false teachers 3.3 Exhortation: Gentleness in dealing with dissenters 3.4 Exhortation: Dissociation from evil and godless people 3.5 Warning: People seducing especially women to false doctrine | 48# 10# 6# 12# 9# 11# |
| 3:10-4:5 3:10-13 3:14-17 4:1-5 | 4. Timothy's task II: Following Paul 4.1 Reminder: Necessity of suffering for the pious 4.2 Exhortation: Keep to what you have learned and the scriptures 4.3 Exhortation: Fulfilling the office of preacher and teacher | 31# 9# 9# 13# |
| 4:6-18 4:6-8 4:9-15 4:16-18 | 5. Personal situation: Paul in the face of martyrdom 5.1 Outlook: Martyrdom and crown of righteousness 5.2 Personal: Request for visit, about opponents and coworkers 5.3 Report: Beginning of trial, confidence in redemption | 29# 8# 12# 9# |
| 4:19-22 4:19-21 4:22 | 6. Conclusion 6.1 Greetings: To and from individuals and house churches 6.2 Benediction | 7# 5# 2# |
| 1:1-4:22 | 0.-6. Paul in prison: Ministry in struggle and suffering | 189# |

| Titus Chapter | Parts Content | 16-Syll. <i>Stichoi</i> |
|--|---|--|
| 1:1-4 | 0. Beginning: Paul's self-introduction, addressee, greeting | 10# |
| 1:5-16 1:5-9 1:10-14 1:15-16 | 1. Church order: Rules of office, defense against false teachers 1.1 Commission in Crete I: Installation of elders and bishops 1.2 Commission in Crete II: Defense against false teachers 1.3 Rationale: Principle "To the pure all things are pure" | 28# 13# 10# 5# |
| 2:1-15 2:1 2:2-8 2:9-10 2:11-14 2:15 | 2. Rules of conduct I: For groups in the congregation 2.1 Instruction: Speak in accord with sound doctrine 2.2 Exhortation: Self-control of men, women, old, young 2.3 Exhortation for slaves: Submission in order to "do honor" 2.4 Rationale: Purified to good works by God's grace 2.5 Exhortation : Instruct accordingly with vigor | 32# 2# 13# 5# 10# 2# |
| 3:1-11 3:1-2 3:3-7 3:8-11 | 3. Rules of conduct II: Toward all people 3.1 Exhortation: Obedient to worldly authority, kind to people 3.2 Rationale: Justified by God's loving kindness and baptism 3.3 Tasks: Affirmation of doctrine, distance to false teachers | 27# 5# 13# 9# |
| 3:12-15 3:12-14 3:15 | 4. Conclusion: Instructions and greetings 4.1 Assignments: Four coworkers named, final reminders 4.2 Greetings: From all and to all, benediction | 8# 6# 2# |
| 1:1-3:15 | 0.-4. Titus as apostle's pupil: Christians' behavior in the world | 105# |