

Draft 2.0

This Document reproduces Six separate Tables illustrating many different features of the de Vere Geneva Bible Annotations.

First we need to clarify some vocabulary. If we don't have clear terms, then we won't really know what we are talking about, and fakes like Tom Veal or the Oxfrads will prevail. So please do your best to follow the lesson.

**A Graph** is the smallest unit of coherent visual form. As Davis says "each graph is an individual, necessarily unique, representation of a grapheme."

**A grapheme** is in our written language the same as an individual letter: "A reader sees graphs, recognizes graphemes, and is thus able to read" (254).

**An Exemplar** is a graph as used for analytic purposes to illustrate a particular character of an individual graph or to compare one graph to another.

**Natural variation** is the variation within a given hand or sample entirely written by one individual. Davis says that "sample writing should be representative...exemplifying as far as possible the whole range of natural variation in the hand under examination" (256). Its importance as an analytical factor has in my opinion been greatly underestimated. Properly considered, natural variation can yield a kind of "higher order" information, a pattern of patterns. More attention to the range and patterns of **natural variation** may yield more secure conclusions, since it considers a larger field of evidence, than is the case when trying to match or distinguish individual letters. When not just individual graphs themselves, but the entire range of natural variation within the two samples, can be said to show matching patterns of variation, the conclusion of a match with the known sample is greatly strengthened. An elementary example of this process is when both samples use the same range of allomorphic variants of, for example, *g*, *d*, or *E*.

An **Allomorph** is a recognized, stable variant of a morpheme, for example *a* and *a* or *E* or  $\mathcal{E}$  (epsilon *e*).

**Artificial variation** is a type of variation between samples that is sufficiently marked to allow the analyst to reach a conclusion of the presence of more than one hand.

**Sample size** is an overlooked aspect of the study of variation. In a small sample, natural variation can easily be misidentified without good cause as artificial variation, producing a **Type Two error**.

A **Type One** error is a false positive. **Type Two** errors may be the result of various factors, including too limited sample size, poor training, or poor analytic skills – particularly the reluctance of the analyst to consider negative evidence.

A **Type Two error** is a false negative. These may arise for several reasons, but are especially due to two primary factors. In the first case, some analysts have only a weak theoretical understanding of the critical importance of sample size and may attribute undue weight to characteristics that are merely expressions of natural variation.

Equally deadly to defensible conclusions is the mistake of not having a practical working knowledge of the actual range of variation within the known hand. This problem may be especially acute when the samples show a high range of natural variation because of factors of **exigence** including, but not limited to the formality or informality of a writing circumstance, the condition of writing implements or ink, the emotional state of the writer, and the physical characteristics of the writing surface – as writing, for example, in the margins of a large book with some flexure to the surface is different, for example, than writing on a flat surface, just as writing within a cramped space will force certain adaptations to the **script** compared to that produced.

The Script is all or some part of the written inscription

**Exigence** is the actual circumstances of the production of a given sample. According to Davis, every sample is the result of the writer's ideal of a written expression encountering the exigence influencing the particular writing act.

Sample Quality refers primarily to the condition of the document being examined, which in the case of photographic copies of an original primarily refers to the pixel density of the reproduction. Since the completion of my dissertation in 2001 the internet and the rise of digital photography allow for much higher density, full-color reproductions of exemplars from both the known and the contested sample.

All legitimate forensic handwriting analysis involves a careful weighing of contrary propositions involving many subroutine calculations of probability, whether formal or informal, and testing of individual, often competing hypotheses. What may seem a simple task, to define “different” and “the same,” turns out to sometimes be extremely difficult, because handwriting analysts must grapple with two kinds of difference, and learn to distinguish one from the other.

Every writer expresses a range of what is called “natural variation.” Unless the analyst has an understanding of this “natural variation” it can be very easy to mistake a difference of this kind for so-called “artificial variation,” the kind that legitimately leads to the null hypothesis of rejecting the identification of two samples as the work of a single writer.

In the case of the de Vere Bible, these difficulties are compounded by the fact that there are three (or possibly four) major colors of ink in the annotations, representing more than one strata of reading and sometimes overlapping with one another to suggest the annotator’s recurrent interest in certain topics or passages. There are also two main styles of annotation, one in which only a verse number is underlined, and another in which some part of the text of the verse is underlined.

If this were all we knew, we might well be tempted to conclude that there must be more than one annotator. In fact, as I will show, the evidence suggests quite the contrary, that the annotations were all made by the same reader over several successive readings of the Bible. This is so for several interdependent and mutually corroborating reasons:

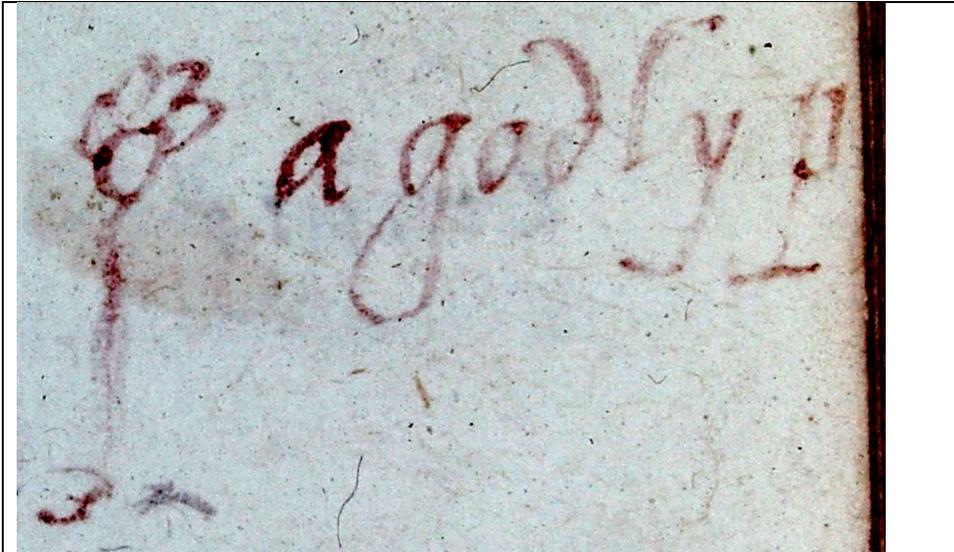
- 1) There is handwriting, for all practical purposes indistinguishable, in all four ink colors.
- 2) Two of the major ink groups, the orange and the brown-black, exist throughout the bible, including books of the Old Testament, the Apocrypha, and the New Testament, with both underlining and annotations.
- 3) The scarlet ink is also found in association with Brown-black and gray inks annotating the same passages.
- 4) These ink variants have somewhat distinct thematic fingerprints, as if the writer was color-coding his annotations, with the orange-red VN markings being exclusively about economic themes, and the brown-black focusing primarily on sin, mercy, and speech (as well, sometimes, as economics).
- 5) These thematic emphases are consistently maintained throughout the Bible, from Leviticus to Revelations.
- 6) Proofs of these statements are attached below in a series of charts, which together include both the larger analytic catetories and a rich trail of material evidence from the annotations themselves top draw the informed conclusion that there was only one significant annotator of this Bible, Edward de Vere.

Table One: Ink Types by Book

	<b>Books</b>	<b>Themes</b>	<b>Total books and marked verses</b>	<b>comments</b>
<b>Orange-red (originally red)</b>	Exodus, Leviticus, Deut., Proverbs, Ecclesiastes, Isaiah, Ezekiel, Daniel, Tobit, Ecclesiasticus, II Macabees, Matthew, Mark, I Corinthians, II Corinthians, Titus, Revelations	Economics, charity, economic justice, usury,	Books: 17 Verses: 224	This ink type occurs in three main forms: 1) Underlining of verse numbers (VN), viz.:  2) Marginal annotations in Leviticus and Titus
<b>Brown-black</b>	Leviticus, Numbers, Deut., Ist Sam., II Sam., I Kings, Psalms, Proverbs, Ecclesiastes, Isaiah, Jeremiah, Ezekiel, Daniel, Hosea, Joel, Amos, Micah, Nahum, Habukuk, Zephaniah, Zechariah, Malachi, II Esdras, Judeth, Wisdom, Ecclesiasticus, Baruch, Matthew, Luke, Acts, Romans, I Corinthians, II Corinthians, Philippians, Colossians, I Thessalonians, II Thessalonians, I Timothy, Hebrews, James, I Peter, Revelations, Sternhold and Hopkins Psalms (manicules only).	Sin, mercy, usury, language, prayer, works, swearing	Books: 42 Verses:	

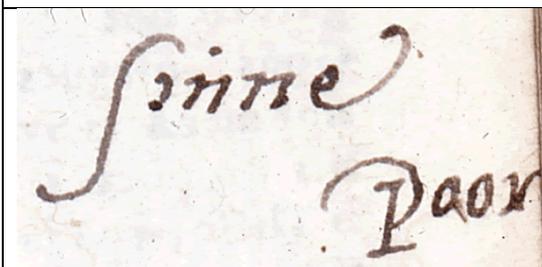
<b>scarlet</b>	Ist Sam., II Sam., I Kings, II Kings, II Chronicles, Isaiah, Jeremiah, II Esdras	Narrative history, prayer	Books: 8 Verses: 326	
<b>Gray-black</b>	Genesis, Exodus, Duet., I Kings, II Kings, Jeremiah		Books: 5 Verses: 10, plus one marginal note (I Kings 8.63).	This group is distinguished as much on the basis of its high bleed-rate as color. These underlinings also tell a coherent narrative, across the five books in which they appear, regarding disobedience, and God's punishment and mercy, but it is sometimes difficult to tell if a particular instance belongs to this ink group or the Brown-black group.

<b>Table Two: Annotations exist in all three major ink colors.</b>

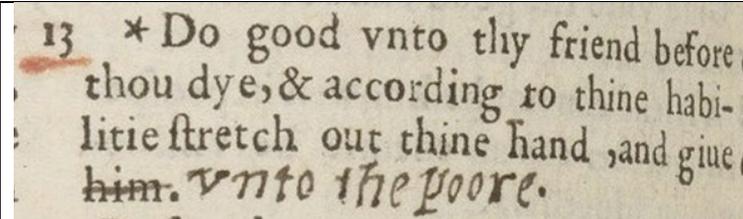


Scarlet ink (found only in I & II Sam., I Kings, II Chron., and II Esdras), here in II Esdras 8.20 annotation of “a godly p[raier]. This is the only scarlet annotation in the book. The accompanying underlining is scarlet.

However, elsewhere the scarlet underlining is accompanied by black ink

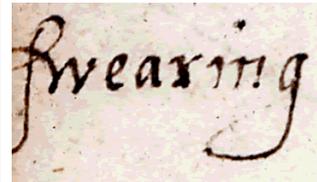


Black-Brown from Amos.



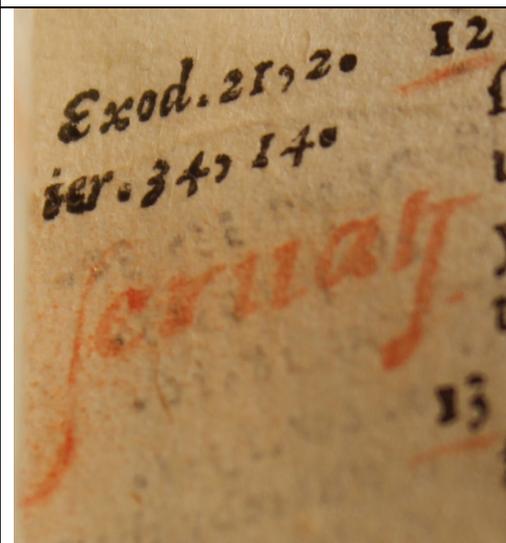
13 \* Do good vnto thy friend before  
thou dye, & according to thine habi-  
litie stretch out thine hand, and giue  
him. vnto the poore.

Brown black from Eccus. 14.13 with orange-red underlining.



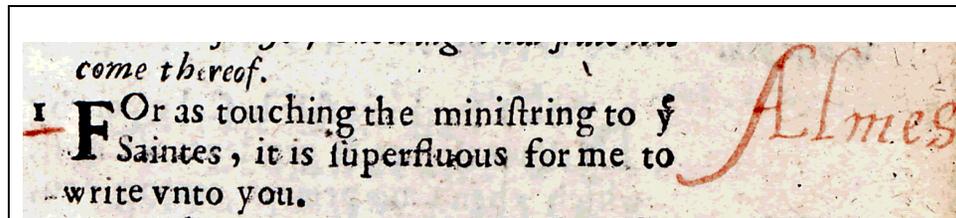
swearing

Brown-black from Eccus.

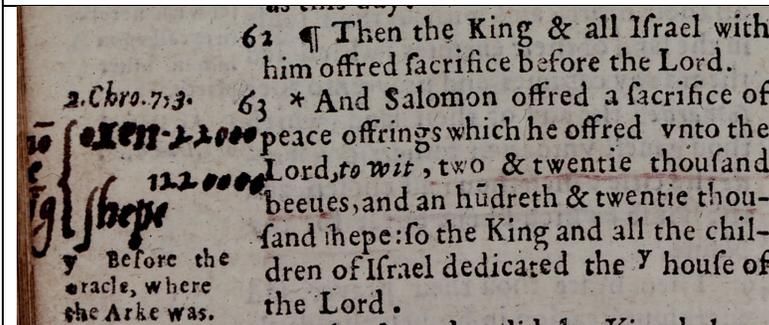


Exod. 21, 20. 12  
ier. 34, 14.  
servants  
13

Orange-red annotation *servants* from Deut. 15.14.



Orange-red annotation *Almes* from *Titus*. The annotation is in conjunction with an orange-red verse number underlining.



Brown-black ink annotation with scarlet underlining from II Kings 8.63. Both colors of ink refer to the same content in different ways.

Table Three: Anomalous features not otherwise accounted for in other tables.

<p>Hand B, Job 9. In unique brown-orange ink not seen elsewhere in volume.</p>		<p>This either represents a second hand, or possibly the same writer as the other annotations – as the forms of letters <i>m</i>, <i>e</i>, and <i>n</i> might suggest – but afflicted by significant disability, perhaps of age.</p>
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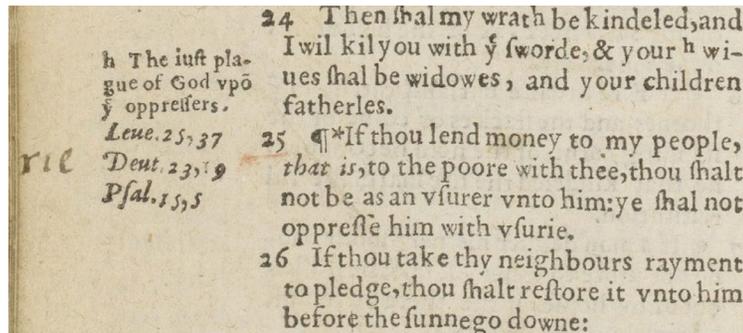
Pencil cross marks at the starts of certain New Testament chapters.	No evidence exists to confirm when these were made or whether they have any conceivable relationship to the more copious and detailed ink notes.	
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**Table Four: Cross Correlations:** In multiple places in the bible, commentary or drawings in one ink color is found adjacent underlining in another, compounding the impression of unity from the ink inscriptions *per se*, which show the same handwriting in four different inks.

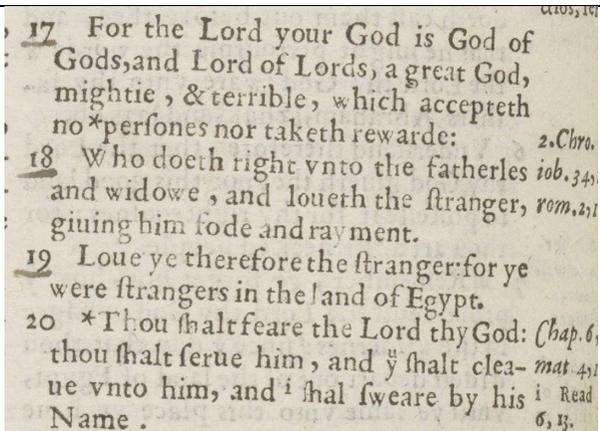
Exodus 33.4-6 BB underlining with fleur-de-lis in O?

Exodus 22.22, 25, in orange, with black note. The verse emphasizes justice for widows and orphans.

In a slightly greyer color of ink, the thematic parallel from Deuteronomy 10.17-19 is also underlined.



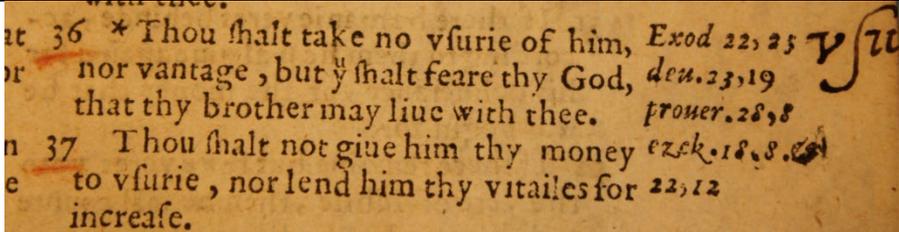
Exodus 22.25, showing orange-red underlining with the remnants of a marginal note, "[usue]rie"



These two examples yield a three-way triangulation of fact pattern:

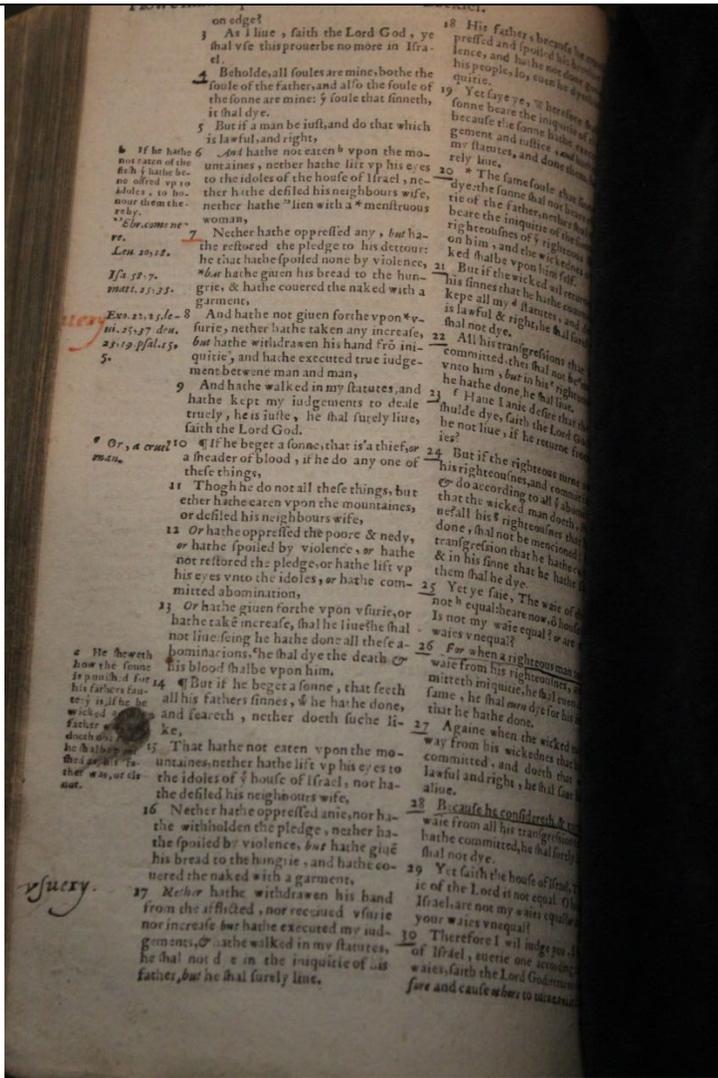
- 1) There is a thematic match between Grey, Orange, and Brown-black inks.
- 2) There is an orange underlining accompanied by a brown-black note.
- 3) All three colors are tied to the theme of justice for widows and orphans.

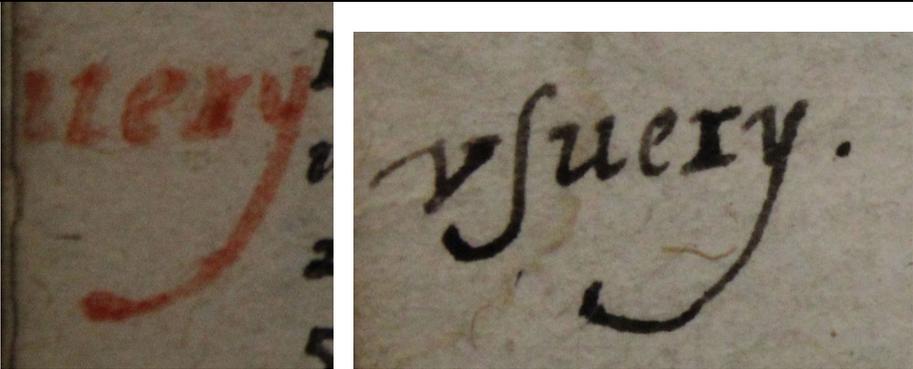
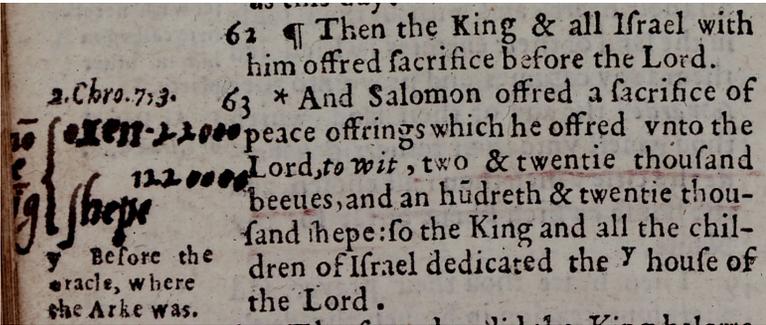
Leviticus 25.36-37.  
 Again this illustrates the conjunction of a note in one color and an underlined verse in another – usually, as in this case, orange VN with black-brown note is a pattern found throughout the volume, in the Old Testament, the

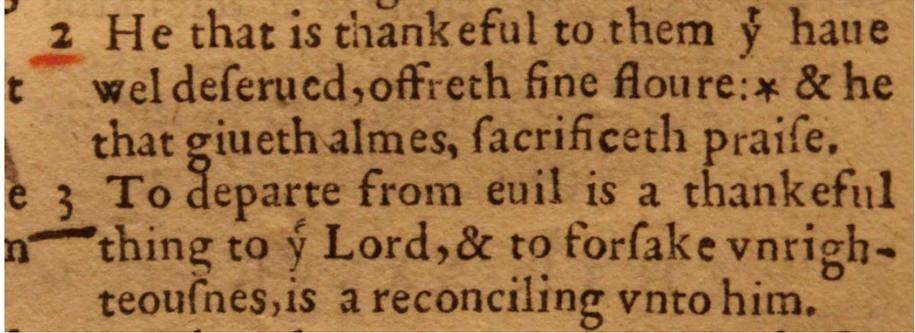


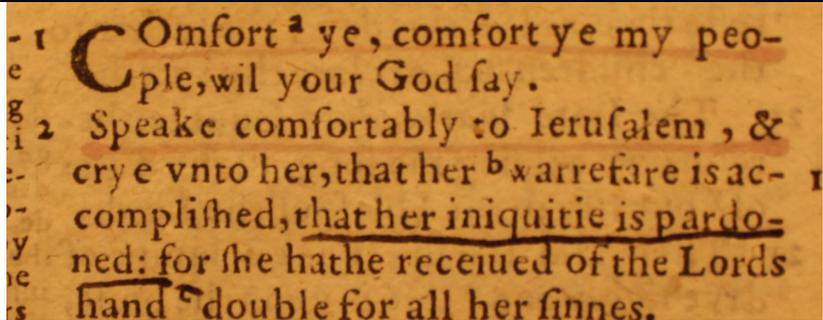
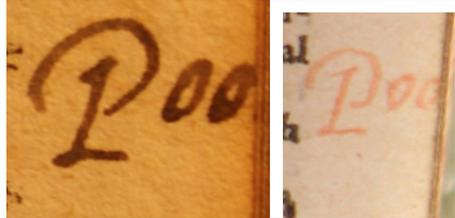
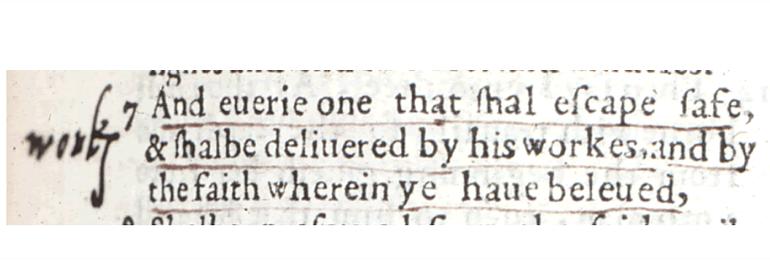
Apocrypha, and the New Testament.

Ezekiel 18, showing VN underlining in both orange-red and brown-black inks, C underlining in brown-black, and annotation in both colors. Both annotations print the same word, "usury," in the same unusual spelling, although the orange version is cropped, leaving on the final four letters.



<p>Comparison of "[us]uery" (orange) and "usuery" black from Ezekiel 18.</p>	
<p>I Kings 8.63</p>	

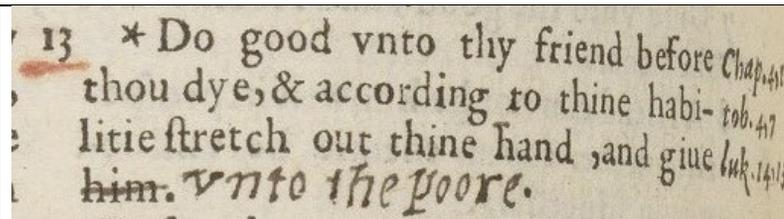
	<p>The gray ink (here looking more black than gray) – one aspect of the annotation that definitely associates it with lighter colored underlining in the OT that I have called the Gray Ink, is a stronger than usual tendency to bleed. However we classify the annotation by color it is here associated with the scarlet underlining of II Kings. In this passage the underlining very closely matches the content of the annotation, except that the annotator has turned the “hundred and twenty thousand” sheep into 1220000. What might seem like an excessive attention to ritual details is somewhat modified in our judgement by evaluation of the larger context. These are the sacrificial offerings at the inauguration of Solomon’s temple – an object of huge devotion to the Christians of the middle ages and the Renaissance, the object of crusaders and archaeologists alike, it was widely fabled to contain long concealed manuscripts of sacred architecture or treasure. Unfortunately the cropping of the volume has here obliterated past any entirely verifiable recovery. However, it does appear to me that the words missing must have been something like [Solon]nō [ ]e [offer]ig, with both the <i>o</i> and the <i>i</i> bearing an umlaut sign.</p>
<p>O-r VN underlining right next to BB, showing the characteristic emphasis of the O-r on economics or almes, and the BB on sin/mercy.</p>	

<p>Isaiah showing continuous scarlet underlining adjacent to bb continuous underlining.</p>	 <p>1 Comfort<sup>a</sup> ye, comfort ye my people, wil your God say.          2 Speake comfortably to Ierusalem, &amp; crye vnto her, that her<sup>b</sup> warrefare is accomplished, <u>that her iniquitie is pardoned</u>: for she hath receiued of the Lords hand<sup>c</sup> double for all her sinnes.</p>
<p>Poo[re] in B-B from Amos and in O-R from Ecclesiastes.</p>	
<p>The black-brown ink annotation "works" at II. Esdras 9.</p>	 <p>7 <u>And euerie one that shal escape safe,</u>  <u>&amp; shalbe deliuered by his workes, and by</u>  <u>the faith wherein ye haue beleued,</u></p>
<p>See next cell.</p>	<p>The larger context of the annotation "a godly p[raier] at II Esdras 8.20 shows that the identity of ink in the underlining and that annotation.</p> <p>Thus, we have annotations in two ink colors accompanying the scarlet underlining, black and scarlet. Unless these two handwriting samples can reliably be attributed to different writers on some paleographical grounds, this suggests that both the black and the scarlet annotations are by the same writer, that person also being responsible for the underlining.</p> <p>The sample sizes are too small for reliable direct comparison of the hand; a sample of that size viewed in comparative isolation will yield too many false negatives in accordance with the overfitting fallacy. If one cannot definitively</p>

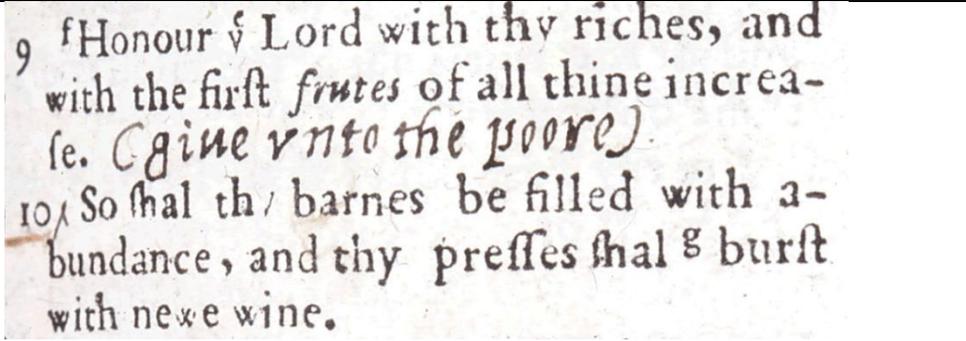
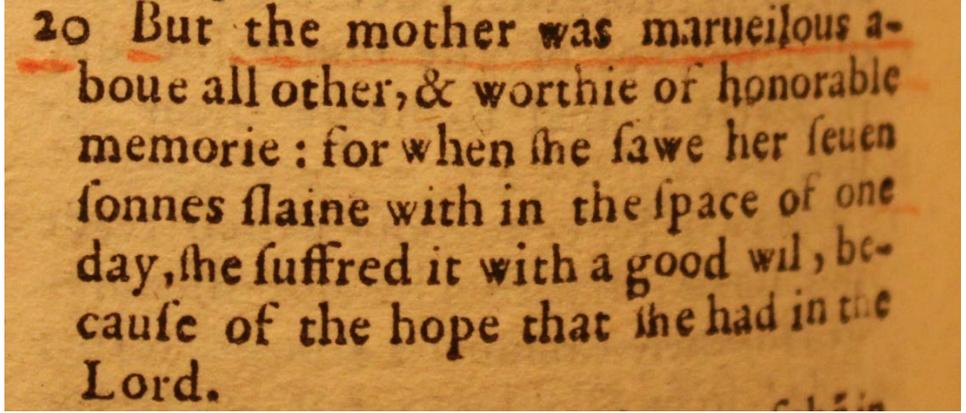
answer the question of identity based on the two samples, the question then becomes whether one can establish that the two writings are in different hands based on this same limited sample.

We cannot. The prudent choice is to entertain the plausibility of identity; both samples reflect the same general characteristics, being both drawn from the same copybook design and evidently very possibly on the face of the letter shapes alone to be the product of a single annotator. When we compound to this the evidence of the cross-correlation of documents attesting to his purchase and investment in the book's expensive binding, the balance must tip in favor of the single writer theory.

We must see, however, how far further inquiry will either reinforce or contradict this impression.



This brown-black annotation – emending the text at Eccles. 14.13. to read “give unto the poore” in place of the Geneva text’s “give unto <thy friend> – accompanies orange-red verse number underlining. This is one of the more radical textual emendations of the annotator, and one of many that places him at some odds with some reformers: He held a more conservative, classical position about economic justice. He was one could easily lament the monastic destructions of the church lands, the “bare ruin’d choirs where late the choice birds sang.” He thought one should give unto the poor, not unto one’s friends. No wonder he ended up with so little.

	 <p>An almost identical brown-black annotation at Proverbs 3.9-10 makes the same otherworldly point: abundance begins with charity. Again the annotator has added the special emphasis on charity. As we shall see, this is a leitmotif of the bible's underlined passages, especially those in the orange-red ink.</p>
<p>II Macabees 7.1-33 show the red-orange ink in yet another combination, where the ink marks both the verse number and some part of the verse.</p>	 <p>Here the conclusion that “the mother was marvelous” marks the happy climax of the account of the martyrdom of the seven sons who persisted in “answering” despotism “in their own language.”</p>
<p>In the apocryphal</p>	

book of Tobit (4.7), we again find brown-black annotation next to orange-red verse underlining. In this instance the word "envious," evidently poorly printed in the original, has been filled in for clarity by the annotator.

envious.  
 47 \* Give almes according to thy substance : if thou haue but a litle , be not afraide to giue a litle almes.

And all the way at the end of the book, in Revelations 21, the same combination of colors again appears, this time when the annotator again corrects a faulty printed text: brown black corrections alongside orange verse number underlining.

I wil giue to him that is a thurst, of the well of the water of life frely.  
 7 He that ouercometh, shal inherit all things, and I wil be his God, and he shall be my sonne.  
 8 But the feareful and vnbeleuing, and the abominable, and murderers,

**Table 5: Variation resulting from on exigence of space.**

All handwriting performance, as Tom Davis says, represents a compromise between an ideal graph and the exigencies of the writing circumstance. These include but are not limited to writing implement, ink characteristics, writing surface, mood of the writer, expected level of formality of communication, etc.

In this case, having already seen that the handwriting appears in all four colors of ink, and that these annotations in various colors and types covary with the underlining in such a way that every variant ink exists in close contact to one or more of the other inks, we need to account for this pattern. What circumstances might lead us to account for any observable variations from the norm within the sample of Oxford's hand and, to a lesser extent, addressing Mr. Veal's claim for the existence of a second annotator within the volume.

There are at least two relevant considerations, formality and writing surface, more particularly the spatial characteristics of the writing surface when when space is constricted in a least two ways: Sometimes the narrow vertical band of the book margin limits the forward momentum of the hand on a lateral plane, and sometimes the narrow spaces between text or notes force a fore-shortening of letters with large vertical extension, whether upwards as in *t*, *f*, or long *s*, or downward as in *g* or *y*.

The annotations fall into two reasonably discrete categories based on the extent of vertical space available to the annotator. On the one hand, most of the annotations are written in the margins where they have available a generous supply of vertical space that can accommodate the full range of the writer's habitual vertical expansion. Other words, however, are cramped within two adjacent lines of print and hence show certain characteristics that are evidently the result of the foreshortening of the full up and down motion of the letter formed under more ideal circumstances.

A. Words written in the margins with large available vertical space

B. Words written in limited vertical space between lines of print

f Thei hate the  
 prophetes, &  
 reprove them  
 in the assem-  
 blies.  
 g Ye take bothe  
 his money and  
 also his fode  
 n wherewith he  
 shuldc liue.

*Poo*

*sinne*

*Paor*

i h God wil so  
 plague them, y  
 i thei shal noe  
 suffer the god-

*sinne*

9 Honour v Lord with thy riches, and  
 with the first frutes of all thine increa-  
 se. (Giue vnto the poore).  
 10 So shal th barnes be filled with a-  
 bundance, and thy presses shal & burst  
 with newe wine.

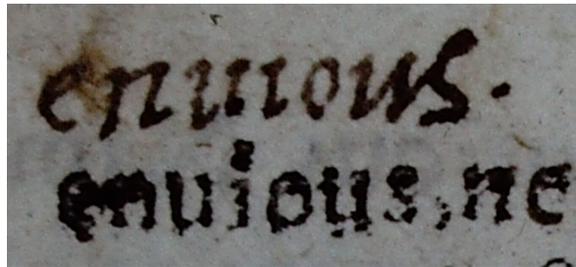
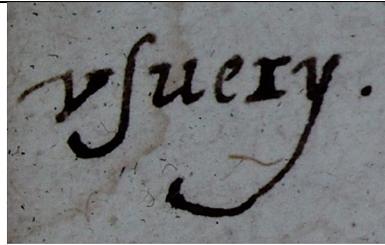
13 \* Do good vnto thy friend before  
 thou dye, & according to thine habi-  
 litie stretch out thine hand, and giue  
 him. vnto the poore.

*Chap. 41*  
*rob. 47*  
*luk. 14. 13*

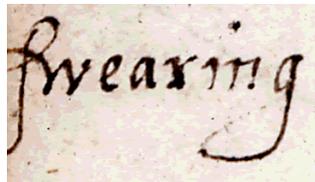
The t and p exemplars of both scripts are considerably truncated from their normal heights, as is the h in the second sample and the g in the first.

pon of }  
 dly is } Praier

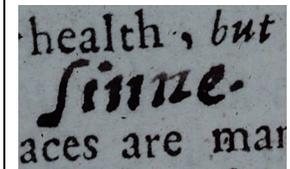
Although this annotation at Wisdom 18.21 is in the margins, the double



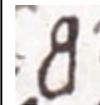
Brown black annotation from Tobit 4.7 supplies badly printed text.



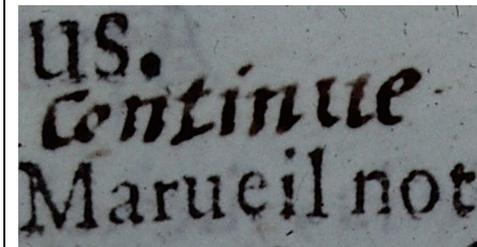
lineation in the cropped part of the note has artificially compressed the forms characteristic of the previous comparison samples in the righthand cell. Also the fitting of the two lines is interrupted by the awkward crossing of the d-riser and the p-ascender, so the vertical truncation is not sufficient to accommodate all the letters without an anomaly.



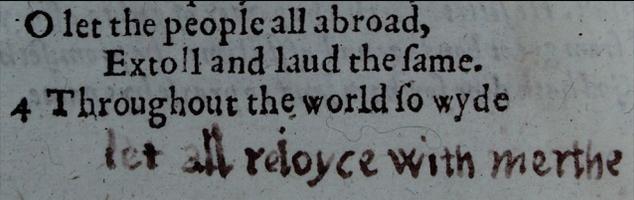
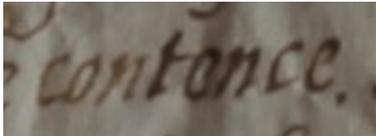
Compare the proportions of the S in "sinne" in the two exemplars against the other letters. *Long-s*, like *p*, is a letter requiring more vertical space than the other letters in the word. Hence the s of the b sample takes up about twice the vertical space of the *n* or the *e*, while the s in the same word in the margins takes 4x the vertical space.

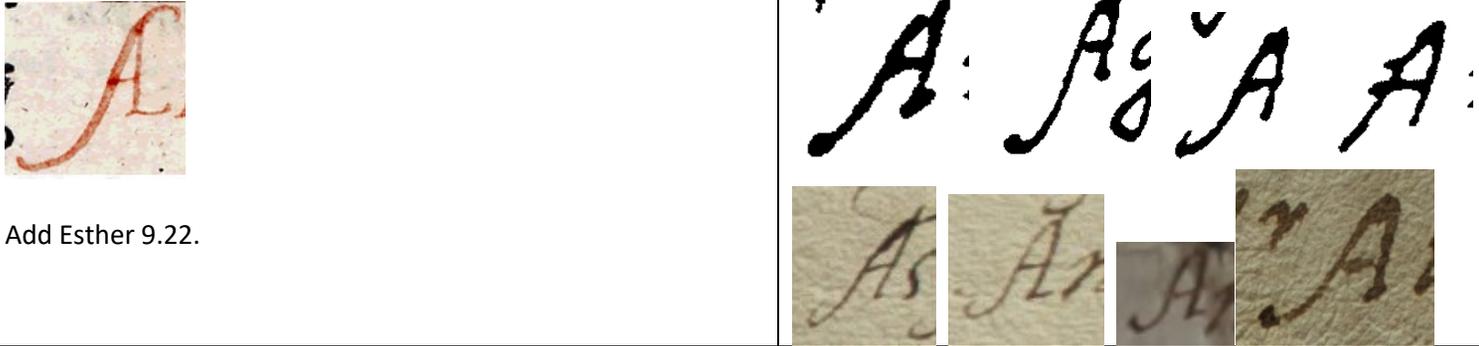


foreshortened *g* from Proverbs 3.9-10 annotation.

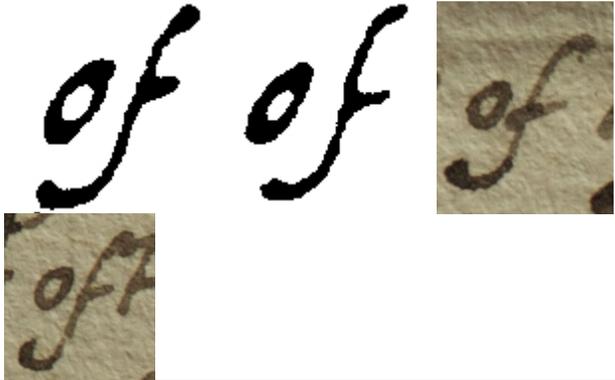
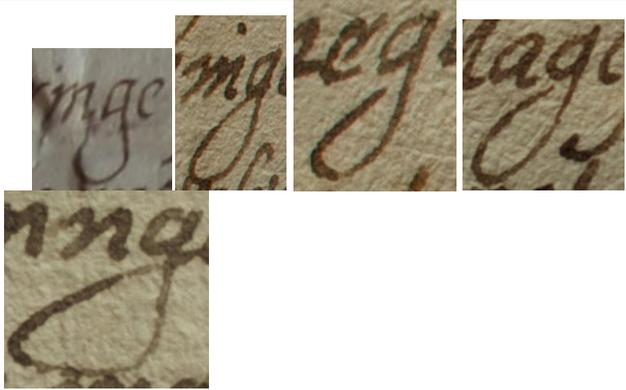


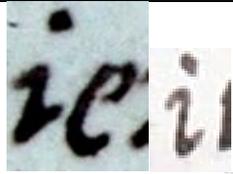
Ecclus. 11 showing the foreshortened *t* in "continue."

 <p>This brown-black annotation from the Sternhold and Hopkins psalm 67.4, which supplies a missing line to the psalm, adopts ideographs of the small letter a and the w in this passage, imitating the printed forms and are atypical both of the rest of this sample and of de Vere's hand more generally.</p>	 <p>Compare "contence" from Oxford's 1603 letter to King James. Note the identical degree of connectedness, viz. almost none, except where the initial c incidentally ends at the lower left corner of the o and where the u (continue) and the c (contence) briefly contact the final e in both samples. The pattern of connectedness is identical in both samples as are the shapes of key letters, although all the letters in the "continue" sample show some degree of compression of their full vertical size due to their crowded exigency.</p>
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<p align="center"><b>Figure 6: Individual Letters from de Vere Geneva Bible compared to Oxford's holograph from his letters.</b></p>	
<p>A</p>	 <p>Add Esther 9.22.</p>

<p>a</p>	 <p>Both samples show the same range of natural variation in the small letter a, from a more angular, ovoid shape with a pointed top or bottom (or both), to a softer, rounder, more oblong form.</p>			
<p>c/co</p>				
<p>d</p>	 <p>Small letter <i>d</i> illustrates the danger of too small a sample size in analyzing the differences between two or more samples.</p> <p>In some Oxford documents have all or almost all the exemplars of small letter <i>d</i> correspond to the straight-backed form, but in others – generally written more hurriedly or under some other type of constricting exigence – use almost as exclusively the reverse-descender type seen in the de Vere Bible.</p> <p>The two ds are differently formed, the straight-backed variant being done in two strokes, one for the bowl and the other for the descender, which appears to start at the top with the same flourish as seen on <i>h</i>, and finish in a serif at the bottom. By contrast the reverse-loop <i>d</i> is made in one stroke, forming both the bowl and the descender in one motion of the pen. The stress of speed or other exigence causes the writer to adopt the</p>	 <table border="1" data-bbox="1205 1117 1906 1190"> <tr> <td data-bbox="1205 1117 1556 1190">Straight-backed d.</td> <td data-bbox="1556 1117 1906 1190">Curved or reversed ascender d.</td> </tr> </table>	Straight-backed d.	Curved or reversed ascender d.
Straight-backed d.	Curved or reversed ascender d.			

	simpler form of the letter, as seen in the questioned document sample.	
e		
f		
g	 <p>Note the detail on the long s in "swearing": the writer first wrote the s. Unsatisfied with the curvature of the top of the letter, he started the w by added a flourish</p> <p>In both samples the loop tends towards a peak or point at the upper right edge. The</p>	 <p>The range of variation of lower case g in both samples is the same.</p>



19 For I do not the good thing, which I wolde,<sup>n</sup> but the euil, which I wolde not, that do I. *i*

*n* The flesh aayeth euen y mo- ste perfe& to rû- ne forwarde as y spirit wisheth.

20 Now if do that I wolde not, it is no more I that do it, but the sinne y dwel- leth in me.

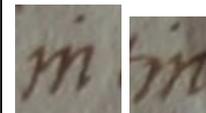
21 I finde then by the Law, that when I wolde do good, euil is present with me.

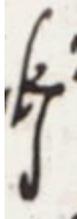
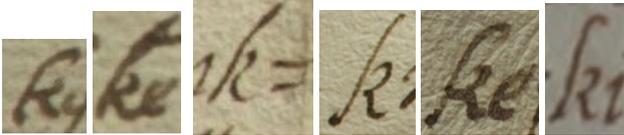
In its more ideal exemplars, *i* has significant serifs on top and bottom. They typically range in length from 20%-50% or more of the height of the letter and are sometimes dropped.

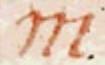
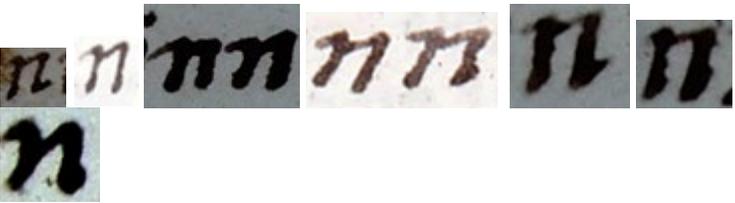
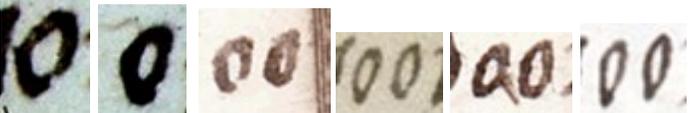


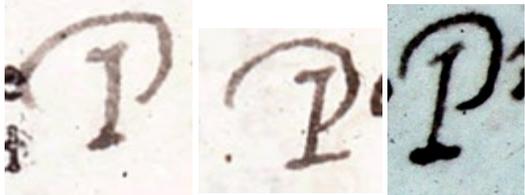
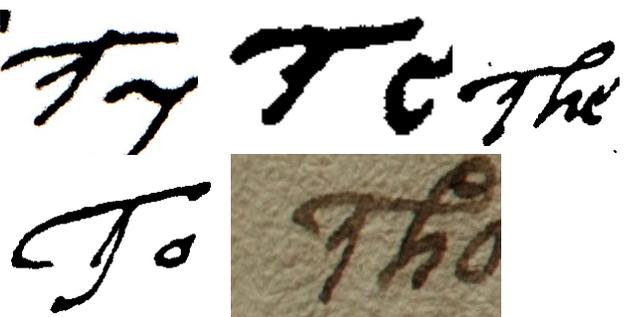
Preceding *n* or *m*, *i* loses the bottom serif more typically seen and tends to connect itself to the subsequent letter.

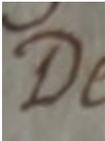
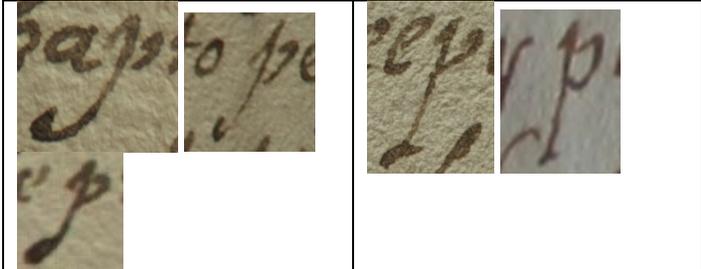
The exemplars in the Bible show this tendency to simplification of form, but are also less typically connected to the subsequent letter. This is another feature apparently resulting from the exigent circumstances of writing a highly formal script in the margins of a book.



	Baruch 1.13 	
k	 <p>This sole exemplar from “works” at Esdras 9 is unfortunately written in the gutter where it is almost impossible to obtain a direct shot. It is directly connected by ligature to the atypical long s in the ultimate position, the ligature being formed by the final downstroke of the letter jutting straight out rather than descending to the baseline. It also has a foot. Compare, however, the proportional relationships of the parts with the known sample, and the typically open top of the shoulder where it stops short of meeting the descender.</p>	
L		 

m		
n	 <p>Isaiah 63.11</p> <p>In Oxford's sample, both m and n range between sharper, more angular forms such as those seen in his earliest extant letter (above), to more rounded forms seen in the samples below. Exemplars of both graphs in the Bible sample, especially n, tend towards the more the more angular type.</p>	
o		

		
		
P	 <p>Both known and questioned samples show the following common characteristics:</p> <ol style="list-style-type: none"> <li>1) Serif at start of descender</li> <li>2) Conspicuous gap between descender and loop</li> <li>3) Loop finishes well behind the descender</li> <li>4) Foot.</li> </ol> <p>The set of exemplars readily illustrates the significance of sample size in as well as the principles controls vary from the questioned sample primarily in two ways:</p> <ol style="list-style-type: none"> <li>1) Like many other letters, they show a more upright character, being oriented at almost 90° to their bases, while the known sample has a characteristic slant of approximately 20° to the right;</li> <li>2) Both the serif and the foot of the questioned exemplars</li> </ol>	 <p>The combination of serif at the top of the descender and a foot is somewhat unusual in hands of the day but characteristic of Oxford's capital P. Starting the descender with a serif is a characteristic not only P but also D and T, where it is frequently if not always visible, although it tends sometimes to merge with the downstroke:</p> 

	<p>are oriented at almost 90° to the descender and close to 180° to one another, while in the known sample both serif and footer they are oriented more like 15-45° to the descender.</p> <p>When two or more divergences of form can be attributed to the same underlying cause, the likelihood of artificial variation is greatly reduced. In this case, exemplars from the known sample contrast with the questioned document exemplars by being more upright and also shoings a top serif that tends towards being parallel with the foot and at close to 90° from the descender. Let us see what happens if we extend our range of sample from the questioned document.</p>	<p>Capital T showing serif at top of descender.</p>  <p>Capital d showing serif at top of descender.</p> <p>In the Bible samples both serif and foot slant at a 45-90 degree angle to the descender, while in most of Oxford's other sample, the same features are more typically angled at a range of 30-5 degrees with the descender. The Bible samples are also, as is often the case, more upright, approaching a 90 degree orientation, while Oxford's capital Ps more typically lean at about 200 degrees.</p> <p>These features are probably to be accounted for based on two factors. One is the writing surface. The other is probably a formality vector. In Oxford's typical hand, the serif hits the ground running after the previous letter at an angle more natural to the rhythm of his hand, but in these more decorative letter Ps in the Bible, he is writing more slowly and more carefully.</p>
p	 <p>One of a very few observable variations of any conceivable consequence between Oxford's sample and the questioned</p>	

document is small letter p. In the questioned sample, these letters are all stubby, showing a ratio of loop to stem is about 1/2. These exemplars also all show a visible point or "horn" on top of the loop of three letter ps.

This latter feature is not usually shown so conspicuously in the p in Oxford's known sample, but in both cases the forms are adaptation to constricted vertical space.

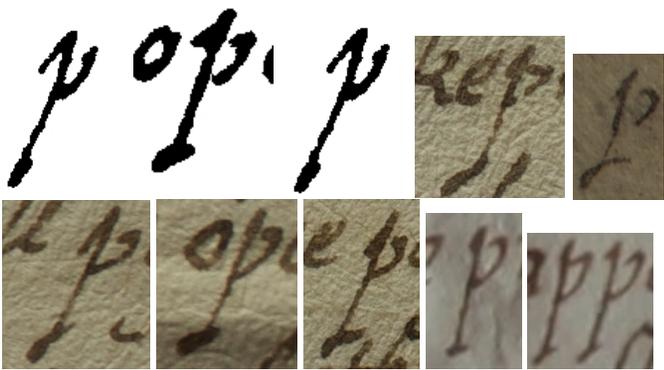
Written in the narrow space between typeset lines, the letter is foreshortened compared to almost all known exemplars from Oxford's sample, where the ratio of loop to stem is typically 1/3-1/5. This also apparently produces the "horn" effect. Were there not so abundant and so clear indications supporting Oxford as the annotator of these like the other annotations, this might be mistaken for systematic variation. Instead it is better interpreted as an example of the writer accomodating his ideal to the exigence of a tight space. But see example from II Esdras 8, which is in the gutter and larger, a kind of hybrid between these and the full capital-Ps of the Bible sample, which show no horn or peak.



Mixed form showing elements of both capital and lower case p,

The curl-back p.	The footed p.

In Oxford's known sample, small letter p exists in two primary types, with a range of intermediate or atypical forms also evident. In one of the graph types, the descender curls back to the left ending in a decorative backstroke flourish. In the other, the descender is finished with a foot like that seen in the capital P. ratio of loop to stem is 1/3-1/5. Both consistently start the downstroke with a serif, which does not vary systematically between the



	with a horn and untypically broad foot.	
r	 <p>The lower case r exemplars in the Bible sample represent, like those of the lower-case <i>p</i>, one of the few instances of regular contrast with Oxford's known sample. All of these share to a greater or lesser extent a tendency to thicken the stem. The Bible exemplars</p>	 <p>In Oxford's normal <i>r</i>, the ascent of the second part of the letter is perfectly calibrated to retrace the route of the descender, producing a letter that more typically ends in a sharp point in place of the thick foot seen in the Bible exemplars.</p>
S/s	<p>Again, range of variation confirms the identity of writership for both samples; exemplars of <i>S</i> exists in three basic forms:</p> <ol style="list-style-type: none"> <li>1) Most commonly, the long renaissance italic <i>s</i>, almost always a lower case <i>s</i>, used initially and medially but almost never terminally.</li> <li>2) The short <i>s</i>, which looks like a modern <i>s</i>, occurs in lower case terminally, especially after a vowel – where the long <i>s</i> never does, or medially when following a long <i>s</i>. It tends to be significantly more angular, more swiftly formed than type #3.</li> <li>3) A much more fully articulated version of this <i>S</i> usually initially in a larger size denoting a capital. The technically lower case <i>s</i> in the Titus annotation “Almes” is most directly comparable to the initial capital <i>S</i> in the known sample.</li> </ol>	
Long s	<p>The most common form of <i>s</i> in both samples is the characteristic italic long-s:</p>	



In both samples there is a noticeable tendency to “weight” the bottom of the latter with a somewhat larger curvilinear shape, sometimes ending in a definite hook, while the top is reduced in size and extent. All in all, given the deceptive simplicity of the letter, the correspondences are highly impressive if not in themselves persuasive of any definite conclusion.



Short terminal s.

Job 15.39.

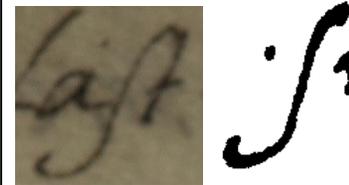
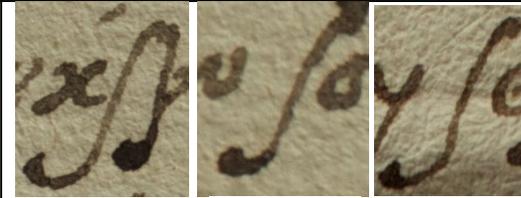
Add Baruch 1.13, Isaiah 59.11

Add sinne baruch 1.13

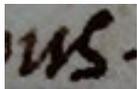
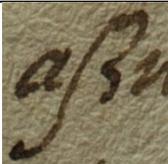
Isaiah 43, 59

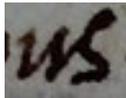
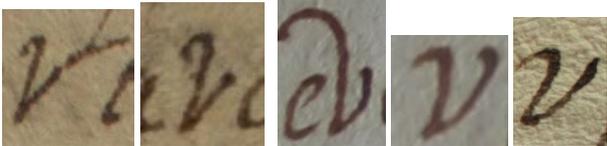
Usury Ezek 18.17

Lev. 25.36



Short terminal s. Angles and orientations are consistent with common authorship. The known exemplar has a somewhat longer bottom loop.

us	 <p>Short s in terminal –us illustrating connectivity of this letter combination.</p>	 <p>Short s in terminal –us illustrating connectivity of this letter combination.</p>
ss		 <p>Short terminal s after long s.</p>
	 <p>Modern capital “full” S.</p>	 <p>Modern capital “full” S showing many similarities of form although lacking the</p>
t		
u	 <p>Medial u shows the more upright posture of letters written in the margins of a book but is otherwise a strong match to Oxford.</p>	 <p>Medial u shows the same range of variation from more rounded to more chiseled forms, all drawn on exactly the</p>

		same stroke pattern.
-us	 <p>-us termination combination.</p>	 <p>-us terminal combination matches in numerous features, most conspicuously the size, shape, and angles of the functional ligature between the letters and the proportionalities of the <i>u</i> itself.</p>
v	 <p>Initial v.</p>	 <p>V, used both initially and medially.</p>



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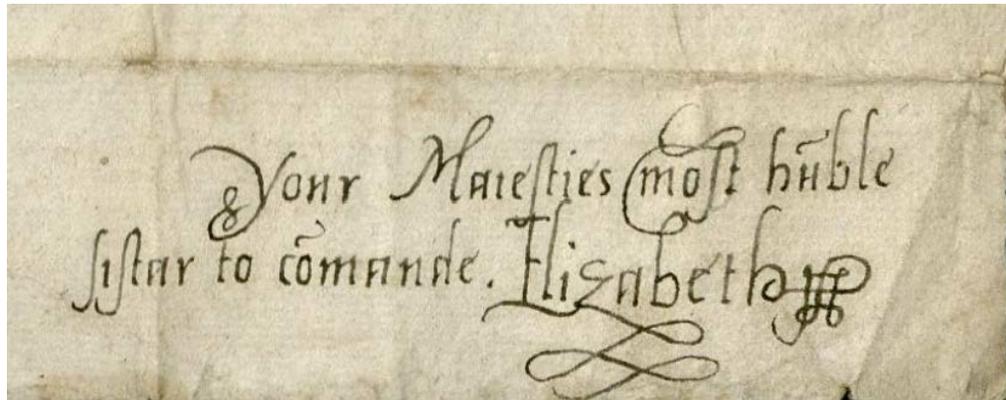
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Your Maesties most humble  
Sister to comande. Elizabeth