Critique of Vaticanus Distigme-obelos Denials

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Building on over twenty-five years of research on this issue,[1] my 2017 *NTS* article, 'Vaticanus Distigme-obelos Symbols Marking Added Text, Including 1 Corínthians 14.34–5,'[2] analyzes combinations of Codex Vaticanus B's two-dot distigmai, which mark the location of textual variants, with horizontal-bar obeloi, which mark a specific kind of variant, namely multi-word additions. This article argues that combinations in *Vaticanus* of a distigme and a horizontal bar with characteristic features that always coincide with multi-word additions, henceforth 'characteristic bars', are best understood as distigme-obelos symbols marking added text. Two April 2019 *NTS* articles, however, deny that distigme-obelos symbols exist.

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[1] P. Payne, 'Fuldensis, Sigla for Variants in Vaticanus, and 1 Cor 14.34–5', *NTS* 41 (1995) 240–62; P. Payne, 'Ms. 88 as Evidence for a Text without 1 Cor 14.34–5', *NTS* 44 (1998) 152–88; P. Payne and P. Canart, 'The Originality of Text-critical Symbols in Codex Vaticanus', *NovT* 42 (2000) 105–13; P. B. Payne, 'The Text-Critical Function of the Umlauts in Vaticanus, with Special Attention to 1 Corinthians 14.34-35: A Response to J. Edward Miller', *JSNT* 27 (2004) 105–12; P. B. Payne, '1 Tim 2.12 and the Use of οὐδέ to Combine Two Elements to Express a Single Idea', *NTS* 54 (2008) 235–53; P. Payne and P. Canart, 'Distigmai Matching the Original Ink of Codex Vaticanus: Do They Mark the Location of Textual Variants?' *Le manuscrit B de la Bible (Vaticanus graecus): Introduction au fac-similé, Actes du Colloque de Genève (11 juin 2001), Contributions supplémentaires* (ed. P. Andrist; Lausanne: Éditions du Zèbre, 2009) 199–226; P. B. Payne, *Man and Woman, One in Christ* (Grand Rapids: Zondervan, 2009) 217–67.

[2] *NTS* 63 (2017) 604–24: https://www.cambridge.org/core/services/aop-cambridge-core/content/view/A5FC01A6E14A2A1CF1F514A9BF93C581 offers its free download.

I am grateful to both Fellows and Krans for providing valuable observations that, in fact, support my distigme-obelos judgments. Unfortunately, neither Fellows's nor Krans's articles acknowledge this support. Furthermore, both ignore the fundamental question: How does one identify the meaning of any marginal symbol? The answer is that one looks for consistent patterns. Then using statistical analysis, one tests whether a pattern is statistically significant and to what level. My previous research on these symbols is grounded in statistical analysis. Fellows and Krans provide no refutation of my statistical analysis. They provide no statistics that justify their distigme-obelos denials. Nor do they provide any explanation for the 100% coincidence of characteristic bars with multi-word additions. Page numbers in parentheses hereafter cite their *NTS* articles. '2017:' precedes page numbers in my 2017 *NTS* article. '2020:' precedes page numbers in my forthcoming study identifying 17 distigme-obelos symbols marking locations where variants cumulatively add four or more words that were not in the original text.

Critique of Richard Fellows's Distigme-obelos Denial[3]

Fellows Makes Two Important Contributions

First, Fellows identifies a bar I missed at 1285B (Mark 6:11) that 'is hard to spot because it was inked successfully only at its extreme ends' (249, 2020:11, figure 4). A large mid-line gap on this line marks the exact point where some manuscripts add 15–18 words. Fellows cannot say I 'cherry-picked' (251) this case since he discovered it. It strengthens the statistical argument for distigme-obelos symbols and for the early text of *Vaticanus*'s Gospels. It has exceptionally long extension into the margin and overall length. These heighten the contrast between characteristic bars and paragraphoi by distigme lines regarding these measurements' averages. Fellows's 3 Oct.

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[3] Richard G. Fellows, 'Are There Distigme-Obelos Symbols in Vaticanus?', *NTS* 65 (2019) 246–51.

2017 email to me acknowledged that his discovery strengthens my statistical case, but his article states, 'Our conclusions would not change if we included this bar in the analysis' (249).

Fellows's discovery caused me to reexamine the *Vaticanus* New Testament five more times to see if I had missed any other bars by distigme lines. This revealed nine more characteristic bars by distigme lines where NA[28] and/or Reuben-Swanson-noted, multi-word-adding variants interrupt the original text at the exact point of a blank space on that line, henceforth referred to as a 'gap'. It also revealed 11 more undisputed paragraphoi by distigme lines, each lacking at least two of the five features of characteristic bars (2017: 620–1; 2020: 8). Thus, every newly discovered characteristic bar confirms their distinction from paragraphoi. Furthermore, it revealed that the only distigme-obelos-marked addition my 2017 article listed as adding only three words, actually adds five-to-six words.[4] This adds significantly to the statistical argument because NA[28] and/or Reuben-Swanson-noted four-or-more-word-adding variants occur, on average, only once in about 80 lines of *Vaticanus* text whereas three-or-more-word-adding variants occur, on average, once in about 26 lines of *Vaticanus* text.[5]

The ideal confirmation of a thesis identifying what rarely-occurring symbols mean is if it accurately describes what occurs in all cases not originally considered. My thesis accurately describes multi-word additions interrupting the original text at a gap following all nine later-discovered characteristic bars. All 17 distigme lines with characteristic bars coincide with variants that cumulatively add four or more words, henceforth 'multi-word additions', compared to only three[6] of thirty distigme lines with undisputed paragraphoi.

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[4] At Mark 5:40; see 2020:5 n. 8, image on p. 53.

[5] See the calculations at 2020:33–34 and notes 59–62; Payne, 'Distigme-obelos', p. 620, n. 60.

[6] The words added to Mark 14.70 (1301B) and Acts 14.18 (1403B) are at a gap. The words added to 1 Cor 10.17 (1469C) are not at a gap. Note that because distigmai mark the locations of textual variants, it is not exceptional, but rather to be expected, that out of thirty such variants three would be variants adding four or more words.

My research hypothesis, that characteristic bars mark where multi-word-adding variants interrupt the original text, perfectly explains why all 17 characteristic bars coincide with widely acknowledged multi-word additions. The null hypothesis is the opposite of the research hypothesis. Fellows and Krans assert the null hypothesis that characteristic bars do *not* mark where multi-word-adding variants interrupt the original text, but are just paragraphoi that by chance occur by distigmai (249, 252, 255, 257). The chi-square test is the proper procedure for evaluating the probability that the null hypothesis is correct. It determines the probability of such disparate frequencies of multi-word additions coinciding with characteristic bars (17 of 17) vs. undisputed paragraphoi (3 of 30) if the characteristic bars are unrelated to multi-word additions.

To prevent overestimation of statistical significance when the number of occurrences is small, this chi-square test includes Yates's correction. This gives the chi-square value $\chi^2 =$ 32.369, d.f. (degrees of freedom) = 1. This shows that the probability of this happening is extraordinarily low, just 1.275 in 100,000,000.[7] Statistically, a probability of one in 20 is sufficiently low to exclude Fellows's distigme-obelos denial as a false hypothesis. The probability of Fellows being correct in denying that characteristic bars mark added text is 3,921,569 times less likely than that threshold.[8]

Furthermore, what occurs by distigme-obelos symbols is even more remarkable than multi-word variants occurring somewhere on all seventeen *Vaticanus* distigme lines with a characteristic bar. In every case but one with downward dipping ink from both dots and the bar, indicating a different hand (2017:614), a gap marks the exact point where multi-word-adding variants interrupt the original text (2017:612–17, 2020:7–20, 53–4). Coincidence cannot plausibly explain this. Nor does the common occurrence of gaps with paragraphoi explain why multi-word adding variants interrupt the original text precisely at all 16 of these gaps. Since nine

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[7] Standard chi-square calculators calculate the probability of this happening as p (probability) = 0.00000001275, such as http://courses.atlas.illinois.edu/fall2017/STAT/STAT200/pchisq.html.

[8] 1.275 in 100,000,000 = 1 in 78,431,372.549. 78,431,372.549 ÷ 20 = 3,921,568.62745.

of the 30 distigme lines with undisputed paragraphoi have no gap,[9] if all 16 original

characteristic-bar lines were paragraphoi, it is doubtful that they would all have a gap, let alone a

gap precisely where multi-word-adding variants interrupt the original text. Furthermore, it is not

just all 9 newly found distigme-obelos symbols that confirm the thesis, every newly discovered

bar by a distigme line confirms the distinction between obeloi and paragraphoi.

Fellows's second important contribution was to convince me in 2017, when he kindly

emailed me his measurements, to remeasure all bars by distigme lines with greater precision than

I had done originally.[10] I therefore purchased a high-precision ruler. Using the high-resolution

IPZS facsimile,[11] with two large magnifying glasses I carefully measured both the extension into

the margin and the overall length of all 47 bars by a distigme line (2020:31).

Comparing my new, more precise, measurements to Fellows's measurements shows

much greater similarity. Fellows had objected that my length 'measurements of all but one of the

undisputed paragraphoi are smaller than' his measurements (251). Five of my new, more precise

undisputed-paragraphos length measurements are longer than Fellows's, and all but two are

within 0.1 mm of his measurements.

Similarly, regarding extension into the margin of the eight originally-identified

characteristic bars, Fellows had objected, 'His measurements of all but one of his eight "obeloi"

are greater than mine' (249). By my new, more precise measurements, two of these eight

measurements are almost identical to Fellows's measurements, including the bar at the start of 1

[9] 1245B, 1312C, 1342C, 1345B, 1401B, 1442C, 1504B, 1505 B26, 33.

[10] On 5 Oct. 2017 Fellows emailed to me the measurements he used in his *NTS* article of

extension into the margin and overall length of those 28 bars.

[11] *Bibliorum Sacrorum Graecorum Codex Vaticanus B* (Rome: Istituto Poligrafico e Zecca dello

Stato, 1999), available at https://www.linguistsoftware.com/codexvat.htm.

Cor. 14:34 (Fellows 2.65 mm, Payne 2.7 mm[12]). Three of Fellows's measurements of these eight are longer than mine, and three are shorter than mine. One of Fellows's three shorter measurements would have been much longer if Fellows had included in his measurement the dot at the left end of the bar at 1259 A33, Matt. 18:10/12. Fellows writes, 'I do not include it because it adds little to the visible impression of length' (249). That is not, however, a valid reason for excluding the dot from his measurements. This dot makes perfect sense in context as the beginning of this bar. Interpreted as unrelated to this bar, it is completely out of place here.[13]

Fellows's exclusion of this portion of the bar shortened his measurements of both its extension into the margin and total length by approximately 1 mm. His exclusion recharacterizes this bar from one of the longest characteristic bars in both extension into the margin and total length into the shortest by far in both measurements. Both this and Fellows's exclusion of the bar at Mark 6:11, which has unusually long extension into the margin and total length, reduce his calculation of the average extension into the margin and length of the characteristic bars. Nevertheless, Fellows writes, 'Our conclusions would not change if we included this bar in the analysis or if we included the dot at Matt 18.10, 12' (249).

Fellows's Two Central Assertions are False

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[12] A blank sheet of paper covering all but a barely-visible sliver of the far-left edge of the farthest-left letters in a column established my measurements' starting point. Letters added later in the margin, e.g. 1460 B20, were ignored.

[13] In the IPZS facsimile, that dot appears to have the same color as the rest of this bar. Gaps in bars' ink are common immediately to the right of the beginning of bars, as at 1250 A40, 1259 B26, 32, 1271 A22, C26, 1274 B5, 1275 C34. This dot is also aligned with the rest of this bar similarly to the bars on the same page at 1259 A2, B10, C2 and 7. After making initial stylus contact, something presumably interrupted or sped up the scribe's stroke, or there was some irregularity in the vellum's surface or oil on it. In any such case, this dot makes best sense understood as part of this bar.

Fellows's article focuses on two central assertions regarding measurements of bars 'adjacent to distigmai' (247). The first regards their extension into the margin, the second, their length. Fellows writes that by his measurements the eight characteristic bars average 2.69 mm extension into the margin compared to 1.95 mm for the 20 distigme-line, undisputed paragraphoi (249). This is a remarkable disparity for their *average* extension into the margin given Fellows's view that they are all paragraphoi, especially since it excludes both the dot at Matt. 18:10/12 and the bar at Mark 6:11 with exceptionally long extension into the margin. Nevertheless, Fellows asserts that all eight characteristic bars are 'indistinguishable' from paragraphoi (246, 251). His Figures 2 and 3,[14] however, clearly show that all eight characteristic bars are by widely acknowledged multi-word additions, and all are longer in both overall length and extension into the margin than most undisputed paragraphoi by a distigme.

Fellows's first central assertion regarding bars by distigme lines[15] is his null hypothesis: 'there is no strong correlation between extension into the margin and the number of words of omitted[16] text in textual variants. Any trend is explicable by chance' (249). Yet this correlation is obvious in Figure 3 (250) using his own measurements and word count. All eight characteristic bars coincide with widely acknowledged, NA[28]-cited, multi-word additions, including the five longest ones. By Fellows's own measurements and word count, not even one of 'the twenty

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[14] The first (248) is mislabeled *Figure 2. Bar extensions into the margin*. It should be on p. 250 listed as *Figure 3. Bar length.* The second (250) is mislabeled *Figure 3. Bar length*. It should be on p. 248 listed *Figure 2. Bar extensions into the margin.*

[15] 'Black diamonds' in this sentence specifies that it refers to distigme lines.

[16] It is puzzling in light of scholarly consensus that obeloi mark where text was *added* and the consistent description of obeloi throughout my article marking where text was *added* that Fellows refers to their correlation with '*omitted* text'. *Vaticanus*'s asterisks, not obeloi, mark omitted text.

undisputed paragraphoi' (249) coincides with an NA[28]-cited, three-or-more-word addition and also extends into the margin even as far as the shortest characteristic bar.[17]

If the research hypothesis, the opposite of Fellow's and Krans's hypothesis, is correct, namely that characteristic bars mark where multi-word-adding variants interrupt the original text, this obviously explains why all characteristic bars coincide with multi-word additions. Fellows, however, denies any valid distinction between characteristic bars and undisputed paragraphoi. Indeed, he asserts that they are 'indistinguishable' (246, 251).

The standard chi-square probability test is the proper test to evaluate the probability of Fellows' two central assertions being correct. This test shows that if Fellows's and Krans's distigme-obelos denial were correct, the probability of this disparity (8 of 8 vs. 0 of 20) occurring is 1.378 in 1,000,000.[18] To prevent overestimation of statistical significance when the number of occurrences is small, this chi-square test includes Yates's correction. Statistically, a probability of one in 20 is sufficiently low to exclude Fellows's and Krans's distigme-obelos denials as a false hypothesis. The probability of Fellows or Krans being correct in denying that characteristic bars are related to added text is 36,284 times less likely than that threshold.[19] This test overwhelmingly excludes as invalid Fellows's null hypothesis assertion that 'there is no strong correlation between extension into the margin and the number of words of [added] text in textual variants' (249). Consequently, this test confirms that the research hypothesis is correct, namely that characteristic bars mark where multi-word-adding variants interrupt the original text. It justifies distinguishing characteristic bars from undisputed paragraphoi.

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[17] 2.24 mm, Fellows's measurement of Matt. 18:10's bar's extension into the margin excluding the separated dot, making it the shortest characteristic bar extension into the margin he lists.

[18] This chi-square (χ^2) value = 23.311, d.f. (degrees of freedom) = 1. Standard chi-square calculators calculate the probability of this happening as p (probability) = 0.000001378, such as the calculator at http://courses.atlas.illinois.edu/fall2017/STAT/STAT200/pchisq.html.

[19] 1.378 in 1,000,000 = 1 in 725,689.4. 725,689.4 ÷ 20 = 36,284.47.

Fellows's second central assertion is: 'there is no strong correlation between bar length and number of added words in textual variants' (251). Nevertheless, strong correlation between these is obvious in Fellows's Figure 2. All eight characteristic bars coincide with widely acknowledged, NA[28]-cited, three-or-more word additions, including the five longest additions. By Fellows's own measurements and word count, not even one of the other 20 bars (undisputed paragraphoi) by distigme lines[20] coincides with an NA[28]-cited, three-or-more-word addition and is also as long as even the shortest characteristic bar.[21]

Once again, the standard chi-square probability test shows that if Fellows's and Krans's denial that distigme-obelos symbols are related to multi-word additions were correct, the probability of 8 of 8 vs. 0 of 20 occurring is 1.378 in 1,000,000.[22] A probability of one in 20 is sufficiently low to exclude Fellows's distigme-obelos denial as a false hypothesis. Again, the probability of Fellows being correct in denying that characteristic bars are related to added text is 36,284 times less likely than that threshold.[23] This demonstrates that Fellows's second central assertion is also false, namely that 'there is no strong correlation between bar length and number of added words in textual variants' (251).

By Fellows's own measurements, bars by distigme lines exhibiting either length characteristic have extraordinarily strong correlation with multi-word additions. Both together overwhelmingly refute Fellows's denial of a strong correlation between characteristic bars and the number of added words.

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[20] Distigme lines are implied by 'these measurements' (251).

[21] That is, 3.88 mm, Fellows's measurement of Matt. 18:10/12's bar's length excluding the separated dot, hence his shortest characteristic bar measurement.

[22] χ^2 = 23.311 with Yates's correction (conservatively lowering probability for low data), d.f. 1. Standard chi-square calculators calculate the probability of this happening as p (probability) = 0.000001378, such as at http://courses.atlas.illinois.edu/fall2017/STAT/STAT200/pchisq.html.

[23] 1.378 in 1,000,000 = 1 in 725,689.4. 725,689.4 ÷ 20 = 36,284.47.

Fellows contends that 'these are not two independent observations: the bar is longer than average precisely because it extends further into the margin' (251). Yet Fellows's own lists of examples both of length and extension into the margin from 1 Corinthians (249 n. 9, 251, n. 10) demonstrate that these observations are largely independent. 18 of the references Fellows cites for these two observations apply to only one of them, and only seven apply to both. The independence of these measurements is confirmed by the full sets of bars by distigme lines later discovered. Of these 47 bars by a distigme line, 1237C is the shortest, but only three of the other 30 undisputed paragraphoi by distigme lines clearly exceed its extension into the margin: 1268A, 1469C, and 1504B. Similarly, 1429C and 1361A appear to have the least extension into the margin of these 47 bars but are longer than most of the 30 undisputed paragraphoi. As height and weight are different characteristics, so are extension into the margin and bar length.

Fellows Omits Crucial Data and Does not Reveal his Differing Posted Measurements

On 4 Oct. 2017, I emailed to Fellows, 'To avoid the false impression that we were measuring the same thing, you must acknowledge that I was measuring the 1999 *Codex Vaticanus B* facsimile.' Nevertheless, Fellows writes, 'the systematic differences between Payne's measurements and mine cannot be explained by his use of different photographs or his use of a different measurement technique' (249). Fellows acknowledges that his measurements were based on the on-line *Vaticanus* images (249, n. 6). Those images were scanned.[24] Digital images have limited resolution and are far-less dependable in color reproduction because the color displayed varies from monitor to monitor. Even the highest resolution 3rd generation retina display MacBook Pro resolution is only 227 ppi.[25] In contrast, from four inches away, the human

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[24] https://digi.vatlib.it/news/#news-2.

[25] https://en.wikipedia.org/wiki/Reina_display. Ppi = pixels (or points) per linear inch.

eye can perceive up to 2190 ppi of a high-resolution printed image.[26] One should not claim that measurements from different images are truly comparable.

Second only to the original manuscript, which because of its irregular surface is harder to measure accurately, the 1999 facsimile is the ideal standard for measurements since it is unaffected by monitor display and scaling limitations. The Vatican-produced *Vaticanus* New Testament color facsimile lacked the precision and faithful color reproduction necessary for high-level research. So it commissioned Istituto poligrafico e Zecca dello Stato, world-renowned for its extraordinarily accurate reproductions of the Leonardo da Vinci folios, to create the highest precision and most faithful color reproduction possible of Codex Vaticanus B.[27]

My own experience illustrates how accurate the IPZS facsimile is. After my 1995 *NTS* article conjectured that some distigmai might match the original ink color of *Vaticanus*, Paul Canart invited me to examine the original manuscript with him at the Vatican. Using the Vatican-produced color facsimile,[28] I made a list of the most likely cases of original-ink *Vaticanus* distigmai. Canart confirmed that only 11 from my list match the original *Vaticanus* ink color.[29] On receipt of one of the first copies of the IPZS 1999 color facsimile, I examined every distigme to see if any others match the apricot color that I remember so vividly from the original manuscript. I emailed to Canart a list of 40 that appeared in the IPZS facsimile to match that original apricot color. Canart confirmed by careful comparison with the original that there are, indeed, 40 more original-ink distigmai.[30] This exemplifies how reliable the IPZS facsimile is

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[26] https://wolfcrow.com/notes-by-dr-optoglas-the-resolution-of-the-human-eye/.

[27] 'con tecniche di riproduzione non convenzionali'
https://searchworks.stanford.edu/view/471397.

[28] *Novum Testamentum e Codice Vaticano Graeco 1209 (Codex B) tertia vice phototypice expressum* (Vatican: Bibliotheca Apostolica Vaticana, 1968).

[29] Payne and Canart, 'Originality', 105–9 lists the 11.

[30] Payne and Canart, 'Distigmai', 204–8 lists these 40.

in accurately representing the original *Vaticanus* text. The pixel limitations of all computer monitors, the difficulty of confirming that the on-screen image is exactly the original size, and the limitations of measuring on-screen images, argue that future measurements should be based on the IPZS 1999 facsimile rather than on-line scanned images.

I suspect that on-line measurement limitations may have contributed to Fellows's article including as bars in 1 Corinthians that 'have greater extension into the margin than that [bar] at the start of 1 Cor 14:34' (249, n. 9) bars that in the IPZS facsimile have less extension: 1466 B25, 1469 C17, and 1471 B11. Similarly, Fellows includes among the bars in 1 Corinthians that 'are measurably longer' than the one at the start of 1 Cor 14:34 (251, n. 10), bars that are clearly shorter in the IPZS facsimile: 1463 B7 and 1476 C31.

Fellows fails to mention the 15 cases where the range of his measurements and my previous measurements overlap.[31] Nor does Fellows mention that in at least four cases, his own earlier posted measurements of the length of the 28 bars are clearly outside the measurement ranges his Figure 2 gives.[32] This raises doubts about the reliability of the ranges Fellows's Figures list. Bar length measurement differences cannot be attributed to different definitions of 'the margin'. Fellows writes that Payne's 'length measurements are greater than [his] for six of the eight "obeloi"' (251), but Fellows's earlier posted length measurements are greater than *seven* of the eight obeloi length measurements used in his *NTS* article. On 4 Oct. 2017 I emailed

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[31] As shown in Fellows's Figure 3 (250, ordered from bottom to top) nine of my measurements of extension into the margin overlap Fellows's range: 1505B Col. 18f, 1280C, 1442C, 1345B, 1262C, 1284C, 1253B, 1332C, 1390A. In two cases my measurement was only 0.02 mm different than Fellows's measurement: 1262C and 1284C. As shown in Fellows's Figure 2 (248), six of my measurements of bar length overlap Fellows's range: 1505 B26, 1268A, 1504B, 1505B Col 3.20, 1470A, 1500C.

[32] 1505B Col 3.20, 1365A, 1403B, 1385B posted '9/29/2017 4:25 PM' at evangelicaltextualcriticism.blogspot.com/2017/09/more-payne-no-gain-on distigmai.html.

to Fellows, 'Why is it that in the numbers you posted on ETS [the EvangelicalTextualCriticism blogsite] your number was larger than mine in 46 of the 56 measurements including six of the "characteristic bar" measurements, but now you write that "he gets greater measurements for all but one of the characteristic bars…?"' Fellow's response did not answer this question.

Fellows writes that 'the eight "obeloi" have been "cherry-picked" because of their measurements' (251) and 'the greater margin intrusion of Payne's eight "obeloi" proves nothing on its own since he has selected them for their greater margin intrusion!' (249). Since bar measurements are not themselves multi-word additions, identifying a completely consistent pattern between those bar measurements and multi-word additions is not 'cherry-picking'. I recognized them because of their shared characteristic features and because wherever they occur, multi-word additions occur. It is precisely by identifying a consistent pattern that the meaning of any symbol is properly established. All nine newly identified instances of characteristic bars coincide with multi-word additions precisely at a gap on that line. This demonstrates my thesis's predictive value.

Fellows recommended including bar measurements of all bars by distigme lines where NA[28] lists one-or-two-word additions (251). This ignores the exceptional pattern of multi-word additions I had already established and was confirmed by the one additional case he discovered. It also ignores that word additions are commonly marked by distigmai since distigmai mark the location of variants. Out of twenty distigme lines Fellows refers to as being by an undisputed paragraphos, the inclusion of six with NA[28]-noted one-or-two-word additions and two more with NA[28]-noted five-or-six-word additions would be typical rather than something pointing to special significance. Fellows's inclusion of eight paragraphoi in his calculation of the average length of bars by added text (251) waters down and conceals the characteristic bars' exceptional length.

Fellows's article nowhere acknowledges that by the measurements used in his article the *average* total length of the characteristic bars is 4.418 mm,[33] and the *average* total length of

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[33] $35.34 \div 8 = 4.4175$ from the measurements in Fellows's email to me of 5 Oct. 2017.

undisputed paragraphoi by distigme lines is 3.762 mm.[34] If both sets are simply paragraphoi, such a strong contrast in *average* total length is striking. Nor does Fellows's article mention that by Fellows's originally posted measurements, the average length of the eight characteristic bars was much higher, 4.625 mm,[35] even though the average of his paragraphoi measurements was almost the same, 3.795 mm.[36] Fellows's systematically lower 'obelos' length measurements in his *NTS* article than his own earlier posted measurements raise doubts about his assertions, 'There can be no systematic bias in my own measurements' (249) and 'I excluded the possibility of bias' (251).

On 3 Oct. 2017 Fellows emailed to me that he was using the centre of the vertical strokes as his definition of the margin rather than 'the far-left edge of letters on the margin' as Payne, 'Distigme-obelos', p. 610 n. 27 explained I had used. Consequently, Fellows's original measurements had a systematic bias making all his extension-into-the-margin measurements larger than mine. On 4 Oct. 2017, I emailed to Fellows that his remedy of simply subtracting one value for all cases, 'is not the proper way to determine the margin. This can only be done on each page based on the actual margin within which scribe B wrote.'

Fellows concludes, 'The bar at the start of 1 Cor 14.35 is indistinguishable from other paragraphoi' (251) even though he had just acknowledged that it 'is longer than the average bar *and* extends further into the margin than the average bar' (251 Fellows's italics). He asserts, 'The bar at the start of 1 Cor 14.34 is not at all exceptional in its length' (251). Yet by his own measurements shown on Figure 2, none of the 20 undisputed paragraphoi by distigmai lines is longer. Fellows's measurements do not support, but rather contradict his conclusions. Indeed,

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[34] $75.24 \div 20 = 3.762$ from the measurements in Fellows's email to me of 5 Oct. 2017.

[35] $37.7 \div 8 = 4.625$ from the measurements Fellows posted '9/29/2017 4:25 PM' at evangelicaltextualcriticism.blogspot.com/2017/09/more-payne-no-gain-on distigmai.html.

[36] $75.9 \div 20 = 3.795$ from the measurements Fellows posted '9/29/2017 4:25 PM' at evangelicaltextualcriticism.blogspot.com/2017/09/more-payne-no-gain-on distigmai.html.

they confirm a strong correlation between multi-word additions and both characteristic bars' extension into the margin and their total length.

Conclusion regarding Fellows's Critique

By Fellows's own measurements, none of the 20 undisputed paragraphoi both coincides with an NA[28]-cited three-or-more-word addition and also extends into the margin as far *or* is as long as *any* of the characteristic bars. Yet every characteristic bar coincides with an NA[28]-cited, three-or-more-word, widely acknowledged addition. Fellows's own measurements, therefore, contradict both of his central assertions denying a strong correlation between characteristic bars and multi-word additions. Fellows's critique also ignores most of the evidence that distigme-obelos symbols mark where multiple words were added. It does not acknowledge that Fellows was not measuring the same images I was. It does not acknowledge that many of my measurements lie within the measurement ranges Fellows's charts list. It does not acknowledge that his earlier publicly-posted measurements differ markedly from those cited in his article, including measurements that lie outside the range of measurements his Figures list. Fellows does not provide his own sharply-contrasting bar-length average measurements for characteristic bars and for undisputed paragraphoi by distigme lines or his earlier posted measurements' of their even more sharply contrasting averages. None of Fellows's measurements or observations warrants his denials that distigme-obelos symbols exist.

<center>**Critique of Jan Krans's Distigme-obelos Denial**[37]</center>

Numbers in parentheses are page numbers in Krans's article. Such numbers preceded by '2017:' are page numbers in Payne's 2017 *NTS* 'Distigme-obelos' article, and preceded by '2020:' are page numbers in Payne's forthcoming study on all 17 distigme-obelos symbols.

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[37] Jan Krans, 'Paragraphos, Not Obelos, in Codex Vaticanus', *NTS* 65 (2019) 252–7.

Krans Contributes Six Important Insights

First, Krans identifies 'the addition of εἴδοτες ὅτι ἀπέθανεν in f^{13} etc.' (256 n. 14) at the gap at 1284 C12 (Mark 5:40). This shows that more words were added here than NA[28] lists: ὁ δὲ ᾽Ιησοῦς in f^1. In 2017, while searching for more characteristic bars, I found that W and f^{13} add εἴδοτες ὅτι ἀπέθανεν ὁ and 124 adds εἴδοτες ὅτι ἀπέθανεν ὁ δὲ ᾽Ιησοῦς.[38] Krans's identification demonstrates that this characteristic bar, like all the others, coincides with four-or-more-word widely acknowledged additions. Since NA[28-] and/or Swanson[39]-noted four-or-more-word additions occur on average only about once in 80 *Vaticanus* lines compared to about once in 26 lines for three-or-more-word additions,[40] this drastically reduces the likelihood that all eight of these characteristic bars would randomly coincide with them. This important insight is marred by Krans incorrectly stating three times that I identified the added text at Mark 5:40 as αὐτὸς δὲ ᾽Ιησοῦς (256 and n. 14). In fact, I simply cited the addition NA[28] identifies: ὁ δὲ ᾽Ιησοῦς (2017:613). Note 14 incorrectly asserts: 'it is not a "multi-word addition", and is not found at the location Payne indicates.' In fact, ὁ δὲ ᾽Ιησοῦς is a multi-word addition, and both it and the longer multi-word additions including it or part of it all interrupt the original text precisely at this gap.

Krans's second important contribution is his inclusion of bars by lines with distigmai on the right side of the far-right, sixth column of the open codex (254–5). Krans correctly criticizes my 2017 article because it 'only considers cases where paragraphos and distigme are physically

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[38] Documented in Swanson, *Mark*, p. 77.

[39] R. Swanson's separate volumes, *New Testament Greek Manuscripts: Variant Readings Arranged in Horizontal Lines Against Codex Vaticanus: Matthew, Mark, Luke, John*, are all Sheffield/Pasadena, CA: Sheffield Academic/William Carey, 1995; *Acts* is 1998; *1 Corinthians* is Wheaton, IL/ Pasadena, CA: Tyndale House/William Carey, 2003.

[40] See Payne, 'Distigme-obelos', p. 620, n. 60 (1 in 31.8) x 17/14 = 1 in 26. 1 in 95.410714 x 17/14 = approximately 1 in 80. See the calculation of these in 2020:33–4 and notes 59–62.

close, that is, when the distigme is found at the left of the column' (255). I realized this omission in late 2017 and, with Vince Hoffaker's help, found 13 bars on distigme lines in the sixth column. Five of these bars share all five characteristic features, including a gap at the exact point multi-word variants interrupt the original text.[41] The other eight bars by distigme lines in the sixth column are all undisputed paragraphoi and lack at least two of the five characteristic features.[42] Consequently, all 13 sixth-column instances perfectly fit the distinction between characteristic bars and paragraphoi identified in my 2017 *NTS* article.

Krans incorrectly asserts that one of these, 'the distigme at John 7:52 … is one line too high to possibly refer to the *Pericope de adultera*' (255 n. 11). In fact, both this characteristic bar and this distigme are perfectly positioned to mark 'the interface between the original text and the *pericope adulterae*' (2017:617; 2020:17–18). Krans also incorrectly asserts, 'the distigme in 1 Cor 14 is actually one line too high' (256, 2017:617, 2020:42–6, 54). In fact, every distigme-obelos gap marks the exact point where an addition interrupts the original text as does the obelos at Isaiah 51:23, 1051 B31, where, like 1 Cor. 14:34–5, the added text starts at the beginning of the next line and continues beyond that line (2017:617, 2020:24–5). Likewise, paragraphoi underscore lines when the paragraph break is at the end of that line. Both obeloi in distigme-obelos symbols and paragraphoi are consistently positioned under a line when the end of that line marks the exact point where an addition interrupts the original text or a new paragraph begins. Both mark the interface between the prior text and, respectively, added text or a new paragraph.

Krans's third and fourth important contributions are that, 'spacing is introduced by the original scribe, whereas in *Vaticanus* the paragraphoi seem to be later' (254). An important part of the eight evidences listed in 2020:38–42 that scribe B penned distigme-obelos symbols is that gaps in the text are spacing that could be introduced only by the original scribe. A gap at the exact point widely acknowledged multi-word-adding variants interrupt the original text

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[41] See 2020:8, 12–19 and Payne, 'Distigme-obelos', 17.

[42] See 2020:20–1.

associates 16 combinations of a distigme, characteristic bar, and gap with scribe B. These gaps should not be dismissed simply because gaps often occur with paragraphoi. Only 11 of the 19 originally identified paragraphoi have a gap,[43] so it would be statistically surprising for all 16 of these to have a gap if they were merely paragraphoi, let alone that multi-word-adding variants that occur on average only once in 80 *Vaticanus* lines[44] would interrupt the original text precisely at all 16 gaps.

Krans asserts that this is just 'the coincidental combination of distigme and paragraphos' (252, 257), that the distigme-obelos symbol 'does not exist but is only the fruit of Payne's imagination' (255, 256) and are 'markings created by him' (254), and that the differences between distigme-obelos symbols and paragraphoi that randomly occur by distigme 'turn out to be insignificant' (255). If these are 'markings created by' (254) me, why do they appear in every facsimile? The standard chi-square probability test results list above, pp. 4–5, 9–11, demonstrate that the likelihood of all these co-occurrences being random coincidences is extraordinarily low. Is the 8 of 8 coincidence of multi-word additions with greater extension into the margin vs. 0 of 20 for originally identified undisputed distigme-line paragraphoi an insignificant random variation? Are the 8 of 8 coincidence of multi-word additions with greater bar length vs. 0 of 20 for undisputed paragraphoi insignificant random variations? Are multi-word additions interrupting the original text precisely at a gap on all nine subsequently discovered characteristic-bar lines (2020:7–20) insignificant random variations?[45] As 2020:31 Figure 13 shows, even just the 17 characteristic bars' combination of extension into the margin plus length sets every one of them apart from all 30 undisputed paragraphoi that just happen to occur by a line with a distigme. Are all of these insignificant random variations?

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[43] 1280C at Mark 3:5 is a characteristic bar, not an undisputed paragraphos.

[44] See the calculation of this in 2020:33–4 and notes 59 and 61.

[45] Regarding the probability of additions at all 17 happening at random, see 2020:34–6.

Krans asserts that applying 'measurements only to the small set where paragraphoi and distigmai go together' is 'a basic error' (255). Not only is this not an error, as 2020:34–5 demonstrates, this specification is essential to make a statistically-valid determination whether a distinguishable subset of bars by distigmai mark the location of multi-word additions to the text. This is because variants, including multi-word additions are more likely to occur on distigme lines than in random lines of Vaticanus since distigmai mark where variants occur. This focus on bars by distigme lines is also justified because the remarkable correlation is with multi-word additions, which are textual variants, the very thing that distigmai mark (2017:607–8; 2020:32–4). Furthermore, scribe B explains that obeloi signal added text (2017:608–9).[46]

Krans's observation that 'paragraphoi seem to be later' (254) is also an important part the evidence distinguishing distigme-obelos symbols from paragraphoi.[47] Krans's statement is confirmed by the absence of any *Vaticanus* New Testament paragraphoi that match the original ink color (2020:27–8). In sharp contrast, Canart confirmed that fifty-one distigmai match *Vaticanus*'s original ink color (2017:605 n. 6). Consequently, when scribe B penned the *Vaticanus* New Testament, there would have been no nearby paragraphoi with which these characteristic bars could have been confused.

Krans's fifth important contribution is that paragraphoi randomly coinciding with distigmai 'are to be expected, and their total number of about thirty is well within the range of statistical probability' (254). Thirty is in fact the exact number of undisputed paragraphoi (not counting the 17 characteristic bars or the modified end-of-book symbols[48]) by distigme lines my

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[46] For more reasons to focus on the bars with gaps, see 2020:23–27, 38–9.

[47] See 2020:27–9 for evidence paragraphoi were added to the NT after its original production.

[48] These, having an additional stroke, occur only after the Gospels, Jude, 1 & 2 Corinthians, and Ephesians. They do not separate paragraphs. Obviously later symbols with an additional stroke not added to an underlying paragraphos are excluded, as at 1463 B9 and 1464 A20.

new searches confirmed.[49] My thesis that characteristic bars are obeloi, not paragraphoi, affects the actual and the expected number of paragraphoi only in New Testament books with distigme-obelos symbols. The chart below identifies the expected number of paragraphoi by distigme lines[50] ('expected # ¨+¶' is its column heading) in each book having any distigme-obelos symbols (¨+obelos). Each book is treated separately because the frequency of paragraphoi (# lines/¶) and distigmai varies widely from book to book. The expected number of paragraphoi by distigme lines (expected # ¨+¶) and the actual number of undisputed paragraphoi by distigme lines (# ¨+¶) are almost identical in half of these books. The actual and expected numbers for the other half diverge on average by less than two paragraphoi.

Book	# lines	# ¶	# lines/¶	# ¨	# ¨+obelos	# ¨+¶	expected # ¨+¶	# ¨+any bar
Matthew	5343	403	13.258	93	5	7	7.015	12
Mark	3265	199	16.407	57	4	2	3.474	6
Luke	5753	369	15.591	80	2	3	5.131	5
John	4164	351	11.863	48	2	2	4.046	4
Acts	5463	174	31.397	138	3	4	4.395	7
1 Corinthians	1938	73	26.548	59	1	2	2.222	3
Totals for all these books combined:					17	20	26.283	37

[49] 19 were identified in Payne, 'Distigme-obelos', p. 612 n. 32, minus 1280C (see 2020:11, n. 21). The 11 new ones are listed in 2020:20–1 and notes 36–7. 10 are in books with no obelos.

[50] Vaticanus lines in the book ÷ its number of paragraphoi = its average number of lines between paragraphoi. The number of distigmai in that book ÷ its average number of lines between paragraphoi = the expected number of paragraphoi by distigme lines in that book. ¶ = undisputed paragraphoi. Wieland Willker's list of distigmai at www.willker.de/wie/Vaticanus/umlauts.txt minus one-or-two letter spelling corrections (1262 A2, 1361 C1, 1423 A14) and probable offset ink at 1246 C6, plus distigmai in these books Willker missed at 1257 C32, 1277 C19, 1345 B11, 1473 B2 provide the number of distigmai in each book (# ¨).

The expected frequency total for these books combined (26.283) is far closer to the actual total of their undisputed paragraphoi (20) than to the total number of characteristic bars and undisputed paragraphoi combined (37). If Krans's hypothesis were correct that all characteristic bars are simply paragraphoi, there should have been a combined total of about seven bars by distigme lines in Matthew, but in fact there are 12. If, however, these five characteristic bars are distigme-obelos symbols, the statistically-expected number of paragraphoi equals the actual number. The same is true for Acts (four both actual and expected paragraphoi plus three obeloi) and 1 Corinthians (two both actual and expected paragraphoi plus one obelos). The 3.474 expected paragraphoi for Mark is much closer to the actual two than the six including obeloi. Luke and John both have a couple more expected paragraphoi than actual ones, but this is naturally explained as random coincidence. 12 of the 13 characteristic bars in the other four books (Matthew Mark, Acts, 1 Corinthians) exceed the expected number of paragraphoi for those books. Consequently, expected frequency compared to actual frequency of paragraphoi clearly favors distinguishing characteristic bars from paragraphoi.

Krans's sixth important contribution is his acknowledgement that 'distigmai signal… a place where a variant reading was known' and that 'this hypothesis, first advanced in 1997, has found wide acceptance' (252–3). Actually, I first advanced this in *NTS* in 1995. Unfortunately, Krans continues, 'methodological control is difficult to achieve here' (253). Methodological control is illustrated by my original 1995 *NTS* study, pages 252–4 that Krans cites (252 n. 2). Krans's own n. 4 to this paragraph acknowledges: 'Statistical tests … offer the strongest indication that at least many distigmai have been entered as a reminder of the existence of some variant reading at their respective locations', and p. 257 concludes, 'Payne … seems to be correct on the text-critical status of the distigmai'. Since obeloi are scribe B's standard symbol for multi-word additions, obeloi are the obvious symbol to add to distigmai to specify that variants are multi-word additions.

These six valuable insights support the distinction between characteristic bars and paragraphoi, but Krans's presentation of them does not acknowledge any of this.

Krans Misunderstands my Article

Krans criticizes me for assuming 'the unity of the distigmai as a set' (253), even though I have repeatedly and explicitly repudiated this.[51] The very passage Krans's n. 7 cites for this, my 'Distigmai' 214–16, disproves it. 'Distigmai' 215 n. 97 identifies many cases where the medieval re-inker of *Vaticanus* associated distigmai not with textual variants as understood in textual criticism, but rather with one-or-two letter spelling corrections made to *Vaticanus*. Krans also incorrectly implies that I include all two-dot symbols in 'the original set' (253 n. 7). Offset ink from distigmai leaving a mirror impression on the opposite page should not be regarded as distigmai.[52] Apparently every study of a large sample of distigmai has concluded that they mark the location of textual variants. Therefore, when two horizontally aligned dots in the margin appear to mark something other than the location of a textual variant they should not be called 'distigmai'. It is just as improper for Krans to designate as 'distigmai' dots used as 'a reference system between text and marginal notes' (254 n. 9) as it would be to designate as 'obeloi' bars that do not mark the location where added text interrupts the original text.

Ironically, while criticizing me for assuming 'the unity of the distigmai as a set' (253), Krans's entire critique presupposes the unity of paragraphoi as a set since he treats any bar underscoring a line's first letter as a paragraphos. For example, Krans writes that anywhere a bar functions as an obelos is 'additional' to its paragraphos function (255). This presupposes a paragraphos-marked text, but by Krans's own acknowledgement, the original *Vaticanus* New Testament did not include paragraphoi but did include gaps by the original scribe (254). Krans's article does not acknowledge the possibility that scribe B might have added bars at a time when

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[51] 2017:607 n. 12 documents this. I also argue in detail against the view that all distigmai are a unified system as expressed by P. Head in a paper read to the SBL New Testament Textual Criticism Seminar in 2009, 'Distigmai and Marginalia of Vaticanus' at https://pbpayne.com/wp-content/uploads/2010/03/Critique-of-Vaticanus-Marginalia-15Apr2010.pdf.

[52] Payne, 'Distigmai', 210–12.

the *Vaticanus* New Testament had no surrounding paragraphoi. His critique ignores this possibility even though I argue through an array of converging lines of evidence that scribe B is associated both with the distigme-obelos symbols and the gaps on their lines (2017:612, 615, 618, 619, 621–5). Krans mentions none of this nor that scribe B explained three times in Isaiah that horizontal-bar obeloi mark the location of added text (2017:608–9). Nor does Krans mention that whenever a bar has the graphic characteristics 2017:620–1 identifies, multi-word-adding variants interrupt the original text precisely at the gap on that line (2017:612–15). Krans insists that no bars in a position similar to paragraphoi could be obeloi. He does not mention the wide variety of shapes and positions of obeloi throughout Greek literature, as abundantly exemplified in LXX G. Scribe B uses obeloi in *Vaticanus* with and without dots, both in the margin and in the text (2017:608). Krans does not mention the four reasons 2017:619 explains why the *Vaticanus* New Testament and LXX obeloi are in different positions.

Not only does Krans not mention any of these clues to understanding the *Vaticanus* New Testament characteristic bars, he asserts that 'there is no clue for concluding that a paragraphos doubles as an obelos' (255). 2017:620–1, however, identifies five characteristic features of the bars in distigme-obelos symbols that together consistently distinguish them from paragraphoi. Furthermore, as Fellows's measurements also demonstrate, not even one of Fellows's list of 20 undisputed paragraphoi coincides with an NA[28]-cited, three-or-more-word addition and also extends into the margin as far *or* is as long as *any* of the characteristic bars.[53] This confirms an extraordinarily strong correlation between both the extension into the margin of bars by distigme lines and the length of those bars with multi-word textual additions. As shown in 2020:31 Figure 13 and explained on 2020:30–36, the combination of their extension into the margin (average 2.9 mm) and length (average 4.6 mm) sets all 17 distigme-obelos symbols apart from all 30 instances where undisputed paragraphoi just happen to occur by a distigme. In sharp contrast, the 30 undisputed paragraphoi average 1.6 mm extension into the margin and 3.7 mm in length.

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[53] See above, 8–11.

Krans writes that my 'demonstration of [distigmai] antiquity is not conclusive. Its main pillar is similarity [to *Vaticanus* original] ink colour' (254). Krans speculates without providing any evidence that the LXX G 'signs may be more recent as well' (254). David Parker, however, concluded that regarding my dating of distigmai, 'Payne successfully vindicated his case' against Niccum's dating of distigmai.[54]

Regarding distigme-obelos symbol dating, even more important than evidence from ink color[55] is the coincidence of gaps, which only the original scribe could insert, at the exact point every distigme-obelos-line multi-word variant interrupts the original text except one by a later hand.[56] As 2020:2366–26 show, all three of Scribe B's abbreviated 'obelos' explanations in Isaiah give precedents for inserting a recognizable gap where multi-word additions interrupt the original text and for positioning a horizontal-bar obelos below and to the right of an abbreviated explanation. These precedents make scribe B the natural source not only of the *Vaticanus* NT's 16 distigme-obelos-line gaps precisely positioned where multi-word additions interrupt the original text, but also of their associated distigme-obelos symbols explaining that these gaps mark where multi-word-additions interrupt the original text. These precedents also explain the typical characteristic bar position below and to the right of its distigme and their measurably farther extension into the margin than most undisputed paragraphoi by distigme lines, since this extension helps associate these bars with the distigme.

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[54] D. Parker, 'Through a Screen Darkly: Digital Texts and the New Testament', *JSNT* (2003) 395– 411, at 408 n. 17, referring to the arguments in Payne and Canart, 'Originality', 109 n. 25 and P. Payne, *Man and Woman*, 235–7 rebutting C. Niccum's conjecture that distigmai postdate the fourteenth century, 'The Voice of the Manuscripts on the Silence of Women: The External Evidence for 1 Cor 14.34–5', *NTS* 43 (1997) 242–55, at 245, n. 20.

[55] 2107:614; 2020:9–10, 17, 40, 53 (1332C).

[56] See 2020:5 and n. 6, 54.

It is puzzling in light of the scholarly consensus that obeloi mark added text, as well as the consistent description throughout my article of obeloi marking added text, that in criticizing me for giving 'obelos' an 'unusual meaning', Krans refers to obeloi as signaling 'an omission' (256). Asterisks, not obeloi, signal 'an omission'.[57]

In the context of my recommendations for apparatus notation 'for the *Pericope de adultera* and 1 Cor 14.34–5' (253 n. 3), Krans writes this is 'extremely unwise' because 'identifying specific readings remain speculative' (253). Yet for all 17 distigme-obelos symbols there is always a single obvious candidate for the added text. Gaps at the precise point the variant interrupts the original text permit precise identification of the variant in the 16 cases apparently by the original scribe.[58] For every distigme-obelos symbol, multiple manuscripts attest the added text. To omit B¨– notation from critical apparatuses as Krans recommends would deprive readers of awareness of the earliest evidence for the *Pericope Adulterae* at John 7:53–8:11 and one of the earliest manuscripts favoring omission of 1 Cor. 14:34–5.

Krans implies that I made: 'The assumption of a conscious, consistent and recognisable system' (255). Rather, it is the *Vaticanus* data itself, not my assumptions, that reveals a consistent and recognizable pattern that distinguishes characteristic bars from undisputed paragraphoi by distigme lines. Krans acknowledges various changes from my earlier studies' conclusions (254 n. 10). Such changes show that my new conclusions were not an 'assumption'. The *Vaticanus* data has caused further refinements in my present conclusions, such as including the distigmai on the right side of the sixth column (2020:12–21).

Krans incorrectly attributes to me that scribe B was *consciously* differentiating obeloi from paragraphoi by extending them farther into the margin and making them longer than

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[57] On the similar odd usage by Fellows, see above, pp. 8–9 and n. 16.

[58] Because the average length of these additions is 19 words (2020:31), in many cases there is some variation in the precise form of the variant. Of course, in those cases, the distigme-obelos does not favor any particular form of that obvious candidate.

paragraphoi (255). We agree that paragraphoi were not in the original *Vaticanus* text (254 and 2020:27–9). Consequently, there was no need for scribe B to distinguish obeloi from paragraphoi. It is simply natural that one category of bars (obeloi) would have different characteristics than another category of bars (paragraphoi) inserted by different scribes at different times for completely different purposes.

Krans states that 'Only in 1 Cor 14 … would the presumed obelos have its usual meaning of marking a portion of the text as absent elsewhere' (256). In fact, scribe B used obeloi at least 121 times in the LXX to mark the location of additions that are present in *Vaticanus*'s text. Consequently, 1 Cor. 14:33/34's obelos marking *Vaticanus* text as added is scribe B's most common obelos usage. *Vaticanus* obeloi always mark where text was added, whether or not the addition in is *Vaticanus*'s text. My definition of 'obelos' is consistent and corresponds to 'distigme' use. Just as distigmai in general do not specify whether it is *Vaticanus* or another manuscript that omits, adds, transposes, or otherwise changes words, phrases, or clauses, so, too, it is natural that obeloi used in conjunction with distigmai would not specify whether it is *Vaticanus* or another manuscript that adds text.

The absence from the *Vaticanus* Gospels of their 13 distigme-obelos-marked additions is explained by the *Vaticanus* Gospels text being so early it was not corrupted by any of these 13 additions (2017:621–3 and 2020:46–7). The distigme-obelos marking where 1 Cor. 14:34–5 interrupts the original text is the only one in the epistles, which were copied from a later exemplar, that, unlike the Gospels' exemplar, had sentence-ending high stops throughout and included its distigme-obelos-marked addition. 2017:617 n. 49 and 2020:43–4 explain why Krans's single word (διδάσκω) referent proposal (256) that does not occur at this line's gap does not adequately explain this distigme-obelos and is an unlikely distigme referent.

Krans describes me as claiming 'similarity in [*Vaticanus*'s distigmai's] ink colour, described as "apricot". In reality the dots show various colors, and are so small that conclusions cannot be certain' (254). Here Krans gives the false impression that I write that most distigmai have an apricot color, though he acknowledge on p. 253, n. 7 that I cite P. Canart's identification

of 51 apricot-color distigmai (2017:605 and n. 6[59]). Furthermore, with the high-power, internally-lighted loupe Canart and I used, each dot looks like a huge moon with color that unambiguously matches the color of undisputed original ink letters nearby on the same page.

Krans asserts, 'Payne explains away this difficulty [distigme-marked variants not listed in critical editions] by assuming that variants unknown today have to be at stake, but this solution is just an expression of embarrassment' (253). Yet newly discovered or recently published New Testament manuscripts reveal more and more variants not documented in critical editions.[60] Newly discovered variants imply that not all variants are known. 2020:43 explains that the wide range of manuscripts containing variants marked by original-ink distigmai and by distigme-obelos symbols show that scribe B had access to far more pre-*Vaticanus* New Testament text than survives today. That would, almost inevitably, include some variants not known today. The very passage in 'Distigmai', p. 216, that Krans ridicules (253 n. 3) cautions, 'Since there is always the possibility that a distigme in *Vaticanus* might signal a variant other than the ones known today, critical editions should explain this in their description of B¨.'

Conclusion regarding Krans's Critique

Krans provides six key insights that support recognizing the characteristic bars in distigme-obelos symbols as obeloi. First, he shows that the only addition marked by a characteristic bar that I listed as adding only three words, in fact adds over four words. This greatly decreases the probability that it is mere coincidence that all characteristic bars occur at such multi-word additions. NA28- or Reuben Swanson-noted three-or-more-word additions occur on average about once in about 26 lines of Vaticanus text, whereas four-or-more-word additions occur on average only about once in 80 *Vaticanus* lines.[61] Since four or more words were added at all 17

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[59] Which also cites two instances of apricot-color ink protruding from under reinked distigmai.

[60] E.g. those listed in Payne, *Woman*, 253 and Payne, 'Distigmai', 218.

[61] See the calculation of this in 2020:32–3 and notes 59–62.

distigme-obelos, and all 16 original ones have a gap at the exact point of the addition, this cannot plausibly be attributed to random coincidence as Krans does. Second, he notes additional distigmai with bars in the sixth column. Five of these are characteristic bars by lines where multi-word-adding variants interrupt the original text at a gap, just as my thesis described. The other eight are undisputed paragraphoi lacking at least two features of characteristic bars. All 13 confirm the distinction on distigme lines between undisputed paragraphoi and characteristic bars with a gap that marks the exact location where four-or-more-word-adding variants interrupt the original text. Third, he affirms that the original scribe introduced spacing. Fourth, he confirms that paragraphoi seem to be later. Fifth, his reference to 'about thirty' paragraphoi randomly occurring on lines with a distigme is the exact number of undisputed paragraphoi by distigme lines, not counting the 17 characteristic bars. The statistically-expected number of paragraphoi by distigme lines corresponds far more closely with the actual number of undisputed paragraphoi than to the sum of those plus the 17 characteristic bars. Sixth, he affirms that distigmai signal where a variant reading was known. This makes them logically related to obeloi, which mark a specific kind of variant, namely added text. All six important insights support distinguishing characteristic bars from paragraphoi. Unfortunately, Krans does not engage with any of the converging lines of evidence explaining why multi-word additions interrupt the original text at the exact point of a gap in distigme lines with characteristic bars. Krans repeatedly misrepresents my article. Krans provides no explanation for the 100% coincidence of the characteristic bars with widely acknowledged multi-word additions that interrupt the original text. A gap is at the exact point in all 16 original characteristic bars lines where these words interrupt the original text. Understanding these 17 characteristic bars as obeloi explains them perfectly.

Conclusion

Despite their valuable insights, Fellows and Krans ignore the fundamental question: How does one identify the meaning of a symbol? One looks for consistent patterns. Then one tests whether a pattern is statistically significant and to what level. Fellows and Krans provide no

refutation of the converging lines of evidence or the statistical evidence that all eight distigme-obelos symbols I originally identified coincide with NA^{28}-cited three-or-more-word additions. They provide no statistics that justify their distigme-obelos denials. By Fellows's own measurements not even one of the 20 originally identified paragraphoi does this and also extends into the margin as far *or* is as long as *any* of the characteristic bars. Including the nine newly identified distigme-obelos symbols, all seventeen extend farther into the margin and are longer than most undisputed paragraphoi, and all seventeen occur where variants cumulatively add four or more words. Such variants occur, on average, only about once in eighty *Vaticanus* lines. Furthermore, in all cases associated with the original scribe (16 of the 17), such variants interrupt the original text precisely at the point of a gap on that line. Such correlation cannot plausibly be attributed to chance, yet both Fellows and Krans assert that bars with those characteristics by distigme lines are unrelated to multi-word additions without providing any credible explanation or statistical justification for dismissing their amazing correlation with multi-word additions. My thesis that scribe B left these gaps at the exact points such variants interrupt the original text and marked them with distigme-obelos symbols explains them perfectly.